RAMAIAH UNIVERSITY OF APPLIED SCIENCES

M S Ramaiah University of Applied Sciences

Programme Structure and Course Details of

B.Des. (Interaction Design) 2022-2023

Programme Code: 419

Faculty of Art and Design

Department of Interaction Design

Registrar
M.S.Ramaiah University of Applied Sciences
Bangalore - 560 054

Dean - Academics
M.S. Ramaiah University of Applied Sciences
Bangalore-560054

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University's Vision, Mission and Objectives

The M. S. Ramaiah University of Applied Sciences (MSRUAS) will focus on student-centric professional education and motivates its staff and students to contribute significantly to the growth of technology, science, economy and society through their imaginative, creative and innovative pursuits. Hence, the University has articulated the following vision and objectives.

Vision

MSRUAS aspires to be the premier university of choice in Asia for student centric professional education and services with a strong focus on applied research whilst maintaining the highest academic and ethical standards in a creative and innovative environment

Mission

Our purpose is the creation and dissemination of knowledge. We are committed to creativity, innovation and excellence in our teaching and research. We value integrity, quality and teamwork in all our endeavors. We inspire critical thinking, personal development and a passion for lifelong learning. We serve the technical, scientific and economic needs of our Society.

Objectives

1. To disseminate knowledge and skills through instructions, teaching, training, seminars, workshops and symposia in Engineering and Technology, Art and Design, Management and Commerce, Health and Allied Sciences, Physical and Life Sciences, Arts, Humanities and Social Sciences to equip students and scholars to meet the needs of industries, business and society
2. To generate knowledge through research in Engineering and Technology, Art and Design, Management and Commerce, Health and Allied Sciences, Physical and Life Sciences, Arts, Humanities and Social Sciences to meet the challenges that arise in industry, business and society
3. To promote health, human well-being and provide holistic healthcare
4. To provide technical and scientific solutions to real life problems posed by industry, business and society in Engineering and Technology, Art and Design, Management and Commerce, Health and Allied Sciences, Physical and Life Sciences, Arts, Humanities and Social Sciences
5. To instill the spirit of entrepreneurship in our youth to help create more career opportunities in the society by incubating and nurturing technology product ideas and supporting technology backed business
6. To identify and nurture leadership skills in students and help in the development of our future leaders to enrich the society we live in
7. To develop partnership with universities, industries, businesses, research establishments, NGOs, international organizations, governmental organizations in India and abroad to enrich the experiences of faculties and students through research and developmental programmes

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Programme Specifications: B. Des. (Interaction Design)

Faculty	Art and Design (FAD)
Department	Industrial Design
Programme Code	419
Programme Name	B.Des. (Interaction Design)
Dean of the Faculty	Prof. Dilip Kumar Mahanty
Head of the Department	Mr. H. S. Lohit

1. **Title of the Award:** B.Des. in Interaction Design
2. **Mode of Study:** Full-Time
3. **Awarding Institution /Body:** M. S. Ramaiah University of Applied Sciences, Bengaluru
4. **Joint Award:** Not Applicable
5. **Teaching Institution:** Faculty of Art and Design, M. S. Ramaiah University of Applied Sciences, Bengaluru
6. **Date of Programme Specifications:** July 2022
7. **Date of Programme Approval by the Academic Council of MSRUAS:** 14-July-2022
8. **Next Review Date:** July 2026
9. **Programme Approving Regulating Body and Date of Approval:**
10. **Programme Accredited Body and Date of Accreditation:** Not Applicable
11. **Grade Awarded by the Accreditation Body:** Not Applicable
12. **Programme Accreditation Validity:** Not Applicable
13. **Programme Benchmark:** Not Applicable
14. **Rationale for the Programme**

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Internet users in India are projected to grow to 974 million in the next four years. Any new startups such as in the field of ecommerce businesses or the existing brick and mortar companies are focusing on creating good quality and experience oriented virtual products and services today. Providing a positive consumer experience and building trust defines the success of any fledgling company. There is a need for a unique expertise in the market which deals with crafting a two way virtual communication between the Industry and consumers owing to the boom of startup ecosystem, India is currently experiencing. Indian Organizations like Reliance, Infosys, TCS and Wipro and top Indian startups such as Byjus, CRED, Groww, Unacademy, have started their Digital Companies focusing on Customer Experience and are investing in dedicated design setups. In order to survive the aggressive marketing and premium user experience provided by the major international conglomerates such as Google, Amazon, it is necessary that companies adopt latest trends and techniques necessary for their survival.

Interaction Design deals with two-way communication between a user and any digital medium. User experience (UX) which involves the mechanics of operating a virtual product and User Interface (UI) which involves the graphical characteristics of the same are the two pillars of

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Interaction design in the product design ecosystem. The choices of various visual elements including the links users click on, the text they read, the images, sliders, text entry fields, screen layout, transitions, interface animations are carefully researched and designed by an Interaction Designer. In developing countries such as India, the scope of UI/UX is extensive.
Major Job search engine websites such as Glassdoor has given the UI/UX industry 6th position among the "Top 25 highest-paying entry-level jobs". There is an emerging demand in the market for students who have upgraded themselves in the latest aspects of UI/UX in specialized roles in the Industry which includes Interaction Designers, UI/UX Designers, User Researchers, Information Architects and Conversational Designers. The demand for the same is bound to grow in the near future as Industries focus on having a strong digital presence in the market.

15. Programme Mission

The purpose of the programme is the creation of innovative problem solvers in multi-disciplinary settings; entrepreneurs and leaders applying the knowledge, understanding, cognitive abilities, practical skills and transferable skills gained through systematic, flexible and rigorous learning in the chosen academic domain.

16. Gradate Attributes (GAs)

GA-1. **Design knowledge**: Ability to apply knowledge of art and Design fundamentals to solve complex problems in product development

GA-2. **Manual and Digital Tool Usage**: Ability to apply appropriate tools and techniques and comprehend utilization of resources appropriately to complex design activities.

GA-3. **Design Analysis and Synthesis** : Ability to analyse design problems, interpret data and arrive at meaningful conclusions involving design inferences

GA-4. **Design and Development**: Ability to design an artefact considering functionality, usability, public health, safety and the cultural, societal, and environmental considerations.

GA-5. **Critique and Evaluate**: Ability to comprehend the effect of design solutions on legal, cultural, social and public health and safety aspects

GA-6. **Professional Design Practice**: Ability to comprehend and solve complex design problems by interacting with the end users

GA-7. **Environment and sustainability**: Ability to develop sustainable solutions and understand their effect on society and environment

GA-8. **Ethics**: Ability to apply ethical principles to design practices and professional responsibilities

GA-9. **Individual and teamwork**: Ability to work as a member of a team, to plan and to integrate knowledge of various design and engineering disciplines and to lead teams in multidisciplinary settings

GA-10. **Communication**: Ability to make effective oral presentations and communicate design ideas to a broad audience using written and oral means

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GA-11. Project management and finance: Ability to lead and manage multidisciplinary teams by applying design and management principles

GA-12. Life-long learning: Ability to adapt to the changes and advancements in technology and engage in independent and life-long learning

17. Programme Outcomes (POs)

B.Des. graduates will be able to:

PO 1. Apply fundamental aspects of art, design and culture and apply its principles while designing.

PO 2. Apply manual and digital tools and techniques in various media to express and convey design ideas in 2D, 3D digital and physical form skilfully.

PO 3. Identify, interpret and generate insights for developing new products based on data gathered from various research methods including ethnographic research to support the ideation of relevant and appropriate design solutions.

PO 4. Design and develop solutions based on identified user needs considering style, theme, elements and principles of aesthetics, functionality and safety.

PO 5. Apply critical judgement and evaluate design solutions on aesthetic quality and intended end use, art and cultural impact.

PO 6. Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional design practice.

PO 7. Identify the impact of the professional design solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO 8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the design practice.

PO 9. Ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 10. Ability to make effective oral presentations and communicate design ideas to a broad audience using written and oral means

PO 11. Ability to work in groups and perform effectively in multidisciplinary teams by applying design and management principles

PO 12. Ability to recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of trend change.

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18. Programme Goal

The programme goal is to produce creative, innovative and skilled graduates with an ability to think independently and pursue a career in Interaction Design.

19. Program Educational Objectives (PEOs)

The objectives of the B.Des. (Interaction Design) Programme are to:

PEO-1. Inculcate creative thinking to generate design ideas for new and innovative interactive products and services

PEO-2. Induce effective usage of elements and principles of design to develop aesthetically pleasing and functionally appropriate products for the User Experience Design Industry

PEO-3. Impart usage of manual and digital tools and techniques to express design ideas thereby improving user experience and creating usable products

PEO-4. Advocate strong human values, social, interpersonal and entrepreneurial skills required for professional success in evolving global professional environments

20. Programme Specific Outcomes (PSOs)

At the end of the B.Des. (Interaction Design) program, the graduate will be able to:

PSO-1. Apply design fundamentals to solve complex design problems and create conceptual interactive design solutions

PSO-2. Demonstrate manual and digital prototyping skills to convey design ideas considering visual aesthetics and functional parameters

PSO-3. Adapt to the latest digital technology in Interactive Design to communicate design ideas for a wide spectrum of design applications

PSO-4. Demonstrate an understanding of the importance of life-long learning through professional development, practical training, leadership qualities, specialized certifications and entrepreneurial skills for betterment of organization environment and society

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Programme Structure

Sem.	Discipline Core (DSC)(Credits) (L+T+P)	Discipline Elective(DSE) / Open Elective (OE) (Credits) (L+T+P)	Ability Enhancement Compulsory Courses (AECC), Languages (Credits)(L+T+P)		Skill Enhancement Courses (SEC)		Total Credits
					Skill based (Credits) (L+T+P)	Value based (Credits) (L+T+P)	
I	Discipline A1(4+2) Discipline B1(4+2) *Elements of Design* *Print Making Techniques* *Foundation Drawing and Painting*	OE-1 (3) *Indian Art Appreciation/MOOC*	*English For Communication-1/MOOC (3)*		SEC-1: *Studio Practice -1(2) (1+0+2)*	Digital Fluency (2) (1+0+2)	22
II	Discipline A2(4+2) Discipline B2(4+2) *Creativity Techniques* *Design Drawing* *Design for social Impact* *Digital Design Basics*	OE-2 (3) *Handicraft/MOOC*		Environmental Studies (2)		Health & Wellness/ Social & Emotional Learning (2) (1+0+2)	19
Exit option with Certificate (41) credits)							
III	Discipline A3(4+2) Discipline B3(4+2) *Digital Illustration techniques* *Graphic Representation Technique* *Product Photography*	OE-3 (3) *Sculpture/MOOC*	*English For Communication-2/MOOC (3)*		Artificial Intelligence*(2) (1+0+2)*	Innovation & Entrepreneurship (3) (0+0+3)	23
IV	Discipline A4(4+2) Discipline B4(4+2) *2D Animation* *Design Thinking and Need Identification* *Photo and Video Communication*	OE-4 (3) *Watercolor Painting /MOOC*		Ethics and self – awareness(2)	SEC 3: Professional Communication (2)	Internship/Training/Project (3)	22
Exit option with Diploma (86 credits)							

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V	Discipline A5(3+2) Discipline B5(3+2) *Human Computer Interaction* *Information Architecture* *UI/UX Design*	DSE-B Elective 1 (3)		Project management (3)	SEC-4: *Constitution of India and Human Rights*(2) (1+0+2)	Sports/Yoga/NSS/ Cultrural/ NCC(2) (1+0+2)	20
VI	Discipline A6(3+2) Discipline B6(3+2) *Interaction Design Project (Group Project)* *Usability Testing*	DS-A Elective 1 (3) Res. Methodology (3)			SEC-5: Personality Development and Soft Skills (2)(1+0+2)	Internship/Training/Project (3) Vocational (3)	24
Exit option with Bachelor of Arts, Science, B.Sc. /B.Des., B.A.(Hons) degree (130 credits)							
Choose any one Discipline as Major							
VII	Discipline A/B-7(3+2) Discipline A/B-8(3+2) Discipline A/B-9(3+2) *Portfolio Design and Presentation* *Interaction Design Project* *Design Management and Professional Practice* *Advanced UI Design*	DS-A/B Elective 2(3) DS-A/B Elective 3(3)					21
VIII		Research/Internship in A/B (21)					21
Award of Bachelor Degree with Honours with Research (with the completion of courses equal to a minimum of 172 credits)							

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21. Programme Structure :

Program Structure with codes for B.Des in Interaction Design:

Semester 1							
Discipline Core (DSC) (Credits) (L+T+P)							
Sl. No.	**Code**	**Course Title**	**Lecture (h/W/S)**	**Tutorials (h/W/S)**	**Practical (h/W/S)**	**Total Credits**	**Max. Marks**
1	PDC101A	Elements of Design	1		6	4	100
2	PDC102A	Foundation Drawing and Painting	1		6	4	100
3	PDC103A	Print Making Techniques	1		6	4	100
Discipline Elective(DSE) / Open Elective (OE)(Credits) (L+T+P)							
4	PDO101A	Open Elective-1/MOOC Courses	3		0	3	100
Ability Enhancement Compulsory Courses (AECC), Languages (Credits) (L+T+P)							
5	TSM101A	English For Communication-1 /MOOC Courses	3			3	100
Skill Enhancement Courses (SEC)- Skill based (Credits)(L+T+P)							
6	PDM101A	Studio Practice	1		2	2	50
Skill Enhancement Courses (SEC)- Value based (Credits)(L+T+P)							
7	CSM101A	Digital Fluency	1		2	2	50
Total			**3**		**22**	**22**	**600**
Total number of contact hours per week			**35 Hours**				
Number of credits to be registered			**22**				

Semester 2							
Discipline Core (DSC) (Credits) (L+T+P)							
Sl. No.	**Code**	**Course Title**	**Lecture (h/W/S)**	**Tutorials (h/W/S)**	**Practical (h/W/S)**	**Total Credits**	**Max. Marks**
1	PDC104A	Creativity Techniques	2			2	50
2	PDC105A	Design Drawing	1		6	4	100
3	PDC106A	Design for social Impact	1		6	4	100
4	PDC107A	Digital Design Basics			4	2	50
Discipline Elective(DSE) / Open Elective (OE)(Credits) (L+T+P)							
5	PDO102A	Elective-2/MOOC Courses	1		4	3	100
Ability Enhancement Compulsory Courses (AECC), Languages (Credits) (L+T+P)							
6	BTN101A	Environmental Studies	2			2	50
Skill Enhancement Courses (SEC)- Value based (Credits)(L+T+P)							
7	AHU101A	Health and Wellbeing / Social & Emotional Learning	1		2	2	50
Total						**19**	**500**
Total number of contact hours per week			**30 Hours**				
Number of credits to be registered			**19**				

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Semester 3							
Discipline Core (DSC) (Credits) (L+T+P)							
Sl. No.	**Code**	**Course Title**	**Lecture (h/W/S)**	**Tutorials (h/W/S)**	**Practical (h/W/S)**	**Total Credits**	**Max. Marks**
1	PDC201A	Digital Illustration techniques	1		6	4	100
2	IDC201A	Graphic Representation Technique	1		6	4	100
3	PDC203A	Product Photography	1		6	4	100
Discipline Elective(DSE) / Open Elective (OE)(Credits) (L+T+P)							
4	IDO201A	Open Elective-3/MOOC Courses	1		4	3	100
Ability Enhancement Compulsory Courses (AECC), Languages (Credits) (L+T+P)							
5	TSM102A	English For Communication-2 /MOOC Courses	3			3	100
Skill Enhancement Courses (SEC)- Skill based (Credits)(L+T+P)							
6	CSM301A	Artificial Intelligence	1		2	2	50
Skill Enhancement Courses (SEC)- Value based (Credits)(L+T+P)							
7	BAU201A	Innovation & Entrepreneurship			6	3	100
Total						23	**650**
Total number of contact hours per week			**38 Hours**				
Number of credits to be registered			**23**				

Semester 4							
Discipline Core (DSC) (Credits) (L+T+P)							
Sl. No.	**Code**	**Course Title**	**Lecture (h/W/S)**	**Tutorials (h/W/S)**	**Practical (h/W/S)**	**Total Credits**	**Max. Marks**
1	IDC202A	2D Animation	1		6	4	100
2	PDC205A	Design Thinking and Need Identification	2	2	2	4	100
3	IDC203A	Photo and Video Communication	1		6	4	100
Discipline Elective(DSE) / Open Elective (OE)(Credits) (L+T+P)							
4	IDO202A	Open Elective-4/MOOC Courses	1		4	3	100
Ability Enhancement Compulsory Courses (AECC), Languages (Credits) (L+T+P)							
5	TSU301A	Ethics and Self-awareness	2			2	50
Skill Enhancement Courses (SEC)- Skill based (Credits)(L+T+P)							
6	TSU202A	Professional Communication	2			2	50
Skill Enhancement Courses (SEC)- Value based (Credits)(L+T+P)							
7	IDMV201A	Internship/Training/Project			6	3	100
Total						**22**	**600**
Total number of contact hours per week			**35 Hours**				
Number of credits to be registered			**22**				

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Semester 5							
Discipline Core (DSC) (Credits) (L+T+P)							
Sl. No.	**Code**	**Course Title**	**Lecture (h/W/S)**	**Tutorials (h/W/S)**	**Practical (h/W/S)**	**Total Credits**	**Max. Marks**
1	IDC301A	Human Computer Interaction	3		2	4	100
2	IDC302A	Information Architecture	1		2	2	100
3	IDC303A	UI/UX Design	1		6	4	100
Discipline Elective(DSE) / Open Elective (OE)(Credits) (L+T+P)							
4	IDEXXXA	Discipline Elective-1	1		4	3	100
Ability Enhancement Compulsory Courses (AECC), Languages (Credits) (L+T+P)							
5	TSN201A	Project management	3			3	100
Skill Enhancement Courses (SEC)- Skill based (Credits)(L+T+P)							
6	LAN101A	Constitution of India and Human Rights	2			2	50
Skill Enhancement Courses (SEC)- Value based (Credits)(L+T+P)							
7	DSU101A	Sports/Yoga/NCC/Cultural/NSS				2	50
Total						**20**	**600**
Total number of contact hours per week			**26 Hours**				
Number of credits to be registered			**20**				

Semester 6							
Discipline Core (DSC) (Credits) (L+T+P)							
Sl. No.	**Code**	**Course Title**	**Lecture (h/W/S)**	**Tutorials (h/W/S)**	**Practical (h/W/S)**	**Total Credits**	**Max. Marks**
1	IDP301A	Interaction Design Project (Group Project)			14	7	100
2	IDC304A	Usability Testing	1		4	3	100
Discipline Elective(DSE) / Open Elective (OE)(Credits) (L+T+P)							
3	IDEXXXA	Discipline Elective 2	1		4	3	50
4	IDUE305A	Res. Methodology	3			3	50
Skill Enhancement Courses (SEC)- Skill based (Credits)(L+T+P)							
5	IDUM302A	Personality Development and Soft Skills	1		2	2	100
Skill Enhancement Courses (SEC)- Value based (Credits)(L+T+P)							
6	IDPM301A	Internship/Training/Project			6	3	
7	IDMV301A	Vocational			6	3	
Total						**24**	**600**
Total number of contact hours per week			**42 Hours**				
Number of credits to be registered			**20**				

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Semester 7							
Discipline Core (DSC) (Credits) (L+T+P)							
Sl. No.	**Code**	**Course Title**	**Lecture (h/W/S)**	**Tutorials (h/W/S)**	**Practical (h/W/S)**	**Total Credits**	**Max. Marks**
1	PDC401A	Portfolio Design and Presentation			4	2	50
2	IDP401A	Interaction Design Project			14	7	100
3	IDC402A	Design Management and Professional Practice	3			3	100
4	IDC403A	Advanced UI Design	1		4	3	100
Discipline Elective(DSE) / Open Elective (OE)(Credits) (L+T+P)							
5	IDEXXXA	Discipline Elective- 3	1		4	3	100
6	IDEXXXA	Discipline Elective- 4	1		4	3	100
Total						**21**	**550**
Total number of contact hours per week			**37 Hours**				
Number of credits to be registered			**21**				

Semester 8							
Discipline Elective(DSE) / Open Elective (OE)(Credits) (L+T+P)							
Sl. No.	**Code**	**Course Title**	**Lecture (h/W/S)**	**Tutorials (h/W/S)**	**Practical (h/W/S)**	**Total Credits**	**Max. Marks**
1	IDP402A	Research/Internship			42	21	
Total						**21**	
Total number of contact hours per week			**42 Hours**				
Number of credits to be registered			**21**				

Discipline Elective			
Group ▼	**Stream ▸**	**Visual Design**	**Advance UX Design**
Sem. 5	Course Code	IDE301A	IDE302A
	Course Title	Evolution of Visual Design	User Psychology and Behavior
Sem.6	Course Code	IDE303A	IDE304A
	Course Title	Visual Identity and Branding	UX- Design For Enterprise
Sem.7	Course Code	IDE401A	IDE402A
	Course Title	Animation and Motion Graphics	Gamification and UX
Sem. 7	Course Code	IDE403A	IDE404A
	Course Title	Advanced Interaction Studio	Service Design for UX

*Minimum of 40% students of a particular batch needed to offer a particular DE

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22. Open Elective Offered

A number of Open Elective Courses from various Faculties of RUAS are offered as mentioned in the University's website. Students can choose the Open Electives of their choice. The students are permitted to choose online electives from the list approved by the respective HoD and Dean The following open elective choices are offered.

22.1 Innovation Courses in Lieu of Open Elective Courses

Students can earn 3-credits by participating in innovation activities as per the approved guidelines in lieu of Open Elective Courses. The activities could be related to any of the following:

1. Indian Art Appreciation(PDO101A)
2. Handicraft(PDO102A)
3. Sculpture(PDO201A)
4. Watercolor Painting(PDO202A)

23. MOOC Courses

Students are to choose MOOC course if they opt to, from the given list below.

Sl No	Title	Awarding Agency	Link
1	ANIMATION By Dr. Abhishek Kumar & Dr. Achintya Singhal, Banaras Hindu University	SWAYAM	https://onlinecourses.swayam2.ac.in/cec22_cs22/preview
2	Visual Communication Design for Digital Media By Prof. Saptarshi Kolay, IIT Roorkee	NPTEL	https://onlinecourses.nptel.ac.in/noc22_ce53/preview
3	FRENCH Échanger / Interactions (French) By Dr. Deepanwita Srivastava, Indira Gandhi National Open University	SWAYAM	https://onlinecourses.swayam2.ac.in/nou22_lg46/preview
4	Sanskrit Bhasha aur Sahitya By Dr. Soniya, Indira Gandhi National Open University (IGNOU)	SWAYAM	https://onlinecourses.swayam2.ac.in/nou22_lg35/preview
5	Mandarin (Chinese) for beginners By Dr. Deepanwita Srivastava, Indira Gandhi National Open University (IGNOU)	SWAYAM	https://onlinecourses.swayam2.ac.in/nou22_lg37/preview
6	Graphic Design Specialization	COURSERA	https://www.coursera.org/specializations/graphic-design
7	Graphic Design Elements for Non-Designers Specialization	COURSERA	https://www.coursera.org/specializations/graphic-design-elements-non-designers
8	3D Printing and Additive Manufacturing Specialization	COURSERA	https://www.coursera.org/specializations/3d-printing-additive-manufacturing

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9	UI / UX Design Specialization from Coursera	COURSERA	https://www.coursera.org/specializations/ui-ux-design
10	Art and Design in the Digital Age	edX	https://www.edx.org/course/art-and-design-in-the-digital-age?index=product&queryID=bca89adb1a0270fe56cada2114771b2b&position=14

24. Course Delivery: As per the Timetable

25. Teaching and Learning Methods

1. Face to Face Lectures using Audio-Visuals
2. Workshops, Group Discussions, Debates, Presentations
3. Demonstrations
4. Guest Lectures
5. Laboratory work/Field work/Workshop
6. Industry Visit
7. Seminars
8. Group Exercises
9. Project Work
10. Project
11. Exhibitions
12. Technical Festivals

26. Assessment and Grading

26.1. Components of Grading

There shall be **two components** of grading in the assessment of each course:

Component 1, Continuous Evaluation (CE): This component involves multiple subcomponents (SC1, SC2, etc.) of learning assessment. The assessment of the subcomponents of CE is conducted during the semester at regular intervals. This subcomponent represents the formative assessment of students' learning.

Component 2, Semester-end Examination (SEE): This component represents the summative assessment carried out in the form a Jury Presentation/ examination conducted at the end of the semester.

Marks obtained CE and SEE components have weightage of 40:60. (CE: 40% and SEE: 60%)

- For courses having only laboratory component, Semester End Exam will be conducted for 50 marks and converted to 30 marks (60%).
- For courses having only theory Component, Semester End Exam will be conducted for 100 marks and converted to 60 marks.
- For courses having both theory and laboratory components, Semester End Exam (Jury system) will be conducted for 100 marks and converted to 60 marks.

For common courses offered by university, 60:40 evaluation (CE: 60% and SEE: 40%) will be followed.

The complete details of Grading are given in the Academic Regulations.

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26.2. Continuous Evaluation Policies

Continuous evaluation depends on the type of the course as discussed below:

26.2.1 Theory Courses

For Theory Courses Only					
Focus of COs on each Component or Subcomponent of Evaluation					
	Component 1: CE (40% Weightage)				Component 2: SEE (60% Weightage)
Subcomponent Type ▶	Assignment 1	Assignment 2	Test	Assignment 3	SEE
CO-1					
CO-2					
CO-3					
CO-4					
CO-5					
CO-6					
The details of number of tests and creative submission to be conducted are presented in the Academic Regulations and Programme Specifications Document.					

There shall be three Assignment evaluated for 5 marks each and a mandatory Test evaluated for 25 marks. The three creative submissions can be of any of the following types:

a) Online Test
b) Assignments/Problem Solving
c) Field Assignment
d) Open Book Test
e) Portfolio
f) Reports
g) Case Study
h) Group Task
i) Jury
j) Any other

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After the four subcomponents are evaluated, the CE component marks are determined as:

CE Component Marks = Total of the marks obtained in all the four subcomponents

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26.2.2 Laboratory Course

For a laboratory course, the scheme for determining the CE marks is as under:

For Laboratory Courses Only					
Focus of COs on each Component or Subcomponent of Evaluation					
	Component 1: CE (40% Weightage)				Component 2: SEE (60% Weightage)
Subcomponent Type ▶	Creative Submission 1	Creative Submission 2	Creative Submission 3	Creative Submission 4	Laboratory SEE
CO-1					
CO-2					
CO-3					
CO-4					
CO-5					
CO-6					
The details of number of creative submissions to be conducted are presented in the Academic Regulations and Programme Specifications Document					

The subcomponents can be of any of the following types:

a) Laboratory / Clinical Work Record
b) Experiments
c) Computer Simulations
d) Creative Submission
e) Virtual Labs
f) Viva / Oral Exam
g) Lab Manual Report
h) Jury
i) Any other (e.g. combinations)

Course leaders to declare the assessment components before the commencement of the session and get approval from HoD and Dean

After the subcomponents of CE are evaluated, the CE component Marks are determined as:

CE Component Marks = Total of the four subcomponent marks (SC1+SC2+SC3+SC4)

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26.2.3 Course Having a Combination of Theory and Laboratory

For a course that contains the combination of theory and laboratory sessions, the scheme for determining the CE marks is as under:

For Combined Courses (Theory + Laboratory)					
Focus of COs on each Component or Subcomponent of Evaluation					
Course Outcome	CE (Weightage: 40 %) Four components				SEE (Weightage: 60 %)
	SC1 (Creative Submission-1)	SC2 (Creative Submission 2)	SC3(Creative Submission 3)	SC4 (Creative Submission 4)	SEE Jury
CO-1					
CO-2					
CO-3					
CO-4					
CO-5					
CO-6					
The details of number of tests and assignments to be conducted are presented in the Academic Regulations and Programme Specifications Document.					

There shall be four Creative Submission each having 10 marks each. The CE component will be collation of all the 4 creative submissions submitted by students.

The creative work submission can be of any of the following types:

a) Online Test
b) Problem Solving
c) Field Assignment
d) Open Book Test
e) Portfolio
f) Reports
g) Case Study
h) Group Task
i) Jury
j) Any other

The laboratory subcomponent can be of any of the following types:

a) Laboratory / Clinical Work Record
b) Experiments
c) Computer Simulations
d) Creative Submission
e) Virtual Labs
f) Viva / Oral Exam
g) Lab Manual Report
h) Any other (e.g. combinations)

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After the four subcomponents are evaluated, the CE component marks are determined as:

CE Component Marks = Total of the marks obtained in all the four subcomponents

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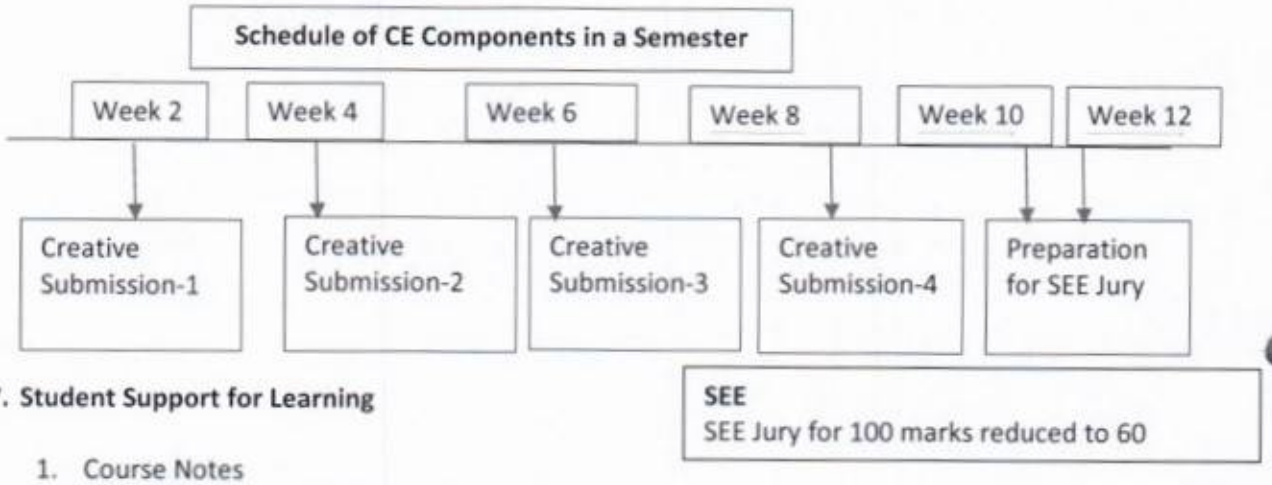
26.2.4 Ability Enhancement courses

For AECC Only		
Focus of COs on each Component or Subcomponent of Evaluation		
	Component 1: CE (60% Weightage)	Component 2: SEE (40% Weightage)
Subcomponent Type ▶	Terms Tests or Assignments	
CO-1		
CO-2		
CO-3		
CO-4		
CO-5		
CO-6		
The details of number of tests and assignments to be conducted are presented in the Academic Regulations and Programme Specifications Document.		

- Course leaders to declare the assessment components before the commencement of the session and get approval from HoD and Dean



27. Student Support for Learning

1. Course Notes
2. Reference Books in the Library
3. Magazines and Journals
4. Internet Facility
5. Computing Facility
6. Laboratory Facility
7. Workshop Facility
8. Staff Support
9. Lounges for Discussions
10. Any other support that enhances their learning

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28. Quality Control Measures

1. Review of Course Notes

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2. Review of Question Papers and Assignment Questions
3. Student Feedback
4. Moderation of Assessed Work
5. Opportunities for students to see their assessed work
6. Review by external examiners and external examiners reports
7. Staff Student Consultative Committee meetings
8. Student exit feedback
9. Subject Assessment Board (SAB)
10. Programme Assessment Board (PAB)

29. Co-curricular Activities

Students are encouraged to take part in co-curricular activities like seminars, conferences, symposia, paper writing, attending industry exhibitions, project competitions and related activities for enhancing their knowledge and networking.

30. Cultural and Literary Activities

Annual cultural festivals are held to showcase the creative talents in students. They are involved in planning and organizing the activities.

31. Sports and Athletics

Students are encouraged to take part in sports and athletic events regularly. Annual sports meet will be held to demonstrate sportsmanship and competitive spirit.

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32. Programme Map (Course-PO-PSO Map)

Sem.	Course Title	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	PSO-4
1	Elements of Design	3	3	2	3	2		1		2	2	1	3	3	3	2	1
1	Foundation Drawing and Painting	2	3		1	1					3			2	3		
1	Indian Art Appreciation	3	1		3	3					3	2	1			3	1
1	Print Making Techniques	2	3			2								1	3		
1	Studio Practice-1	1	3	1	1										3		
1	English For Communication-1 /MOOC Courses																
1	Digital Fluency																
2	Design Drawing	3	3	2	3	2			1	1	1			2	3		
2	Creativity Techniques	1	2	1											3		
2	Digital Design Basics	2	2			3					2		1	1	3		
2	Design For Social Impact	1	3	1	2	3					1	3		2	3	2	
2	Handicraft			3		3	1	2	1		2						
2	Environmental Studies																
2	Health & Wellbeing/ Social & Emotional Learning																
3	Product Photography	2			3	1			1	1		2	3	1			3
3	Digital Illustration Techniques	2	3	1	2	1			1		3		1	3	3	2	1
3	Graphic Representation Technique	2	3	1	2	1			1		3		1	3	3	2	1
3	Sculpture	2	3												3		
3	English For Communication-2 /MOOC Courses																
3	Innovation and Entrepreneurship																
3	Artificial Intelligence																
4	Photo and Video Communication	2	3		3	1						2	3	2	3	3	
4	2D Animation	2	3		2						2		1	2	3	3	1
4	Design Thinking and Need Identification	2	1	2	4	1	1							1	2		
4	Watercolor Painting	2	3			1						3	1		3		
4	Ethics and Self Awareness																
4	Professional Communication																
4	Internship/Training/Project	2	3	3	2	2	1	1	2	3	3	2	1	3	3	1	
5	Human Computer Interaction		2	3	2	3	1	2			2			3	1	2	

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5	Information Architecture		1	3	1	3					2	1	1	3	1	1	
5	UI/UX Design	3	3	3	2	2	1		2		2	2	1	3	3	2	
5	Evolution of Visual Design	3	3	2	3	3					2	3			3	3	
5	User Psychology and Behavior	2	1	3	1	3	1				2			3	1	1	
5	Project management																
5	Constitution of India and Human Rights																
5	Sports/Yoga/NSS/Cultrural/ NCC																
6	Usability Testing		2	3	3	1	2				2	2			2	2	
6	Interaction Design Group Project	2	3	3	2	2	1	1	2	3	3	2	1	3	3	1	1
6	Visual Identity and Branding	3	3	3	3	3	1				2		2	3	3	3	
6	UX- Design For Enterprise			3	2	2	1		2		2	2		3	1	2	
6	Res. Methodology																
6	Personality Development and Soft Skills																
6	Internship/Training/Project																
6	Vocational																
7	Portfolio Design and Presentation	3	2	1	1				1		3	2	1	3	2		
7	Interaction Design Project	2	3	3	2	2	1	1	2	3	3	2	1	3	3	1	1
7	Design Management and Professional Practice								2	2	1	3					3
7	Advanced UI Design	3	3	3	3	3	1				2	2	1	3	3	3	
7	Animation and Motion Graphics	2	3		2						2		1	2	3	3	1
7	Advanced Interaction Studio	3	3	1	3	3	1				2	2	1	3	3	2	
7	Gamification & UX	1	3	3	2	2	1		2		2	2		3	1	2	
7	Service Design for UX	2	2	3	2	2	1		2		2	2		3	1	2	
8	Research/Internship	2	3	3	2	2	1	1	2	3	3	2	1	3	3	1	1

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RAMAIAH UNIVERSITY OF APPLIED SCIENCES

Course Specifications

B.Des in Interaction Design

Programme Code: 419

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Batch 2022-2026

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SEMESTER 1

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Course Specifications: Elements of Design

Course Title	Elements of Design
Course Code	PDC101A
Course Type	Discipline Core
Department	Industrial Design
Faculty	Art and Design

1. Course Summary

The aim of this course is to enable students to develop visually appealing and aesthetically pleasing basic forms and shapes using the elements of design. The students are taught to analyze line and form, materials and textures, space, natural and artificial light. Applications of these elements are also taught as per function, form, focal points, rhythm, proportion, human scale and variety in unity within a given space. They are trained to analyze the contents of drawings, artworks, paintings and other creations using elements of design. The students are taught to develop compositions using the elements and principles of design to achieve aesthetic and visually pleasing forms. The students are taught about the combination of elements to create aesthetic design solutions.

2. Course Size and Credits:

Number of Credits	4
Credit Structure (Lecture: Tutorial: Practical)	1:0:3
Total Hours of Interaction	115
Number of Weeks in a Semester	15
Department Responsible	Industrial Design
Total Course Marks	100
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

- **CO-1.** Explain the basics of Design, describe the Elements of Design and significance of various elements of design
- **CO-2.** Discuss colour theory and its contextual purpose
- **CO-3.** Illustrate primitive geometric and organic shapes in different media
- **CO-4.** Apply the principles and elements of design to develop basic forms, linear, planar and volumetric characteristics of advanced form.
- **CO-5.** Critique the essence of artistic creation and Adapt emotions to portray form and expression
- **CO-6.** Demonstrate the application of design skills to create professional portfolios

4. Course Contents

Unit 1 (Awareness of Design): Introduction to Elements of design, from life to art, History, fine art and viewer's response, the creative process.

Unit 2 (Design Elements): Line: creating lines, expressive quality of line, line drawing, positive and negative areas, implies lines.
Shapes and form: Design that emphasize shape, types of shapes, sources of shapes, unfilled areas as shapes, implied shapes, holding shapes together, from shape to form, illogical use of

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forms
Space: Linear perspective, seal, over lapping and position, atmospheric perspective, illusionary space, shallow space
Texture: Actual texture, simulated texture, repetition of design elements, types of texture, rubbing and transfers, erasures
Value: Representing value gradation, from local colours to local value, local value to interpretive value, emphasis, spatial effect, emotional effect

Unit 3 (Colours): Characteristics of colour, computer colour choices, colour prejudices and colour, combination advancing and receding colours, subjective verses local colours, colour interactions

Unit 4 (Principle of design): Unity/harmony and methods of achieving it. Balance and its types ranging from symmetry, asymmetry, radial and mosaic, hierarchy scale/proportion dominance/emphasis, gradation of size and direction, repetition with variation, contrast as the juxtaposition of opposing elements, harmony, dominance as counteracting, confusion and monotony, unity in design elements, meaning and essence of artistic creations, Golden ration, Gestalt Principles

Unit 5 (Form study & Advanced forms): Use of manual tools to explore form using techniques such as bipolar spectrum etc. Expression of form, selection and combination of linear, planar and volumetric characteristics that constitute the formal elements and combining them to develop forms. Additive and subtractive nature of forms, types of forms including rectilinear and curvilinear volumes, composition of fragments, planar construction, lines and axis in space, convexity and concavity aspects of form

Unit 6 (Design and emotions): Emotional appeal, addressing user's needs, deducing emotions of the user to create forms using the elements of design, Metaphors, nature studies

Unit 7 (Evolution of design): History and design movements, Case studies of products and their importance in the evolution of design, Current and future Scenario.

Unit 8 (Application of Visual Language): Case studies, portfolio.

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5. Course Map (CO-PO-PSO Map)

	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)			
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	3	2											2			
CO-2	3													2		
CO-3	3	3	2											3		
CO-4	3	3		3		2							3			
CO-5	3	3		3	3									1		
CO-6				3						2				3		
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution																

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6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		15
Demonstrations		15
1. Demonstration using Videos	00	
2. Demonstration using Physical Models / Systems	15	
3. Demonstration on a Computer	00	
Tutorial		00
1. Tutorial	00	
Practical Work		75
1. Course Laboratory	75	
2. Computer Laboratory	00	
3. Engineering Workshop / Course/Workshop / Kitchen	00	
4. Clinical Laboratory	00	
5. Hospital	00	
6. Model Studio	00	
Others		00
1. Case Study Presentation	00	
2. Guest Lecture	00	
3. Industry / Field Visit	00	
4. Brain Storming Sessions	00	
5. Group Discussions	00	
6. Discussing Possible Innovations	00	
Term Tests, Laboratory Examination/Written Examination, Presentations		10
Total Duration in Hours		**115**

7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B.Des. (Product Design) Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions/ presentation are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2, SC3 and SC4), COs are assessed as illustrated in the following Table.

Focus of COs on each Component or Subcomponent of Evaluation					
	Component 1: CE (40% Weightage)				Component 2: SEE (60% Weightage)
Subcomponent ▶	SC1	SC2	SC3	SC4	
Subcomponent Type ▶	Creative Submission-1	Creative Submission 2	Creative Submission 3	Creative Submission 4	60 Marks
Maximum Marks ▶	10	10	10	10	
CO-1			×		×
CO-2			×		×
CO-3	×	×	×		×
CO-4	×	×	×	×	×
CO-5	×	×	×	×	×
CO-6			×	×	×
The details of SC1, SC2, SC3 and SC4 are presented in the Programme Specifications Document.					

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The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester.

Course reassessment policies are presented in the Academic Regulations document.

8. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

S. No	Curriculum and Capabilities Skills	How imparted during the course
1.	Knowledge	Classroom lectures
2.	Understanding	Class Room Lectures
3.	Critical Skills	Creative Work Submission
4.	Analytical Skills	Classroom Lectures, Creative Work Submission and Examination
5.	Problem Solving Skills	Examination and Creative Work Submission
6.	Practical Skills	Class Room Lectures, Laboratory and Field
7.	Group Work	Work
8.	Self-Learning	Class Room Interaction
9.	Written Communication Skills	Creative Work Submission and Examination
10.	Verbal Communication Skills	Creative Work Submission and Examination
11.	Presentation Skills	Presentation
12.	Behavioral Skills	Presentation
13.	Information Management	Interaction with peers and tutors
14.	Personal Management	Creative Work Submission, Presentation and Examination
15.	Leadership Skills	Interaction with peers and tutors

9. Course Resources

a. Essential Reading

1. Course notes
2. Oei, L. and Kegel, C. D. (2002) The Elements of Design, Rediscovering Colours, Textures, Forms and Shapes, Thames and Hudson
3. Paul Zelanski, mary Pat Fisher(1996) Design principles and Problems, Harcourt Brace Collage Publishers, USA
4. Hannah, G. (2002) Elements of Design: Rowena Reed Kostellow and the Structure of Visual Relationships, Princeton Architectural Press

b. Recommended Reading

1. Evans, P. and Thomas, A. (2012) Exploring the Elements of Design, Thomson Australia
2. Kegel de, cecile, (2007) Elements of Design by Loan oei, Thames and Hudson
3. Eisemann , L. (2000) Pantone Guide to Communicating With Color, North light, Ohio

c. Magazines and Journals

1. Journal of Experimental Psychology: Human Perception and Performance, APA Journals
2. Journal of Design History, Oxford University
3. Form

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4. Domus

d. Websites

1. www.magazinedesigning.com
2. www.digital-web.com/articles/elements_of_design
3. www.pantone.com/pages/pantone/index.aspx
4. www.cis.rit.edu/mcsl
5. https://www.coursera.org/

e. Other Electronic Resources

1. https://ocw.mit.edu/index.htm

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Course Specifications: Foundation Drawing and Painting

Course Title	Foundation Drawing and Painting
Course Code	PDC102A
Course Type	Discipline Core
Department	Industrial Design
Faculty	Art and Design

1. Course Summary

The aim of this course is to enable the students to learn various drawing and painting techniques and methods to represent the physical world in a visual form. The students are taught the procedure of observation and studying the relationship of planes while evaluating proportions. Students are taught applied colour theory, colour palettes and direct painting techniques. They are also taught to analyze different representation techniques in various mediums. Students are trained to acquire the skills to transpose three-dimensional objects into their two-dimensional equivalents and translate these observations to paper

2. Course Size and Credits:

Number of Credits	04
Credit Structure (Lecture: Tutorial: Practical)	1:0:3
Total Hours of Interaction	105
Number of Weeks in a Semester	15
Department Responsible	Industrial Design
Total Course Marks	100
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

CO-1. Sketch basic shapes in terms of geometric and organic forms
CO-2. Demonstrate construction of object, composition and human anatomy as per proportions
CO-3. Illustrate depth in composition using tonal gradation and value using different media
CO-4. Demonstrate usage of gestures in live drawing Demonstrate the application of various painting techniques in different media
CO-5. Create finished drawings and paintings of exhibition quality
CO-6. Judge proportion, scale and spatial relationships

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4. Course Contents

Unit 1 (Contour Drawing): Curvilinear & rectilinear lines, implied or actual lines, expression, lines used as value, contour lines or outlines, separating line, shadow line, hatching, negative space, representative lines, grouped objects, contour line, its types, elevations and depths, hatching and its techniques and variations
(Introduction to painting): Applied colour theory, understanding different palettes, basic water colour and oil painting techniques, direct painting techniques and painting of still life and models.

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Unit 2 (Live Drawing): Still life anatomy, proportions, composition, human anatomy- muscle structure, bones, proportion, etc., animal and birds- formation and construction, gestures of living and non-living objects and their dynamisms.

Unit 3 (Basic Drawing): Basic shapes- organic, geometric, including their size, structure, anatomy, repetition, orientation etc., subtractive drawing- natural, artificial, co-occurrence, additive drawing - natural, artificial, co-occurrence, Positive and negative shapes - natural, artificial, co-occurrence
Painting techniques like wet on wet, wet on dry, methods inherent in watercolor and acrylic painting media such as colour interaction, transparency and opacity.

Unit 4 (Elements of Drawing and Composition): Tonal contrast, repetition and variety, symmetry, proportion, focal points, gravity, overlapping, visual balance, framing eye-movement, passage, unity of objects, using tangents, harmony

Unit 5 (Object Drawing): Outdoor real-life object sketching and painting, indoor still life sketching and painting, life-sketching of humans, animals and birds

Unit 6 (Compositing): Picking a good course, choosing the size, creating crop, placement, controlling lines, balancing positive and negative space, adding contrast, simplifying distracting elements, choosing colors deliberately

5. Course Map (CO-PO-PSO Map)

	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)			
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	2	3											1	2		
CO-2		2														
CO-3		3														
CO-4	1				1											
CO-5		1								2			3			
CO-6		1														
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution																

6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		05
Demonstrations		20
1. Demonstration using Videos	06	
2. Demonstration using Physical Models / Systems	14	
3. Demonstration on a Computer	00	
Tutorial		00
1. Tutorial	00	
Practical Work		60
1. Course Laboratory	60	
2. Computer Laboratory	00	

3. Engineering Workshop / Course/Workshop / Kitchen	00	
4. Clinical Laboratory	00	
5. Hospital	00	
6. Model Studio	00	
Others		
1. Case Study Presentation	05	10
2. Guest Lecture	05	
3. Industry / Field Visit	00	
4. Brain Storming Sessions	00	
5. Group Discussions	00	
6. Discussing Possible Innovations	00	
Term Tests, Laboratory Examination/Written Examination, Presentations		10
Total Duration in Hours		**105**

7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B.Des. (Product Design) Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions/ presentation are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2, SC3 and SC4), COs are assessed as illustrated in the following Table.

Focus of COs on each Component or Subcomponent of Evaluation					
	Component 1: CE (40% Weightage)				Component 2: SEE (60% Weightage)
Subcomponent ▶	SC1	SC2	SC3	SC4	
Subcomponent Type ▶	Creative Submission-1	Creative Submission 2	Creative Submission 3	Creative Submission 4	SEE(60 Marks)
Maximum Marks ▶	10	10	10	10	
CO-1	x	x	×		×
CO-2		x	×		×
CO-3	x		×		×
CO-4			×	×	×
CO-5		x	×	×	×
CO-6		x	×	×	×
The details of SC1, SC2, SC3 and SC4 are presented in the Programme Specifications Document.					

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The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester.

Course reassessment policies are presented in the Academic Regulations document.

8. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

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S. No	Curriculum and Capabilities Skills	How imparted during the course

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1.	Knowledge	Classroom lectures
2.	Understanding	Class Room Lectures
3.	Critical Skills	Creative Work Submission
4.	Analytical Skills	Classroom Lectures, Creative Work Submission and Examination
5.	Problem Solving Skills	Examination and Creative Work Submission
6.	Practical Skills	Class Room Lectures, Laboratory and Field
7.	Group Work	Work
8.	Self-Learning	Class Room Interaction
9.	Written Communication Skills	Creative Work Submission and Examination
10.	Verbal Communication Skills	Creative Work Submission and Examination
11.	Presentation Skills	Presentation
12.	Behavioral Skills	Presentation
13.	Information Management	Interaction with peers and tutors
14.	Personal Management	Creative Work Submission, Presentation and Examination
15.	Leadership Skills	Interaction with peers and tutors

9. Course Resources

a. Essential Reading

1. Course notes
2. Oei, L. and Kegel, C. D. (2002) The Elements of Design, Rediscovering Colours, Textures, Forms and Shapes, Thames and Hudson
3. Paul Zelanski, mary Pat Fisher(1996) Design principles and Problems, Harcourt Brace Collage Publishers, USA
4. Goswamy, B.N. (2005) Domains of Wonder: Selected Masterworks of Indian Painting, San Diego Museum of Art

b. Recommended Reading

1. Hannah, G. (2002) Elements of Design: Rowena Reed Kostellow and the Structure of Visual Relationships, Princeton Architectural Press Don Taylor (2005) Custom Auto Interiors, California Bill's Automotive Handbooks
2. Schuessler, M. (2014) Foundational Arts: Mural Painting and Missionary Theater in New Spain, University of Arizona Press
3. The Public Catalogue Foundation, (2010) Oil Paintings in Public Ownership in Northumberland, Tees Valley & Tyne and Wear, The Public Catalogue Foundation
4. Ellis, A. and Roe, S (2006) Oil Paintings in Public Ownership in Norfolk, Public Catalogue Foundation

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c. Magazines and Journals

1. Journal of Experimental Psychology: Human Perception and Performance, APA Journals
2. Journal of Design History, Oxford University

d. Websites

1. www.magazinedesigning.com
2. www.digital-web.com/articles/elements_of_design
3. www.pantone.com/pages/pantone/index.aspx
4. www.cis.rit.edu/mcsl

e. Other Electronic Resources

1. https://ocw.mit.edu/index.htm

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Course Specifications: Print Making Techniques

Course Title	Print Making Techniques
Course Code	PDC103A
Course Type	Discipline Core
Department	Industrial Design
Faculty	Art and Design

1. Course Summary

The aim of this course is to enable students to explore various techniques and processes of printmaking. The students are taught basic methods of colour separation, shade preparation and mixing of colours. The students are trained to create artworks using traditional and digital methods of printmaking.

2. Course Size and Credits:

Number of Credits	4
Credit Structure (Lecture: Tutorial: Practical)	1:0:3
Total Hours of Interaction	105
Number of Weeks in a Semester	15
Department Responsible	Industrial Design
Total Course Marks	100
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

- **CO-1.** Describe various methods of printmaking
- **CO-2.** Explain printmaking materials and techniques
- **CO-3.** Compare the mode of print making techniques
- **CO-4.** Generate required palette of colours using primary hues with the correct mixing techniques
- **CO-5.** Develop print artworks using traditional and modern methods of printmaking
- **CO-6.** Create works of art that employ the elements of Art and Design

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4. Course Contents

Introduction to printmaking: General introduction to wiping, carving, registration, examples and types and their overall process.

Relief printmaking: Demonstrate various techniques for transferring drawings to the plate; become familiar with the different qualities of carving surfaces (linoleum, hard and soft woods, long and engrains); exercise safe and effective use of carving tools(knives, gouges, etc.) and maintain tools, demonstrate various relief print techniques such as reduction, multiple block prints

Introduction to screen printing: Screen-printing techniques in this versatile medium. Silkscreen from hand drawn, photographic, and digital imagery on paper, fabric, and other Surfaces in a variety of colours. Handmade and photographic stencils. Screen preparation, colour separation for multi-plate prints, correct colour mixing, registration, screen mono printing, and basic

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methods of printing onto T-shirts

Solar plate etching: Also known as photopolymer etching, this is an easy and innovative way to create intaglio and photo etchings. Hand-drawn, photo-based, or digital images are exposed onto light-sensitive polymer plates, which are developed in water and printed on an etching press.

Monotype: Effectively use ink rollers and subtractive tools; use brush and ink and other tools for the application of ink; explore possibilities for multiple passes with roller and multiple passes with the plate.

Intaglio: Demonstrate sound techniques for dry or non-acid intaglio processes such as dry point and engraving; properly prepare plate for etching (beveling, filing, coating); demonstrate sound procedures for effective biting, heating, inking, wiping and pulling of plates; explore use of other intaglio methods such as soft ground, aquatint.

Digital printmaking: inkjet popular technology based upon the ejection of small drops of fluid by an actuator that is controlled by a digital computer system, Piezo, Thermal, and Continuous-Flow Inkjet Technologies, electrophotography based upon the deposition of either dry powder or liquid toner onto a photoreceptive surface, thermal transfer based upon using heat to transfer colour from thin carrier film to a rece

5. Course Map (CO-PO-PSO Map)

	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)			
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	3												2			
CO-2				3												
CO-3					2											
CO-4				3												
CO-5		2									1	1			2	
CO-6				1					1							2
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution																

6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		05
Demonstrations		15
1. Demonstration using Videos	00	
2. Demonstration using Physical Models / Systems	00	
3. Demonstration on a Computer	15	
Tutorial		00
1. Tutorial	00	
Practical Work		75
1. Course Laboratory	75	
2. Computer Laboratory	00	
3. Engineering Workshop / Course/Workshop / Kitchen	00	

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4. Clinical Laboratory	00	
5. Hospital	00	
6. Model Studio	00	
Others		
1. Case Study Presentation	00	
2. Guest Lecture	00	
3. Industry / Field Visit	00	00
4. Brain Storming Sessions	00	
5. Group Discussions	00	
6. Discussing Possible Innovations	00	
Term Tests, Laboratory Examination/Written Examination, Presentations		10
Total Duration in Hours		**105**

7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B.Des. (Product Design) Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions/ presentation are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2, SC3 or SC4), COs are assessed as illustrated in the following Table.

Focus of COs on each Component or Subcomponent of Evaluation					
	Component 1: CE (40% Weightage)				Component 2: SEE (60% Weightage)
Subcomponent ▶	SC1	SC2	SC3	SC4	
Subcomponent Type ▶	Creative Submission-1	Creative Submission 2	Creative Submission 3	Creative Submission 4	SEE(60 Marks)
Maximum Marks ▶	10 marks	10 marks	10 marks	10 marks	
CO-1			×		×
CO-2			×		×
CO-3			×		×
CO-4	×	×	×	×	×
CO-5	×	×	×	×	×
CO-6	×	×	×	×	×
The details of SC1, SC2, SC3 and SC4 are presented in the Programme Specifications Document.					

The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester.

Course reassessment policies are presented in the Academic Regulations document.

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8. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

S. No	Curriculum and Capabilities Skills	How imparted during the course
1.	Knowledge	Classroom lectures
2.	Understanding	Class Room Lectures
3.	Critical Skills	Creative Work Submission

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4.	Analytical Skills	Classroom Lectures, Creative Work Submission and Examination
5.	Problem Solving Skills	Examination and Creative Work Submission
6.	Practical Skills	Class Room Lectures, Laboratory and Field
7.	Group Work	Work
8.	Self-Learning	Class Room Interaction
9.	Written Communication Skills	Creative Work Submission and Examination
10.	Verbal Communication Skills	Creative Work Submission and Examination
11.	Presentation Skills	Presentation
12.	Behavioral Skills	Presentation
13.	Information Management	Interaction with peers and tutors
14.	Personal Management	Creative Work Submission, Presentation and Examination
15.	Leadership Skills	Interaction with peers and tutors

9. Course Resources

a. Essential Reading

1. Course notes
2. Saff, D. and Sacilotto, D. (1978) Printmaking: History and Process, Donald Deli, Holt, Rinehart and Winston.

b. Recommended Reading

1. Devon, M. (2009) Tamarind Techniques for Fine Art Lithography, Harry N. Abrams
2. Darlow, A. (2007) 301 Inkjet Tips and Techniques: An Essential Printing Resource for Photographers, Cengage Learning PTR
3. ohnson, H. (2004) Mastering Digital Printing, 2nd edn, Cengage Learning PTR.
4. Bethmann, D. (1997) Making Prints from Nature (Storey's Country Wisdom Bulletin), Storey Publishing, LLC.

c. Magazines andJournals

1. Libro de Artista, Universidad Nacional Autónoma de México,
2. Spain Printmaking Today, Cello Press Limited, U.K.
3. World Printmakers
4. World of Woodblock Printmaking
5. Magical Secrets, Crown Point Press, US

d. Websites

www.printeresting.org
www.artmondo.net/printworks

e. Other Electronic Resources

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Course Specifications: Studio Practice

Course Title	Studio Practice
Course Code	PDM101A
Course Type	Skill Enhancement Courses (SEC)- Skill based
Department	Industrial Design
Faculty	Art and Design

1. Course Summary

The aim of this course is to enable the students to understand the tools, techniques and processes involved in model making. An overview of materials like clay, Plaster of Paris, sunboard, cardboard and sheet metal used in model making are covered. Students are trained to create form exploration models using basic model making tools and materials.

2. Course Size and Credits:

Number of Credits	2
Credit Structure (Lecture: Tutorial: Practical)	1:0:1
Total Hours of Interaction	45
Number of Weeks in a Semester	15
Department Responsible	Industrial Design
Total Course Marks	50
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

CO-1. Describe various processes involved in physical model making
CO-2. Explain various tools and machines used for model
CO-3. Choose appropriate materials to achieve desired form and finish in a physical model
CO-4. Create form exploration models with different materials

4. Course Contents

Unit 1 (Softwood sections) : Various cedar like yellow cedar used for furniture, veneer, European redwood used for cupboard shelves.

Unit 2 (Cardboard/Mount board models): Developing contours and layouts, handling cardboard like cutting , sticking, bending, applying dimensions like papier-mache , plaster, mass formation glue, folding patterns, joining patterns, pattern creation after formation.

Unit 3 (Styrene/Acrylic/Sunboard)- Types of sheet, gauges, skin types for various purposes, cautionary considerations while using material, obtaining sheets, storing sheets, handling sheets like cutting, bending, sticking, glues and types for sheet work, layout development.

Unit 4 (Clay - Characteristics and properties), Types of clays- traditional and modern, pottery clay and modelling clay, non-kiln fired clay, various cutting tools and surface finishing tools, joining clay, storing clay, restoring clay by applying veneer and varnish quotes.

Unit 5 (Plaster Of Paris) - Classification of Plaster of Paris, acquiring materials, storing materials, materials used for the basic mould like wash basin, raw POP, soap spoon, the procedure of molding POP, One piece mould, two piece mould, multiple piece mould, weight reduction techniques.

Unit 6 (MDF/HDF (MILD/HIGH DENSITY FOAM)- Shaping process like slicing with sharp knives

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or a hot-wire cutter, sawing with serrated blades, rasping with files, and smoothing with sandpaper, applying surface finish and texture .

Unit 7 (Bamboo)-Mechanical Properties like Bamboo, a Hollow Tube , Nature's Structural Design, Modelling and Calculations, The Art of Modelling.

Unit 8(Metal) - Brass and its properties and handling techniques, Brass shim Also known as 'sculptor's shim' or 'brass fencing', model making and casting materials

Unit 9(Introduction to Tools and Machines) : Various tools used in the modeling industry pertaining to 2D as well as 3D models, cutting , joining, bending, surface finishing of materials like wood, clay, plaster, Styrofoam, metals. Processes like Vacuum forming, Planning, grinding, Clay oven-baking , pottery wheel, sheering and bending machine, welding, soldering, wire cut, table and hand drills, glass cutting.

Unit 10 (Details): Paper/Cartridge Sheet Craft-Modeling Techniques, Model Copies, Scoring, Cutting, Folding, Edging, Dry Fitting, Reinforcing, Gluing, Basing, Storing. Tools for handling paper

Unit 11 (Finishing) Like self-healing mat, hobby knives, scissors, metal rulers, permanent ink pens, glue. Types of paper used for printing, paper prototyping, packaging design, various gauges in paper, handmade paper

5. Course Map (CO-PO-PSO Map)

	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)			
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	PSO-4
CO-1		3		1									1	3		
CO-2		2												2		
CO-3		3			2									3		
CO-4		2		2	1								2			
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution																

6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		0
Demonstrations		0
1. Demonstration using Videos		
2. Demonstration using Physical Models / Systems	00	
3. Demonstration on a Computer	00	
Tutorial		00
1. Tutorial	00	
Practical Work		00
1. Course Laboratory	00	
2. Computer Laboratory	00	
3. Engineering Workshop / Course/Workshop / Kitchen	10	
4. Clinical Laboratory	00	
5. Hospital	00	
6. Model Studio	30	
Others		00
1. Case Study Presentation	00	

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2. Guest Lecture	00	
3. Industry / Field Visit	00	
4. Brain Storming Sessions	00	
5. Group Discussions	00	
6. Discussing Possible Innovations	00	
Term Tests, Laboratory Examination/Written Examination, Presentations		5
Total Duration in Hours		**45**

7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B.Des. (Product Design) Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions/presentation are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2, SC3), COs are assessed as illustrated in the following Table.

Focus of COs on each Component or Subcomponent of Evaluation					
	Component 1: CE (40% Weightage)				Component 2: SEE (60% Weightage)
Subcomponent ▶	SC1	SC2	SC3	SC4	
Subcomponent Type ▶	Creative Submission-1	Creative Submission 2	Creative Submission 3	Creative Submissio n 4	50 Marks
Maximum Marks ▶	10 Marks	10 Marks	10 Marks		
CO-1					×
CO-2	×	×	×	×	×
CO-3	×	×	×	×	×
CO-4	×	×	×	×	×
CO-5					×
The details of SC1, SC2, SC3 and SC4 are presented in the Programme Specifications Document.					

The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester.

Course reassessment policies are presented in the Academic Regulations document.

8. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

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S. No	Curriculum and Capabilities Skills	How imparted during the course
1.	Knowledge	Laboratory
2.	Understanding	Laboratory
3.	Critical Skills	Laboratory Instructions and Demonstrations
4.	Analytical Skills	Laboratory and Examination
5.	Problem Solving Skills	Laboratory and Examination
6.	Practical Skills	Laboratory
7.	Group Work	Laboratory
8.	Self-Learning	Laboratory
9.	Written Communication Skills	Laboratory and Examination
10.	Verbal Communication Skills	Laboratory and Examination
11.	Presentation Skills	Presentation
12.	Behavioral Skills	Interaction with peers and tutors
13.	Information Management	Examination and presentation
14.	Personal Management	Interaction and discipline
15.	Leadership Skills	Time management and achieving the learning outcomes

9. Course Resources

a. Essential Reading

1. Course notes

2 (2012) Prototyping and Model making for Product Design,

b Laurence King Publishers Recommended Reading

1. Yadav, S.K. (2006) Workshop Practice, Discovery Publishing House.
2. Agostinho, S., Bennett, S., Lockyer, L. and Harper, B. (2011) 'The Future of Learning
3. Design', Learning, Media and Technology
4. Beetham, H.and Sharpe, R. (2007) Rethinking Pedagogy for a Digital Age, Routledge.

C Magazines and Journals

d Websites

E Other Electronic Resources

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Course Specifications: Indian Art Appreciation

Course Title	Indian Art Appreciation
Course Code	PDO101A
Course Type	Open Elective Course
Department	Industrial Design
Faculty	Art and Design

1. Course Summary

The aim of this course is to enable students to understand the different forms of Indian art. The students are taught about key concepts, principles and techniques of aesthetics and art. The students are also taught about different Indian art forms such as architecture, tribal and folk art, sculpture, painting and writing of past and modern era. They are trained to use aesthetics and sensitivities to critique works of art.

2. Course Size and Credits:

Number of Credits	03
Credit Structure (Lecture: Tutorial: Practical)	3:0:0
Total Hours of Interaction	55
Number of Weeks in a Semester	15
Department Responsible	Industrial Design
Total Course Marks	100
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

CO-1. Explain the key concepts, principles and techniques of art.
CO-2. Discuss different traditional and contemporary Indian art forms.
CO-3. Evaluate the impact of art on human life and culture
CO-4. Analyze various Indian craft forms and techniques
CO-5. Critique the works of art.

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4. Course Contents

Unit 1 (Art History): Basic premises, key concepts, definite principles and techniques of art. Methods of art enquiry in a historiographical framework, ways in which Indian art has been understood during the past two centuries.

Unit 2 (Aesthetics and Art Theory): Aesthetic theories, texts, and art practice, shastric concepts and precepts and their role in the understanding of Indian art. An introduction to the nature of art and aesthetic experience, worldview and artistic expression, aesthetics in a historical perspective.

Unit 3 (Early Indian Art and Architecture): Early Indian architecture, origin and development of the stupa, evolution of the rock-cut caves, evolution of temple architecture, imperial architecture during Sultanate & Mughal rule, colonial & modern architecture

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Unit 4 (Tribal and Folk Arts of India): Images in metal, woodcarving, terracotta, textile and other mediums including rock art and ritual paintings of various regions.

Unit 5 (Painting): Study of ancient and medieval Indian painting. Buddhist mural paintings of Ajanta and Bagh, mural painting in Badami, Kanchipuram, Panamalai, Tanjore, and Sittanavasal. Study of Western Indian (Jaina) manuscript painting and Eastern Indian (Pala) painting. Mughal paintings, Rajasthani paintings of Mewar, Bundi, Kota, Kishangarh, Bikaner and Jaipur. Pahari paintings with special emphasis on Basohli, Guler and Kangra schools.

Unit 6 (Writings of Important Thinkers): Bharata's Natyashastra, Prachina and Navina schools of Sanskrit poetics, Dhvani and Rasa in the writings of Anandavardhana and Abhinavagupta, canons of Indian art and their relationship to art practice, poetic metaphors in Indian sculpture and painting

Unit 7 (Modern Indian Art): Modernity in Indian art, indigenization and the trends in 1950s and 1960s; trends in abstraction since the 1970s; the 20th & 21st century contemporary trends towards globalization

5. Course Map (CO-PO-PSO Map)

	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)			
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	2									1					2	
CO-2	1									1		2	1			
CO-3	1				2							1				2
CO-4	3									1			1			
CO-5					3					1		1				3
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution																

6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		39
Demonstrations		00
1. Demonstration using Videos	00	
2. Demonstration using Physical Models / Systems	00	
3. Demonstration on a Computer	00	
Tutorial		00
1. Tutorial	00	
Practical Work		00
1. Course Laboratory	00	
2. Computer Laboratory	00	
3. Engineering Workshop / Course/Workshop / Kitchen	00	
4. Clinical Laboratory	00	

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5. Hospital	00	
6. Model Studio	00	
Others		06
1. Case Study Presentation	03	
2. Guest Lecture	00	
3. Industry / Field Visit	00	
4. Brain Storming Sessions	00	
5. Group Discussions	03	
6. Discussing Possible Innovations	00	
Term Tests, Laboratory Examination/Written Examination, Presentations		10
Total Duration in Hours		**55**

7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B.Des. (Product Design) Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2, SC3 or SC4), COs are assessed as illustrated in the following Table.

Focus of Cos on each Component or Subcomponent of Evaluation					
	Component 1: CE (40% Weightage)				Component 2: SEE (60% Weightage)
Subcomponent▶	SC1	SC2	SC3	SC4	
Subcomponent Type ▶	Assignment 1	Assignment 2	Test	Assignment 3	SEE(100 Marks)
Maximum Marks▶	5	5	25	5	
CO-1	×		×		×
CO-2	×		×		×
CO-3	×	×	×	×	×
CO-4		×	×	×	×
CO-5		×		×	×

The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester.

Course reassessment policies are presented in the Academic Regulations document.

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8. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

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S. No	Curriculum and Capabilities Skills	How imparted during the course
1.	Knowledge	Classroom lectures
2.	Understanding	Class Room Lectures
3.	Critical Skills	Assignment and Examination
4.	Analytical Skills	Assignment and Examination
5.	Problem Solving Skills	Assignment and Examination
6.	Practical Skills	Class Room Lectures, Assignment

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		and Examination and Field Work
7.	Group Work	Class Room Interaction
8.	Self-Learning	Assignment and Examination
9.	Written Communication Skills	Assignment and Examination
10.	Verbal Communication Skills	Presentation
11.	Presentation Skills	Class Room Interaction, Field Work
12.	Behavioral Skills	Field Work, Presentation
13.	Information Management	Assignment and Examination
14.	Personal Management	Class Room Interaction and Field Work
15.	Leadership Skills	Time management and achieving the learning outcomes

9. Course Resources

a. Essential Reading

1. Course notes
2. Coomaraswamy, A. (2000) History of Indian and Indonesian Art, Kessinger Publishing
3. Mitter, P. (2001), Indian Art, Oxford University Press

b. Recommended Reading

1. Singhania, N (2018) Indian Art and Culture, 2nd Edition, McGraw Hill Education (India) Private Limited
2. Arnheim, R. (2004) Art and Visual Perception: A Psychology of the Creative Eye, First Edition, Fiftieth Anniversary Printing edition, University of California Press
3. Januszczak, W. (1996) Techniques of the Great Masters of Art, Chartwell Books, Inc
4. Schama, S. (2006) The Power of Art, Ecco
5. DePaola, T. (1996) The Legend of the Indian Paintbrush, Puffin Books

c. Magazines and Journals

1. ART India, The Art News Magazine of India
2. Indian Contemporary Art Journal
3. Journal of Indian Art

d. Websites

1. https://www.theartnewspaper.com/keywords/indian-art
2. https://www.thebetterindia.com/topics/art/fine-arts/

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Course Specifications: Environmental Studies

Course Title	Environmental Studies
Course Code	BTN101A
Course Type	Ability Enhancement Compulsory Course
Department	Product Design
Faculty	Art and Design

1. Course Summary

This course deals with essential aspects of environmental studies. The students are taught various issues associated with natural resources and concepts of ecosystems, conservation of the biodiversity and environmental pollution. The students also learn about social issues associated with the environment and the impact of human population on the environment.

2. Course Size and Credits:

Number of Credits	02
Credit Structure (Lecture:Tutorial:Practical)	2:0:0
Total Hours of Interaction	40
Number of Weeks in a Semester	15
Department Responsible	Industrial Design
Total Course Marks	100
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

- **CO-1.** Define the multidisciplinary nature of environmental studies
- **CO-2.** Classify and explain the various natural resources and their associated problems, ecosystems and environmental pollution
- **CO-3.** Examine the various social issues pertaining to the environment including sustainable development and energy issues
- **CO-4.** Apply the requisite knowledge to demonstrate biodiversity at local, national and Global levels
- **CO-5.** Analyze and document the environmental assets for a given location
- **CO-6.** Assess the impact of human population on the environment

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4. Course Contents

Unit 1 (Environmental studies): Definition, scope and importance, need for public awareness

Unit 2 (Natural resources): Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems, use and exploitation, environmental effects of extracting and using mineral resources

Unit 3 (Energy resources): Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources including case studies

Unit 4 (Land resources): Land as a resource, land degradation, man induced landslides, soil

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erosion and desertification, role of an individual in conservation of natural resources, equitable use of resources for sustainable lifestyles.

Unit 5 (Ecosystems): Concept of an ecosystem, Structure and function of an ecosystem, producers, consumers and decomposers, energy flow in the ecosystem, ecological succession, food chains, food webs and ecological pyramids, introduction, types, characteristic features, structure and function of forest ecosystem, grassland ecosystem, desert ecosystem, aquatic ecosystems including ponds, streams, lakes, rivers, ocean estuaries.

Unit 6 (Biodiversity and its conservation): Introduction, definition, genetic, species and ecosystem diversity, bio geographical classification of india, value of biodiversity, consumptive use, productive use, social, ethical aesthetic and option values, biodiversity at global, national and local levels. threats to biodiversity: habitat loss, poaching of wildlife, endangered and endemic species of India

Unit 7 (Environmental Pollution): Definition, causes, effects and control measures of air, water pollution, soil, marine, noise, thermal and nuclear pollution, solid waste management, causes, effects and control measures of urban and industrial wastes, prevention of pollution and pollution case studies.

Unit 8 (Disaster management): Floods, earthquake, cyclone and landslides

Unit 9 (Social Issues and the Environment): From unsustainable to sustainable development, urban problems and related to energy, water conservation, rain water harvesting, watershed management, resettlement and rehabilitation of people, case studies.

Unit 10 (Environmental ethics): Issues and possible solutions, climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies, wasteland reclamation, consumerism and waste products, environmental protection act, act, water act, wildlife protection act, forest conservation act, issues involved in enforcement of environmental legislation and public awareness

Unit 11 (Human Population and the Environment): Population growth, variation among nations, environment and human health, human rights, value education, women and child welfare, role of information technology in environment and human health, case studies

5. Course Map (CO-PO-PSO Map)

	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)			
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	PSO-4
CO-1						1										1
CO-2							3									1
CO-3							3									1
CO-4						1										1
CO-5						1										1
CO-6						1										1
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution																

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6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		26
Demonstrations		00
1.Demonstration usingVideos	00	
2. Demonstration using PhysicalModels / Systems	00	
3. Demonstration on a Computer	00	
Numeracy		00
1. Solving Numerical Problems	00	
Practical Work		00
1. Course Laboratory	00	
2. Computer Laboratory	00	
3. Engineering Workshop / Course/Workshop / Kitchen	00	
4. Clinical Laboratory	00	
5. Hospital	00	
6. Model Studio	00	
Others		04
1. Case Study Presentation	04	
2. Guest Lecture	00	
3. Industry / Field Visit	00	
4. Brain Storming Sessions	00	
5. Group Discussions	00	
6. Discussing Possible Innovations	00	
Term Tests,Laboratory Examination/Written Examination,Presentations		10
Total Duration in Hours		**40**

7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B. Des. (Product Design) Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions / presentations are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2, SC3 or SC4), COs are assessed as illustrated in the following Table.

Focus of Cos on each Component or Subcomponent of Evaluation					
	Component 1: CE (60% Weightage)				Component 2: SEE (40% Weightage) (2 hrs)
Subcomponent▶	SC1	SC2	SC3	SC4	
Subcomponent Type ▶	Presentation	Assignment/Quiz	Test	Assignment	60 Marks
Maximum Marks▶	10	10	10	10	
CO-1	×		×		×
CO-2	×		×		×
CO-3	×	×	×	×	×
CO-4		×		×	×
CO-5		×		×	

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CO-6		×		×	×

The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester.

Course reassessment policies are presented in the Academic Regulations document.

8. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

S. No	Curriculum and Capabilities Skills	How imparted during the course
1.	Knowledge	Classroom lectures
2.	Understanding	Classroom lectures, Self-study
3.	Critical Skills	Assignment
4.	Analytical Skills	Assignment
5.	Problem Solving Skills	Assignment, Examination
6.	Practical Skills	Assignment
7.	Group Work	--
8.	Self-Learning	Self-study
9.	Written Communication Skills	Assignment, Examination
10.	Verbal Communication Skills	--
11.	Presentation Skills	--
12.	Behavioral Skills	--
13.	Information Management	Assignment
14.	Personal Management	--
15.	Leadership Skills	--

9. Course Resources

a. Essential Reading

1. Course notes
2. Bharucha, E. (2004) Environmental Studies. New Delhi: University Grants Commission

b. Recommended Reading

1. Jadhav, H. and Bhosale, V. M. (1995) Environmental Protection and Laws. Delhi: Himalaya Publishing House

c. Magazines and Journals

1. The Green Guide, Natural Geographic Society
2. Sanctuary Asia
3. Indian Journal of Environmental Protection

d. Websites

e. Other Electronic Resources

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Course Specifications: Creativity Techniques

Course Title	Creativity Techniques
Course Code	PDC104A
Course Type	Discipline Core
Department	Industrial Design/Fashion Design
Faculty	Art and Design

1. Course Summary

The aim of this course is to enable the students to explore creativity techniques to generate original ideas. The students are taught to use ideation methods such as brainstorming, lateral thinking, mind-mapping and concept mapping. The students are trained to develop ideas and evaluate them through creative solutions.

2. Course Size and Credits:

Number of Credits	02
Credit Structure (Lecture: Tutorial: Practical)	2:0:0
Total Hours of Interaction	30
Number of Weeks in a Semester	15
Department Responsible	Industrial Design
Total Course Marks	50
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

CO-1. Describe the creative thinking process for generating original ideas
CO-2. Choose appropriate creative methods based on the requirements
CO-3. Apply creative techniques for idea generation
CO-4. Analyze and evaluate creative solutions
CO-5. Develop creative solutions for the given requirements
CO-6. Develop lateral thinking ability to solve problems

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4. Course Contents

Unit 1 (Introduction): A brief introduction to the available methods and techniques for identification, organization and implementation of ideas, criteria applied to select a particular method or tool for idea implementation

Unit 2 (Ideation): Introduction to ideation and exercises like brainstorming, scenario-building, body-storming, idea clustering, mind-mapping, concept mapping and exploration of new creative techniques.

Unit 3 (Creative elicitation methods): Creative elicitation game and idea gathering through understanding problem solution, derivative idea, symbiotic idea, revolutionary idea, serendipitous discovery, targeted innovation in term of goal-based, innovative thinking with an artistic approach, philosophical idea generation and their implementation, computer-assisted discovery through selective programs for creativity analysis

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Unit 4 (Evaluation): Details in procedural techniques for evaluating and validating ideation process. procedure like concept mapping, evaluation matrix, analysis and evaluation through processes, criteria generation for evaluation, their mapping and selection, lateral thinking and the process of involving lateral thinking for evaluation.

Unit 5 (Concept development and practices): User profiles, experience models, scenarios and storyboarding, structured critiques like 6 hats by Edward de Bono, "rapid" prototyping, black cylinder experiment, targeted user-profiles, user-groups, selecting user-groups and defining a group persona for application of ideas to practice.

Unit 6 (Digital tools for evaluation): Feature and Function Matrices, process and task flows, case studies in task based matrices, examples and case studies of evaluation through matrices

5. Course Map (CO-PO-PSO Map)

	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)			
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	2	2											2			
CO-2		1										2	1			
CO-3		2		2												
CO-4		2	2			1				2			1			
CO-5		2	2		3								2	2	1	
CO-6			2		3								2	1	1	
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution																

6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		16
Demonstrations		00
1.Demonstration using Videos	00	
2. Demonstration using Physical Models / Systems	00	
3. Demonstration on a Computer	00	
Numeracy		00
1. Solving Numerical Problems	00	
Practical Work		00
1. Course Laboratory	00	
2. Computer Laboratory	00	
3. Engineering Workshop / Course/Workshop / Kitchen	00	
4. Clinical Laboratory	00	
5. Hospital	00	
6. Model Studio	00	
Others		04
1. Case Study Presentation	04	
2. Guest Lecture	00	
3. Industry / Field Visit	00	

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4. Brain Storming Sessions	00	
5. Group Discussions	00	
6. Discussing Possible Innovations	00	
Term Tests, Laboratory Examination/Written Examination, Presentations		10
Total Duration in Hours		**30**

7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B. Des. (Product Design) Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions/ presentation are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2, SC3 and SC4), COs are assessed as illustrated in the following Table.

Focus of COs on each Component or Subcomponent of Evaluation					
	Component 1: CE (40% Weightage)				Component 2: SEE (60% Weightage)
Subcomponent ▶	SC1	SC2	SC3	SC4	
Subcomponent Type ▶	Creative Submission 1	Creative Submission 2	Test	Creative submission 3	SEE(50 Marks)
Maximum Marks ▶	5	5	25	5	
CO-1			×		×
CO-2	×	×	×		×
CO-3	×	×	×		×
CO-4	×	×	×	×	×
CO-5			×	×	×
CO-6				×	
The details of SC1, SC2, SC3 and SC4 are presented in the Programme Specifications Document.					

The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester.

Course reassessment policies are presented in the Academic Regulations document.

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8. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

S. No	Curriculum and Capabilities Skills	How imparted during the course
1.	Knowledge	Classroom lectures
2.	Understanding	Classroom lectures, Self-study
3.	Critical Skills	Assignment
4.	Analytical Skills	Assignment
5.	Problem Solving Skills	Assignment, Examination
6.	Practical Skills	Assignment
7.	Group Work	--
8.	Self-Learning	Self-study

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9.	Written Communication Skills	Assignment, Examination
10.	Verbal Communication Skills	--
11.	Presentation Skills	--
12.	Behavioral Skills	--
13.	Information Management	Assignment
14.	Personal Management	--
15.	Leadership Skills	--

9. Course Resources

a. EssentialReading

1. Course notes
2. Buxton, B. (2007) Sketching User Experiences: Getting the Design Right and the Right Design, Morgan Kaufmann

b. Recommended Reading

1. Liedtka, J., King, A. and Bennett, K. (2013) Solving Problems with Design Thinking: Ten Stories of What Works, Columbia University Press
2. Liedtka, J. and Ogilvie, T. (2011) Designing for Growth: A manager's design thinking toolkit, Columbia University Press
3. Amabile, T.M. (1998) How to Kill Creativity, Harvard Business Review
4. DeBono, E. (1993) Serious Creativity: Using the Power of Lateral Thinking to Create New Ideas, Harper Collins

c. Magazines and Journals

1. Do Crafts
2. Makeshift Magazine

d. Websites

1. creativity-online.com

e. Other Electronic Resources

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SEMESTER 2

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Course Specifications: Design Drawing

Course Title	Design Drawing
Course Code	PDC105A
Course Type	Discipline
Department	Industrial Design
Faculty	Art and Design

1. Course Summary

The aim of this course is to teach students the basic methods, principles and conventions followed by advanced exploration of the concepts and techniques. The students are taught drafting techniques to develop various views. The students are also taught to create freehand pictorial presentation drawings. The students are taught necessary skills for representing drawings confirming to standards. They are also taught about study of 3Dforms with an understanding of the inter-relationship between form and content.

2. Course Size and Credits:

Number of Credits	04
Credit Structure (Lecture: Tutorial: Practical)	1:0:3
Total Hours of Interaction	105
Number of Weeks in a Semester	15
Department Responsible	Industrial Design
Total Course Marks	100
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

CO-1. Describe the method of developing a design drawing and 3D forms and techniques to express design ideas graphically
CO-2. Explain the use of drawing techniques for design detailing
CO-3. Apply various techniques to create the perception of depth in design drawing
CO-4. Demonstrate the use of 2D and 3D drawing skills in representing ideas
CO-5. Develop physical skills for handling media and materials required in creating presentation image or design
CO-6. Judge proportion, scale and spatial relationships Demonstrate a variety of design drawing techniques for generating and communicating complex forms and products

4. Course Contents

Unit 1 (Studying Sketch): Exploratory sketches, unpretentious and focus sketches, developmental sketches, thinking aid sketches, short-lived sketches, sketches that are replaced by the next sketch, sketching perception and purpose of exploring it in paper, reaching from a sketch to a presentation drawing.

Unit 2 (Perspective Drawing): Lines and planes in space , 2-D to 3-D, one-point perspective, angles parallel lines, horizon line rays, line two-point perspective, line segments vanishing point,

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orthogonal lines as "visual rays", perceived distance, curved arches, people, objects, wheels, drawings creation using several different vantage points, Division and Multiplication in perspective, Drawing ellipses

Unit 3 (Rendering): Stripling, hatching, pen work related to fast doodle rendering and pre-final model setup for design documentation as well as process description of thoughts, principles, inspiration, perspective and the appearance for product gestures, colour & texture, lighting – shadows as per single or multiple source of light, reflections -refractions as per materials on surface, indirect illumination, sampling of products for display.

Unit 4 (Sketching Progress): Singular Rounding, Multiple Rounding, Planes & Sections, Colour Basics, Coloured Background

Unit 5 (Design Detailing): Depiction of wood, tile, marble, paint and other materials, properties of glossy, dull, reflective and transparent finishes through renderings. Adding lighting for rendering an interior or exterior view of a product, lighting quality, perspectives and 3D views and illustration of sharp shadow lines

Unit 7 (Presentation Drawings): Explanatory Sketches- Exploded Drawing, Cut- away views, Instructional Drawings, Product context – Environment, User and Hand, Background Images, Tracing the Human Shape, Hands, People, composing of presentation Drawing using Gestalt

5. Course Map (CO-PO-PSO Map)

	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)			
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	1															
CO-2	2	3		2									1	2		
CO-3		2		2										3		
CO-4		3	2												3	
CO-5	1	2	1													
CO-6		1		3												
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution																

6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		15
Demonstrations		00
1. Demonstration using Videos	00	
2. Demonstration using Physical Models / Systems	10	
3. Demonstration on a Computer	00	
Tutorial		00
1. Tutorial	00	
Practical Work		90
1. Course Laboratory	90	
2. Computer Laboratory	00	
3. Engineering Workshop / Course/Workshop /	00	

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Kitchen		
4. Clinical Laboratory	00	
5. Hospital	00	
6. Model Studio	00	
Others		
1. Case Study Presentation	03	
2. Guest Lecture	00	
3. Industry / Field Visit	00	03
4. Brain Storming Sessions	00	
5. Group Discussions	00	
6. Discussing Possible Innovations	00	
Term Tests, Laboratory Examination/Written Examination, Presentations		02
Total Duration in Hours		**105**

7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B.Des. (Product Design) Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2, SC3 or SC4), COs are assessed as illustrated in the following Table.

Focus of COs on each Component or Subcomponent of Evaluation					
	Component 1: CE (40% Weightage)				Component 2: SEE (60% Weightage)
Subcomponent ▶	SC1	SC2	SC3	SC4	
Subcomponent Type ▶	Creative Submission-1	Creative Submission 2	Creative Submission 3	Creative Submission 4	60 Marks
Maximum Marks ▶	10 Marks	10 Marks	10 Marks	10 Marks	
CO-1	×		×		×
CO-2	×		×		×
CO-3	×	×	×		×
CO-4		×	×	×	×
CO-5		×	×	×	×
CO-6		×		×	×
The details of SC1, SC2, SC3 and SC4 are presented in the Programme Specifications Document.					

The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester.

Course reassessment policies are presented in the Academic Regulations document.

8. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

S. No	Curriculum and Capabilities Skills	How imparted during the course

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1.	Knowledge	Classroom lectures
2.	Understanding	Class Room Lectures
3.	Critical Skills	Creative Work Submission
4.	Analytical Skills	Classroom Lectures, Creative Work Submission and Examination
5.	Problem Solving Skills	Examination and Creative Work Submission
6.	Practical Skills	Class Room Lectures, Laboratory and Field
7.	Group Work	Work
8.	Self-Learning	Class Room Interaction
9.	Written Communication Skills	Creative Work Submission and Examination
10.	Verbal Communication Skills	Creative Work Submission and Examination
11.	Presentation Skills	Presentation
12.	Behavioral Skills	Presentation
13.	Information Management	Interaction with peers and tutors
14.	Personal Management	Creative Work Submission, Presentation and Examination
15.	Leadership Skills	Interaction with peers and tutors

9. Course Resources

a. Essential Reading

1. Course notes
2. Ching, F. and Juroszek, S. (2010) Design Drawing, 2nd Edition, AIA, Wiley
3. Robertson. S, (2013) How to Draw: Drawing and Sketching Objects and Environments, Design Studio Press

b. Recommended Reading

1. Ching and Frances, D. K. (2009) Graphics in Architecture, 5th edn, Wiley
2. Styles, K. and Bichard, A. (2004) Working Drawings Handbook, 4th edn, Routledge
3. Bhatt, N.D. (1999) Engineering Drawings, Charotar

c. Magazines and Journals

1. Drawing, F&W Media, US

d. Websites

1. www.smashingmagazine.com
2. www.ereatah.com

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Course Specifications: Design for Social Impact

Course Title	Design for Social Impact
Course Code	PDC106A
Course Type	Discipline Core
Department	Industrial Design
Faculty	Art and Design

1. Course Summary

The aim of the course is to prepare students to create ideas for the wellbeing of society. Course includes overview of social design, means of identifying issues and wicked problems in society that need design intervention, Human centered approach to problem solving via community facilitation involving the sharing of conversation, ideas, beliefs and rituals. The course emphasizes on designing visuals/ props to emotionally impact a select audience; and also, on critiquing the approach sort to disburse information on the social cause.

2. Course Size and Credits:

Number of Credits	04
Credit Structure (Lecture: Tutorial: Practical)	1:0:3
Total Hours of Interaction	105
Number of Weeks in a Semester	15
Department Responsible	Industrial Design
Total Course Marks	100
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

- **CO-1.** Identify underlying issues in need for change across various expanses of our society/ world or ecosystem
- **CO-2.** Prepare narratives based on social issues for effective dissemination of its information and reinforcing the need for change
- **CO-3.** Ideate solutions to proliferate awareness regarding the identified social issue using human centered design approach
- **CO-4.** Design visuals/ props regarding the identified social issue, to emotionally impact the target user
- **CO-5.** Critique the designs conceptualized

4. Course Contents

Unit 1 (Social Design): Introduction to Social design, Collaborative design, Design and humanity, Social change regarding social norms and behaviors, mapping and identifying issues, social media influence, Case studies.

Unit 2 (Story Telling and Narrative Design): Storytelling as social and cultural activity of sharing stories, Creating Personas, Design for Emotional value, User Experiences, Story Boarding, Role play, Plots and sub plots, Building a narrative, Case studies.

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Unit 3 (Wicked Problems): Social Problems, Complex human issues, placing the social issues as the priority, Strategies to tackle wicked problems, Defining and reframing Problems, Understanding requirements vs. wishes.

Unit 4 (Human Centered Design): Design and Human Experience, Human-Centered Design theories, Constraints and possibilities of HCD, Concept Ideation and Visualization, Critically evaluating design concepts, Case studies

Unit 5 (Ethical Design): Ethical Hierarchy of Needs, Moral Design Practice, Eco-conscious Design, Sustainable Materials, Design for Service, Usability study, Unethical Design, case studies.

5. Course Map (CO-PO-PSO Map)

	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)			
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	PSO-4
CO-1		2														
CO-2				2									2			
CO-3	1	3												3		
CO-4		3		1	2								3		2	
CO-5					2					1	3			3		
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution																

6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		10
Demonstrations		05
1. Demonstration using Videos	10	
2. Demonstration using Physical Models / Systems	00	
3. Demonstration on a Computer	00	
Tutorial		00
1. Tutorial	00	
Practical Work		65
1. Course Laboratory	00	
2. Computer Laboratory	20	
3. Engineering Workshop / Course/Workshop / Kitchen	00	
4. Clinical Laboratory	00	
5. Hospital	00	
6. Model Studio	50	
Others		15
1. Case Study Presentation	05	
2. Guest Lecture	00	
3. Industry / Field Visit	05	
4. Brain Storming Sessions	00	

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5. Group Discussions	05	
6. Discussing Possible Innovations	00	
Term Tests, Laboratory Examination/Written Examination, Presentations		10
Total Duration in Hours		**115**

7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the (B.Des. Product Design) Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2, SC3, SC4), COs are assessed as illustrated in the following Table.

Focus of COs on each Component or Subcomponent of Evaluation					
	Component 1: CE (40% Weightage)				Component 2: SEE (60% Weightage)
Subcomponent ▶	SC1	SC2	SC3	SC4	
Subcomponent Type ▶	Creative Submission-1	Creative Submission 2	Creative Submission 3	Creative Submission 4	60 Marks
Maximum Marks ▶	10	10	10	10	
CO-1			×		×
CO-2			×		×
CO-3	×	×	×	×	×
CO-4	×	×	×	×	×
CO-5	×	×	×	×	×
The details of SC1, SC2, SC3 or SC4 are presented in the Programme Specifications Document.					

The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester.

Course reassessment policies are presented in the Academic Regulations document.

8. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

S. No	Curriculum and Capabilities Skills	How imparted during the course
1.	Knowledge	Class Room Lectures, Laboratory
2.	Understanding	Class Room Lectures, Laboratory and Demonstration
3.	Critical Skills	Creative Work Submission
4.	Analytical Skills	Class Room Lectures, Laboratory and Creative Work Submission
5.	Problem Solving Skills	Creative Work Submission and Laboratory
6.	Practical Skills	Creative Work Submission and Laboratory
7.	Group Work	Creative Work Submission and Laboratory
8.	Self-Learning	Creative Work Submission

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9.	Written Communication Skills	Creative Work Submission and Examination
10.	Verbal Communication Skills	Creative Work Submission and Examination
11.	Presentation Skills	Presentation
12.	Behavioral Skills	Interaction with peers, instructors and Presentation
13.	Information Management	Creative Work Submission, Laboratory, Presentation and Examination
14.	Personal Management	Interaction and requirements of discipline
15.	Leadership Skills	Effective management of learning, time management and achieving the learning outcomes

9. Course Resources

a. Essential Reading

1. Course notes
2. Papanek, Victor (2019). Design for the Real World: Human Ecology and Social Change, Publisher: Pantheon Books

b. Recommended Reading

1. Anna Dahlström. (2019) Storytelling in Design, Publisher: O'Reilly Media, Inc.
2. Ideo (2009) Design Kit: The Human-Centered Design Toolkit

c. Magazines and Journals

1. Stanford Social Innovation Review
2. International Journal of Design for Social Change
3. Imagine FX
4. Print Mag

d. Websites

1. www.designawards.core77.com
2. www.ideo.com
3. www.humanfactors.com
4. www.interaction-design.org

e. Other Electronic Resources

1. Personal computer

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Course Specifications: Digital Design Basics

Course Title	Digital Design Basics
Course Code	PDC107A
Course Type	Discipline Core
Department	Industrial Design
Faculty	Art and Design

1. Course Summary

This course deals with essentials of representing ideas and sketches using digital media. Students are also taught to use vector based software. Students are trained with essential graphics and visual communication skills that they can use to enhance almost every aspect of their work. Students are also trained creates posters and prepare portfolio of their designs.

2. Course Size and Credits:

Number of Credits	02
Credit Structure (Lecture: Tutorial: Practical)	0:0:2
Total Hours of Interaction	60
Number of Weeks in a Semester	15
Department Responsible	Industrial Design
Total Course Marks	100
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

CO-1. Explain the use of digital software in field of design
CO-2. Apply essential graphics and visual communication skills in designing
CO-3. Create visual poster and edit required images using designing software
CO-4. Apply different effects using the vector based software
CO-5. Recommend appropriate printing environment for printing a poster

4. Course Contents

Unit 1 (Introduction to the design Software): Getting to know the workspace, creating and saving documents, using fonts, resizing, rotating and moving documents

Unit 2 (Basic Drawing Skills): Selecting and manipulating objects drawing and shaping objects arranging objects transforming objects outlining & filling objects arranging objects using layers, working with special effects and texts, special effect working with text working with paragraph special text effects using symbols and clipart working with bitmaps

Unit 3 (Working with Objects): Outlining and filling objects using symbols and clipart transforming objects. Using Text and Colour Using Text and Color Working With Color Working With Paragraph Text Special Text Effects.

Unit 4 (Measurement and dimensions): Working with measurement and dimensions

Unit 5 (Adding special effects): special effects creating output exporting drawings printing layouts and layers special age layouts arranging objects using layers styles and templates using styles and templates advanced effects special interactive effects custom creation tools working with bitmaps

Unit 6 (Page Layout): Printing, Exporting And Advanced Features Special Page Layouts, Exporting Drawings, Using Styles and Templates, Custom Creation Tools

Unit 7 (Case studies and Creating Portfolio): Showcasing most unique and creative work

5. Course Map (CO-PO-PSO Map)

	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)			
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	2	1											1	3		
CO-2	1	1						2		2				2		
CO-3			1							1				2		
CO-4										2				1		
CO-5								1								
CO-6																
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution																

6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		00
Demonstrations		00
1. Demonstration using Videos	00	
2. Demonstration using Physical Models / Systems	00	
3. Demonstration on a Computer	00	
Tutorial		00
1. Tutorial	00	
Practical Work		50
1. Course Laboratory	30	
2. Computer Laboratory	30	
3. Engineering Workshop / Course/Workshop / Kitchen	00	
4. Clinical Laboratory	00	
5. Hospital	00	
6. Model Studio	00	
Others		00
1. Case Study Presentation	00	
2. Guest Lecture	00	
3. Industry / Field Visit	00	
4. Brain Storming Sessions	00	
5. Group Discussions	00	

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6. Discussing Possible Innovations	00	
Term Tests, Laboratory Examination/Written Examination, Presentations		10
	Total Duration in Hours	**60**

7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B.Des (Product Design) Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2 and SC3), COs are assessed as illustrated in the following Table.

	Focus of COs on each Component or Subcomponent of Evaluation				
	Component 1: CE (40% Weightage)				Component 2: SEE (60% Weightage)
Subcomponent ▶	SC1	SC2	SC3	SC4	
Subcomponent Type ▶	Creative Submission 1	Creative Submission 2	Creative Submission 3	Creative Submission 4	SEE(50 Marks)
Maximum Marks ▶	10 Marks	10 marks	10 Marks	10 Marks	
CO-1					×
CO-2	×	×	×	×	×
CO-3	×	×	×	×	×
CO-4	×	×	×	×	×
CO-5	×	×	×	×	×

The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester.

Course reassessment policies are presented in the Academic Regulations document.

8. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

S. No	Curriculum and Capabilities Skills	How imparted during the course
1.	Knowledge	Classroom lectures
2.	Understanding	Class Room Lectures
3.	Critical Skills	Creative Work Submission
4.	Analytical Skills	Classroom Lectures, Creative Work Submission and Examination
5.	Problem Solving Skills	Examination and Creative Work Submission
6.	Practical Skills	Class Room Lectures, Laboratory and Field
7.	Group Work	Work
8.	Self-Learning	Class Room Interaction
9.	Written Communication Skills	Creative Work Submission and Examination

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10.	Verbal Communication Skills	Creative Work Submission and Examination
11.	Presentation Skills	Presentation
12.	Behavioral Skills	Presentation
13.	Information Management	Interaction with peers and tutors
14.	Personal Management	Creative Work Submission, Presentation and Examination
15.	Leadership Skills	Interaction with peers and tutors

9. Course Resources

a. Essential Reading

1. Course notes
2. Gary David Bouton, (2012) CorelDraw X6 The Official Guide, McGraw-Hill Osborne Media

b. Recommended Reading

1. Worobiec, T. (2005) Digital Photo Artist: Creative Techniques and Ideas for Digital Image-making, Collins & Brown

c. Magazines and Journals

1. www.asianphotographyindia.com

d. Websites

1. www.magazinedesigning.com
2. www.coreldraw.com

e. Other Electronic Resources

1. https://ocw.mit.edu/index.htm

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Course Specifications: Handicraft

Course Title	Handicraft
Course Code	PDO102A
Course Type	Open Elective
Department	Industrial Design
Faculty	Art and Design

1. Course Summary

The aim of this course is to enable students to learn the heritage of Indian handicrafts and popular artifacts. Students are taught about ancient, medieval, modern and contemporary practices of handicraft sector in India. They are also taught about importance of craftsmanship in handicrafts. Students are also trained to acquire basic skills in handling various craft materials and the process of converting them into finished products.

2. Course Size and Credits:

Number of Credits	3
Credit Structure (Lecture: Tutorial: Practical)	1:0:2
Total Hours of Interaction	75
Number of Weeks in a Semester	15
Department Responsible	Industrial Design
Total Course Marks	100
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

- **CO-1.** Explain various philosophies and aesthetics of handicrafts in India
- **CO-2.** Describe various materials, processes and techniques of creating handicrafts
- **CO-3.** Distinguish craft traditions from various periods like ancient, medieval, modern and contemporary and their importance
- **CO-4.** Analyse basic premises in art movement across a timeline of history
- **CO-5.** Create artefacts using various materials like metal, clay and wood
- **CO-6.** Develop artefacts using different art styles

4. Course Contents

Unit 1 (Philosophy): Various Philosophies expounded on Indian art.

Unit 2 (Aesthetics): Principles of aesthetics of different art styles, traditional painting, classical painting e.g. Miniature, Tanjore, architectural principles of Jain temples, Islamic architecture, Hindu temples, Buddhist monasteries and symbolism e.g. mandalas and symbols, tribal votive expressions, significance of colours, symbolism in forms, Sikh art and tantric art.

Unit 3 (Materials, Processes and Techniques): Materials used for crafts like bone, ivory, synthetics, plastics, wood, stone, metals, alloys, grasses, bamboo and cane, cotton, silk, wool, jute, coir, gems, glass, leather, horn and paper.

Unit 4 (Crafts Traditions): Overview of craft traditions from ancient and medieval, to modern and contemporary periods. Impact of living practices, hunting traditions, nomadic journeys, ritualistic

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practices, ceremonial occasions, customary beliefs, patronage on the culture of crafts.

Unit 5 (Clay): The most basic material, clay used for making earthen ware, figurines, bricks, tiles, beads Different practices, techniques and distribution of pottery and terracotta crafts in India.

Unit 6 (Metal Crafts): Indigenous methods and processes adopted for casting, polishing and finishing of handicrafts in metal.

Unit 7 (Jewellery): Jewellery made from terracotta, beads, precious stones and metals depicting traditional motifs, intricate, delicate and bold forms.

Unit 8 (Textile Crafts): Woven, dyed, printed, painted and embroidered textiles using material like cotton, silk and wool.

Unit 9 (Painting): The significance and role of paintings on walls, floor and roof of caves, dwellings, and religious structures. Pictorial communication narrating traditional practices, folklores, and folktales on paper, palm leaf, wood, cloth and other surfaces.

Unit 10 (Paper and paper crafts): Traditional craft products made from paper and paper Mache, across India. The process of selecting materials, preparation, mould making, colouring and finishing of handicrafts.

Unit 11: Crafts of northern India, southern India, eastern India and western India. Diversities and similarities between regions, materials, methods, designs and products.

5. Course Map (CO-PO-PSO Map)

	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)			
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3	PSO-4
CO-1	2															
CO-2		3					2						2	3		
CO-3	3													2		
CO-4	3													1		
CO-5		3	2	2	2	1				2		1		3	2	
CO-6	1	3	1	2										3	2	
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution																

6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours
Face to Face Lectures		15
Demonstrations		00
1. Demonstration using Videos	00	
2. Demonstration using Physical Models / Systems	00	
3. Demonstration on a Computer	00	
Tutorial		00
1. Tutorial	00	
Practical Work		60
1. Course Laboratory	00	
2. Computer Laboratory	00	

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3. Engineering Workshop / Course/Workshop / Kitchen	00	
4. Clinical Laboratory	00	
5. Hospital	00	
6. Model Studio	00	
Others		
1. Case Study Presentation	00	
2. Guest Lecture	00	
3. Industry / Field Visit	10	10
4. Brain Storming Sessions	00	
5. Group Discussions	00	
6. Discussing Possible Innovations	00	
Term Tests, Laboratory Examination/Written Examination, Presentations		10
Total Duration in Hours		**95**

7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B.Des. (Product Design) Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2, SC3 or SC4), COs are assessed as illustrated in the following Table.

Focus of COs on each Component or Subcomponent of Evaluation					
	Component 1: CE (40% Weightage)				Component 2: SEE (60% Weightage)
Subcomponent ▶	SC1	SC2	SC3	SC4	
Subcomponent Type ▶	Creative Submission-1	Creative Submission 2	Creative Submission 3	Creative Submission 4	60 Marks
Maximum Marks ▶	10	10	10	10	
CO-1	×		×		×
CO-2	×	×	×	×	×
CO-3	×		×		×
CO-4	×		×		×
CO-5		×	×	×	×
CO-6		×	×	×	×
The details of SC1, SC2, SC3 or SC4 are presented in the Programme Specifications Document.					

The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester.

Course reassessment policies are presented in the Academic Regulations document.

8. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

S. No	Curriculum and Capabilities Skills	How imparted during the course
1.	Knowledge	Classroom lectures
2.	Understanding	Class Room Lectures
3.	Critical Skills	Creative Work Submission
4.	Analytical Skills	Classroom Lectures, Creative Work Submission and Examination

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5.	Problem Solving Skills	Examination and Creative Work Submission
6.	Practical Skills	Class Room Lectures, Laboratory and Field
7.	Group Work	Work
8.	Self-Learning	Class Room Interaction
9.	Written Communication Skills	Creative Work Submission and Examination
10.	Verbal Communication Skills	Creative Work Submission and Examination
11.	Presentation Skills	Presentation
12.	Behavioral Skills	Presentation
13.	Information Management	Interaction with peers and tutors
14.	Personal Management	Creative Work Submission, Presentation and Examination
15.	Leadership Skills	Interaction with peers and tutors

9. Course Resources

a. Essential Reading

1. Course notes
2. Jaitly, J. (2012) Crafts Atlas of India, Niyogi Books

b. Recommended Reading

1. Vatsyayan, K. (2010) Embroidery in Asia Sui Dhaga: Crossing Boundaries Through Needle & Thread, Wisdom Tree
2. Ranjan, A. and Ranjan, M.P. (2009) Handmade in India: A Geographic Encyclopedia of India Handicrafts, Abbeville Press
3. Ramani, S. (2007) Kalamkari and Traditional Design Heritage of India, Wisdom Tree
4. Goldstein-Lynch, E., Malone, N. and Mullins, S. (2007) Making Vinyl, Plastic, and Rubber

   Handbags: Sewing Stylish Projects from Unusual Materials, Quarry Books
5. Vatsyayan, K. (2003) The Square and the Circle of the Indian Arts, 1997 edn, Abhinav Publications

c. Magazines and Journals

1. Journal of Experimental Psychology: Human Perception and Performance, APA Journals
2. Journal of Design History, Oxford University

d. Websites

1. The Caravan - A Journal of Politics and Culture, Paresh Nath, Delhi Press India
2. Majesty Magazine, Rex Publications Limited, London
3. www.craftcentral.com

e. Other Electronic Resources

1. Personal Computer/Laptop

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Course Specifications: English for Communication 1

Course Title	**English for Communication 1**
Course Code	TSM101A
Course Type	Ability Enhancement Compulsory Course
Department	Directorate of Transferable Skills and Leadership Development
Faculty	FLAHS/FMC/FMPS/FAD/SSS/SOL

1. Course Summary

The course aims at equipping the students with skills essential for effective communication in terms of speaking, writing and comprehension.

The course gives practical exposure to the students by equipping them to use appropriate body language and tone for conversation. It focusses on comprehension of words and building of the word repertoire for meaningful communication. Students are instructed on the ways to construct grammatically correct sentences and compose paragraphs and essays.

2. Course Size and Credits:

Number of Credits	03
Credit Structure (Lecture: Tutorial: Practical)	3:0:0
Total Hours of Interaction	45
Number of Weeks in a Semester	15
Department Responsible	Directorate of Transferable Skills and Leadership Development
Total Course Marks	100
Pass Criterion	As per the Academic Regulations
Attendance Requirement	As per the Academic Regulations

3. Course Outcomes (COs)

After the successful completion of this course, the student will be able to:

- **CO-1.** Identify the nuances of communication skills
- **CO-2.** Apply the concepts of grammar in written communication
- **CO-3.** Apply professional etiquette as appropriate
- **CO-4.** Practice extempore and basic conversation skills
- **CO-5.** Practice comprehension skills
- **CO-6.** Compose precise paragraphs as per the given topic

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4. Course Contents

Unit 1 (Communication Skills):
Process of communication, terminologies used in communication process, active listening, communication barriers, types of communication – verbal and non-verbal

Unit 2 (Grammar):
Sentence formation, sentence types, different parts of speech, adjectives and articles, verbs and

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preposition, present and past tense, future tense, use of participles in different tenses, usage of tenses, rules of subject verb agreement

Unit 3 (Essentials of Speaking Skills):
Importance of spoken skills, appropriate use of language, appropriate use of tone, pitch and volume

Unit 4 (Extempore):

Preparation for extempore, mind mapping for speaking readiness, Content of extempore – beginning, body and conclusion, Delivery of extempore – body language and paralanguage

Unit 5 (Conversation Skills)
Body language in conversation, tones in conversation, conversation manners, stages of conversation – introduction, feed forward, close, order of introduction, conversation barriers

Unit 6 (Reading and the Techniques)
Skimming, scanning and reading in details

Unit 7 (Paragraph Writing)
Structure of paragraph – topic sentence, supporting sentence, conclusion sentence, functions of paragraph, paragraph patterns, paragraph writing principles – coherence, unity, order, length

Unit 8 (Comprehension)
Purpose of comprehension, low-level comprehension, high-level comprehension

Unit 9 (Précis Writing)
Paraphrasing techniques, Usage of appropriate words

Unit 10 (Professional Etiquette and Goal Setting)

Etiquette and its importance, types of etiquette – workplace, meeting, telephone, dining, norms of etiquette, goals, types of goal, setting SMART goal

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5. Course Map (CO-PO-PSO Map)

	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)		
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3
CO-1									2						2
CO-2									2						2
CO-3									2						2
CO-4									2						2
CO-5									2						2
CO-6									2						2
3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution															

6. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration in hours	Total Duration in Hours

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Face to Face Lectures		15
Demonstrations		02
1.Demonstration using Videos	02	
2. Demonstration using Physical Models / Systems	00	
3. Demonstration on a Computer	00	
Numeracy		0
1. Solving Numerical Problems	00	
Practical Work		04
1. Course Laboratory	00	
2. Computer Laboratory	00	
3. Engineering Workshop / Course/Workshop / Kitchen	04	
4. Clinical Laboratory	00	
5. Hospital	00	
6. Model Studio	00	
Others		14
1. Case Study Presentation	04	
2. Guest Lecture	02	
3. Industry / Field Visit	00	
4. Brain Storming Sessions	04	
5. Group Discussions	04	
6. Discussing Possible Innovations	00	
Term Tests, Laboratory Examination/Written Examination, Presentations		10
Total Duration in Hours		**45**

7. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B.Sc Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

The evaluation questions are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2, SC3 or SC4), COs are assessed as illustrated in the following Table.

Focus of CO's on each Component or Subcomponent of Evaluation:

	Component 1: CE (60% Weightage)		Component 2: SEE (40% Weightage)
Subcomponent▶	**SC1**	**SC2**	
Subcomponent Type ▶	**Practical Assessment**	**Assignment**	**50 Marks**
Maximum Marks▶	**30**	**30**	
CO-1	X	X	X
CO-2			X
CO-3		X	X
CO-4	X		
CO-5	X	X	X

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The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester.

Course reassessment policies are presented in the Academic Regulations document.

8. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

S. No	Curriculum and Capabilities Skills	How imparted during the course
1.	Knowledge	Face to face lectures
2.	Understanding	Face to face lectures, group discussions
3.	Critical Skills	--
4.	Analytical Skills	Face to face lectures, activities, , group discussions, assignment
5.	Problem Solving Skills	--
6.	Practical Skills	Face to face lectures, activities, , group discussions, course work
7.	Group Work	Course work, practice, assignment, group discussion
8.	Self-Learning	Course work, practice, assignment, group discussion
9.	Written Communication Skills	Face to face lectures, Course work, practice, assignment, group discussion
10.	Verbal Communication Skills	Face to face lectures, Course work, practice, assignment, group discussion
11.	Presentation Skills	--
12.	Behavioral Skills	Course work, practice, assignment, group discussion, presentation practice, role plays
13.	Information Management	Assignment
14.	Personal Management	--
15.	Leadership Skills	--

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9. Course Resources

a. Essential Reading

1. Class Notes
2. Raman M and Sharma S (2004) Technical Communication: Principles and Practice. New Delhi: Oxford University Press
3. Hory Sankar Mukherjee, (2013), Business Communication, Oxford University Press
4. Kroehnert, Gary (2004), Basic Presentation Skills, Tata McGraw Hill

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b. Recommended Reading

1. Sathya Swaroop Debashish and Bhagaban Das, (2014), Business Communication, PHI, New Delhi
2. Young, Dona J (2006) Foundations of Business Communications: An Integrated Approach, Tata McGraw Hill
3. Kaul, Asha (2007) Effective Business Communication, Prentice Hall India
4. Bienvenu, Sherron (2008) The Presentation Skills Workshop, Prentice Hall
5. KavitaTyagi and Padma Misra (2011) Professional Communication, PHI Learning Private Limited, New Delhi

c. Websites

1. www.myenglishpages.com
2. www.britishcouncil.com
3. www.englishmagazine.com
4. www.justenglishmagazine.com

d. Other Electronic Resources

1. Electronic resources on the course area are available on RUAS library

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Health and Wellbeing

Course Title	Health and well being
Course Code	AHU101A
Department	Allied Health Sciences
Faculty	Faculty of Life and Allied Health Sciences

I. Course Summary:

1. Aim and Summary

The course is intended to introduce the concept of health and wellbeing and the ways in which it could be achieved through integrative lifestyle. Students undergo various health issues during their student period. Hence, it is imperative for them to maintain optimum health through proper diet, healthy lifestyles, and adequate physical activity. This course will provide simple and practical guidance to the students with latest scientific evidence in the field of lifestyle medicine (modern medicine), Ayurveda, and Yoga, and Meditation. The course also intends to equip students with handy tool as a continuous resource to facilitate lifestyle changes.

II. Aim

a) The course aims to provide students:

b) To enhance health and wellbeing through integrative lifestyle.

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III. Course Size and Credits:

Number of credits	02
Total hours of classroom interaction during the semester	15
Number of practical/tutorial hours during the semester	15
Course leaders	Dr. Krishnamurthy Jayanna Mr. Shivanand Savatagi
Number of semester weeks	16
Department responsible	Allied Health Sciences (Division of Integrative Health Sciences)
Course evaluation	Total Marks: 50
Pass requirement	As per the Academic Regulations
Attendance requirement	As per the Academic Regulations

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I. **Teaching, Learning and Assessment**

1. Course Outcomes (CO)

No	Intended learning outcome
1	To understand the definitions and scope of health, wellbeing and quality of life, and how they are changing in current times
2	To understand the relationship between lifestyles and health and wellbeing; and science of Integrative Lifestyle based on modern and traditional approaches
3	To apply tools and methods related to different aspects of Integrative Lifestyle
4	To apply the concepts of comprehensive Integrative Lifestyle for improving health and wellbeing

2. Course Contents

Unit-1: Health, wellbeing, and quality of life

- Definitions, determinants, and dimensions
- Changing paradigms of lifestyles
- Reasons for change in lifestyle paradigms
- Effects of changing lifestyles on Health and Wellbeing
- Understanding Integrative Lifestyle (definition and components)

Unit-2: Science of lifestyle based on Modern Medicine

- Nutrition: Energy, metabolism, healthy and balanced diet, Calories, Understanding through charts and scales
- Healthy sleep: Science of sleep, importance, sleep hygiene
- Physical activity and its benefits
- Substance use (tobacco, alcohol), healthy habits and healthy lifestyles
- Stress management and Sleep hygiene as part of Healthy lifestyle

Unit -3: Ayurveda Lifestyle

- Individual's unique body – mind constitution
- Variations in individual's constitutions (diurnal effects, seasonal effects, age related effects and effects of food)
- Recommendations (Daily, Seasonal) for Ayurvedic lifestyle customized to individual constitution

Unit-4: Yoga and Meditation

- Philosophy and Science of Yoga and Meditation
- Practical demonstration of simple yoga techniques
- Heartfulness meditation and supportive practices demonstration

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3. Course Map (CO-PO-PSO Map)

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	Programme Outcomes (POs)												Programme Specific Outcomes (PSOs)		
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2	PSO-3
CO-1									2			2			2
CO-2									2			2			2
CO-3									2			2			2
CO-4									2			2			2

3: Very Strong Contribution, 2: Strong Contribution, 1: Moderate Contribution

3. Course Teaching and Learning Methods

Teaching and Learning Methods	Duration (hours)	Total Duration in Hours
Face to Face Lectures		10
Demonstrations		02
1. Demonstration using Videos		
2. Demonstration using Physical Models/ Systems/in person	02	
3. Demonstration on a Computer/online classes		
Numeracy		
1. Solving Numerical Problems		
Practical Work		
1. Course Laboratory		
2. Computer Laboratory		
3. Engineering Workshop/Course Workshop/Kitchen		
4. Clinical Laboratory		
5. Hospital		
6. Model Studio		
Others		13
1. Case Study Presentation	02	
2. Guest Lecture	03	
3. Industry/Field Visit		
4. Brain Storming Sessions	02	
5. Group Discussions	04	
6. Discussing Possible Innovations		
Written Examination (MCQ and Essay – CE based evaluation)		05
Total Duration in Hours		**30**

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5. Course Assessment and Reassessment

The details of the components and subcomponents of course assessment are presented in the Programme Specifications document pertaining to the B.Sc Programme. The procedure to determine the final course marks is also presented in the Programme Specifications document.

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The evaluation questions are set to measure the attainment of the COs. In either component (CE or SEE) or subcomponent of CE (SC1, SC2, SC3 or SC4), COs are assessed as illustrated in the following Table.

Focus of CO's on each Component or Subcomponent of Evaluation:

	Component 1: CE (60% Weightage)		Component 2: SEE (40% Weightage)
Subcomponent	SC1	SC2	
Subcomponent Type	Practical Assessment	Assignment	50 Marks
Maximum Marks	30	30	
CO-1		X	X
CO-2			X
CO-3	X	X	X
CO-4	X		

The Course Leader assigned to the course, in consultation with the Head of the Department, shall provide the focus of COs in each component of assessment in the above template at the beginning of the semester. The overall 40% is required to clear the course that incudes CE and SEE components.

Course reassessment policies are presented in the Academic Regulations document.

6. Achieving COs

The following skills are directly or indirectly imparted to the students in the following teaching and learning methods:

S. No	Curriculum and Capabilities Skills	How imparted during the course
1.	Knowledge	Face to face lectures
2.	Understanding	Face to face lectures, group discussions
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4.	Analytical Skills	Face to face lectures, activities, , group discussions, assignment
5.	Problem Solving Skills	--
6.	Practical Skills	Face to face lectures, activities, , group discussions, course work
7.	Group Work	Course work, practice, assignment, group discussion
8.	Self-Learning	Course work, practice, assignment, group discussion

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9.	Written Communication Skills	Face to face lectures, Course work, practice, assignment, group discussion
10.	Verbal Communication Skills	Face to face lectures, Course work, practice, assignment, group discussion
11.	Presentation Skills	--
12.	Behavioral Skills	Course work, practice, assignment, group discussion, presentation practice, role plays
13.	Information Management	Assignment
14.	Personal Management	--
15.	Leadership Skills	--

ii. **Course resources**

a. **Essential Reading**

- Science and practice of Integrative Health and Wellbeing Lifestyle
- Simple Heartfulness Practices
- Chandola H M. Lifestyle disorders: Ayurveda with lots of potential for prevention. Year : 2012 / Volume: 33 | Issue Number: 3 / Page: 327-327
- Cohen, M. Challenges and Future Directions for Integrative Medicine in Clinical Practice. Evid-Based-Integrative-Med2. 117-122 (2005).
- Diet, nutrition and the prevention of chronic diseases: report of a Joint WHO/FAO Expert Consultation. WHO Technical Report Series, No. 916. Geneva: World Health Organization; 2003.
- Horst R, Jaeger M, Smeekens S et al. Host and Environmental Factor Influencing Individual Human Cytokine Responses. 2016, Cell167, 1111-1124
- Irwin, M., Opp, M. Sleep Health: Reciprocal Regulation of Sleep and Innate Immunity. Neuropsychopharmacol 42, 129-155 (2017)
- What is Integrative Healthcare? - Duke Integrative Medicine. (2020),. Retrieved 23 August 2020, from https:/dukeintegrativemedicine.org/leadership-program/what-is-integrative-healthcare/
- Kamlesh D Patel. The Profound Beauty of Yoga. Heartfulness Collector's Edition. December 2018
- Kamlesh D Patel. Yogic Psychology. Heartfulness Collectors' edition. December 2019

b. **Recommended Reading**

- Heartfulness Way
- Designing Destiny
- Disease burden and mortality estimates. (2020). Retrieved 23 August 2020, from https://www.who.int/healthinfo/global burden disease/estimates/en/index1.html
- Garaulet, M., Gómez-Abellán, P., Alburquerque-Béjar, J. et al. Timing of food intake predicts weight loss effectiveness. Int Obes 37, 604-611 (2013)

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- Johnstone AM, Murison SD, Duncan JS, Rance KA, Speakman J. Factors influencing variation in basal metabolic rate include fat-free mass, fat mass, age, and circulating thyroxine but not sex, circulating leptin, or triiodothyronine. Am J Clin Nutr. 2005 Nov; 82(5):941-8
- Medicine, U. (2020). Why does Integrative Medicine Matter? Explore Integrative Medicine. Retrieved 23 August 2020, fromhttps://exploreim.ucla.edu/video/why-integrative-medicine-matters/
- Megari K. Quality of life in chronic disease patients. Heal Psychol Res. 2013
- PILCHER et al. Sleep quality versus sleep quantity: relationships between sleep and measures of health, well-being and sleepiness in college students. Journal of Psychosomatic Research, Vol. 42, No. 6, pp. 583 596. 1997
- Rebel DK, Greeson JM, Brainard GC, Rosenzweig S. Mindfulness-based stress reduction and health-related quality of life in a heterogeneous patient population. Gen Hosp Psychiatry. 2001
- Tolahunase, Madhuri R. et al. 'Yoga- and Meditation-based Lifestyle Intervention Increases Neuroplasticity and Reduces Severity of Major Depressive Disorder: A Randomized Controlled Trial'. 1 Jan. 2018: 423 - 442.
- Types of Stressors (Eustress vs. Distress). (2020). Retrieved 23 August 2020, from https://www.mentalhelp.net/articles/ types-of-stressors-eustress-vs-distress/
- Vasant Lad. The Complementary Book of Ayurvedic Home Remedies. London. 2006.
- Wang C (2014). Challenges for the Future of Complementary and Integrative Care. Health Care Current Reviews 2: e102.doi:10.4172/2375-4275.1000e102

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