



JK LAKSHMIPAT UNIVERSITY
Institute of Design

HANDBOOK

B. DES IN PRODUCT DESIGN

BATCH: 2019-2023 (4 YEARS)

COURSE STRUCTURE AND DETAILED SYLLABUS

JK LakshmiPat University, Jaipur
Institute of Design
B. Des in Product Design (Batch 2019-2023)
Course Structure of Foundation (Semester I & II)

Semester	Courses						
I	Freehand Drawing	Digital Drawing	Material Explorations	Geometry & Construction 2D	Elements of Composition		25 Credits
	FD1101 (4 credits)	DD1102 (2 credits)	MX1103 (3 credits)	GC1104 (3 credits)	EC1105 (3 Credits)		
	Culture Studies	Personal Growth	Fundamentals of Communication	Elective – I Film Appreciation	Elective – I Animation		
	CU1107 (2 Credits)	US1106 (2 credits)	CC1101 (2 credits)	FL1110 (2 Credit)	AN1109 (2 Credit)		
II	Colour	Visual Documentation	Geometry & Construction 3D	Habitat Studies	Design process/ Problem Solving		25 Credits
	CL1115 (3 credits)	VD1117 (4 credits)	GC1114 (2 credits)	HS1112 (2 credits)	DE1116 (4 credits)		
	Craft Study	Coding 101/HTML CSS	History of Design	Elective – II Semiotics	Elective - II Biomimicry	Critical Thinking and Storytelling	
	CR1113 (2 credits)	CD1111 (2 credits)	HD1118 (2 credits)	SE1119 (2 credits)	BM1120 (2 credits)	CC1102 (2 credits)	
							Total Credits

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JK LakshmiPat University, Jaipur
Institute of Design
B. Des in Product Design (Batch 2019-2023)
Course Structure for Semester III – VIII

Semester	Courses									Credits
III	Elements of Form 1	Ergonomics	Workshop Skill project 1	Representation Techniques	DP 1: Simple Product Design	Presentation Skills	Materials and processes: Metals	Perspectives on Contemporary Issues	Elective – III	25
	EF1184 (3 credits)	EG1185 (3 credits)	WS1186 (3 credits)	RT1187 (2 credits)	DP1189 (6 credits)	PS1190 (2 credits)	MP1188 (2 credits)	CC1103 (2 credits)	2 credits	
IV	Elements of Form 2	Ergonomics 2-UI	CAD	Sustainable Production Techniques	DP 2: Digital product/ Interface	Proposal Writing		Communication and identity	Elective – IV	25
	EF1291 (3 credits)	EG1292 (3 credits)	MD1193 (6 credits)	SP1196 (2 credits)	DP1197 (5 credits)	PW1198 (2 credits)		CC1104 (2 credits)	2 credits	
V	Nature and form	Packaging Design	Workshop Skills: Prototyping	Hardware Prototyping	IoT	DP 3: Internet Of Things IOT Product	Entrepreneurship	Understanding and Managing Conflict	Elective – V	25
	NF1199 (3 credits)	PD11100 (3 credits)	PR12101 (3 credits)	AR11102 (2 credits)	IT11103 (2 credits)	DP11104 (6 credits)	ET11105 (2 credits)	CC1105 (2 credits)	2 credits	
VI	Portfolio Preparation	Product Photography	Techno-aesthetic Detailing	DP 4: Technically Complex Product	Entrepreneurship 2	Elective – VI				16
	PP11106 (2 credits)	PP11107 (2 credits)	TD12108 (4 credits)	DP12109 (6 credits)	ET12110 (2 credits)	2 credits				
VII	Industrial Internship II12118 (4 to 6 Weeks Duration) - 8 Credits									
	Strategic Design Management	Colloquium Paper	Project Management	DP 5: Systems Design/ Social Design		Leadership	Elective - VII			21
	SD12111 (2 credits)	CP11112 (2 credits)	PM11114 (3 credits)	DP12115 (10 credits)		LD11116 (2 credits)	2 credits			
VIII	Graduation Project GP12117 (18 credits)									20
Total Credits (Semester III – VIII)									148	

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JK LAKSHMIPAT UNIVERSITY
Institute of Design

BATCH: 2019-2023 (4 YEAR)

B.DES IN PRODUCT DESIGN PROGRAMME

FOUNDATION SEMESTER - I



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Freehand Drawing**

Course Code: **FD1101**

Credits: 4.0

Course Description & Content

This course fosters understanding of drawing and sketching as a tool for ideation and presentation. The contents of this course includes, overview of drawing systems for ideation, rendering and presentation, Introduction to basic elements of visual design – line, texture, colour, size, proportion, etc., introduction to drawing objects, human forms and spaces, basic hand and body movements in drawing, using pencils of different grades, freehand plotting and layout, perspective study and drawing of basic solids (cubes/cones/spheres), sketching of natural and human figures, capturing the overall form through finer details of depth, light and shade and simple perspectives of spaces.

Learning Outcomes

- Students can observe and represent images, ideas and concepts.
- Students get to improve coordination of hands and eyes.
- Students get to explore pencil as a media.
- Students can understand drawing and sketching as technique for ideation, rendering and presentation.

Methodology

- Lectures, Demonstrations and Presentations.
- Assignments.
- Analysis and feedback.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	Nil
2	Skills	20%
3	Process and management	Nil
4	Application of concepts	Nil
5	Understanding & clarity of concepts	20%
6	Attitude towards learning	Nil
7	Levels of improvement	10%
8	Levels of thinking & Reflection	Nil
9	Overall output	10%
10	Innovation & creativity	Nil
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Readings

1. Perspective, A new system for Designers, by Jay Doblin.

Websites

Sketch A Day.com, hedesignsketchbook.com , sketchaway.wordpress.com

<http://www.simkom.com/sketchsite/> . Skeren YouTube

<https://vimeo.com/idsketching>



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Digital Drawing**

Course Code: **DD1102**

Credits: 2.0

Course Description & Content

This course fosters understanding of using computers and relevant software to do drawing and sketching as a tool for ideation and presentation. The contents of the course include overview of drawing software for ideation, rendering and presentation, introduction to drawing objects, human forms and spaces on screens, basic hand and body movements in drawing, using devices of different types, digital plotting and layout, drawing of basic solids (cubes/cones/spheres). Drawing a variety of solid forms derived from basic solids, getting comfortable with various software elements and tools, capturing the overall form through finer details of depth, light and shade, simple perspectives of spaces.

Learning Outcomes

- Students get to observe and represent images, ideas and concepts.
- Students can improve coordination of hands and eyes.
- Students will explore inputting devices like trackpads, mouse and digital pencils as media.
- Students understand drawing and sketching as technique for ideation, rendering and presentation.

Methodology

- Lectures, demonstrations, and presentations.
- Lab working.
- Assignments.
- Discussions and feedback.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	Nil
2	Skills	20%
3	Process and management	Nil
4	Application of concepts	Nil
5	Understanding & clarity of concepts	20%
6	Attitude towards learning	Nil
7	Levels of improvement	10%
8	Levels of thinking & Reflection	Nil
9	Overall output	10%
10	Innovation & creativity	Nil
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Readings

1. Daniel Simons Books.
2. Product Sketching and Rendering by Koos Eisen.

Websites

<http://www.simkom.com/sketchsite/> . Skeren YouTube, Car Design News,

<https://vimeo.com/idsketching>



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B. Des in Product Design Programme

Course Title: **Material Explorations**

Course Code: **MX1103**

Credits: 3.0

Course Description & Content

This exploratory course helps students in understanding the properties of different materials that are used in products. It helps student understand the basic nature of tools and material relationship, the contents of the course includes study of wood, metal, plastic and bamboo as basic materials, Exploration of basic forms of materials, exploration of basic processes and form generation, combination of materials.

Learning Outcomes

- Students will understand the different materials and their properties.
- Students get to explore the properties of materials through the use of various hand tools.
- Students get introduced to various hand tools and machinery used in the workshops.

Methodology

- Lectures, demonstrations and presentations.
- Hands-on experience in workshops and studios.
- Assignments.
- Discussions and feedback.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	Nil
2	Skills	20%
3	Process and management	10%
4	Application of concepts	Nil
5	Understanding & clarity of concepts	Nil
6	Attitude towards learning	10%
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	Nil
9	Overall output	10%
10	Innovation & creativity	Nil
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	10%
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Reading

1. A Compendium of Chinese Bamboo.
2. Handmade in India, A Geographical Encyclopedia of Indian hand crafts (Sir MP Ranjan & Aditi Ranjan).
3. Bamboo in Japan, (Nancy Moore Bess with Bibi Wein).
4. Objects & Furniture Design Charles & Ray Eames (Ediciones Poligrafe).
5. Bamboo Craft Design (A.G. Rao & Madhavi Koli).
6. Dutch Design meets Bamboo (Pablo Van der Lugt).
7. Chinese Bamboo (Zhang Qisheng Chang Weishan).



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B. Des in Product Design Programme

Course Title: **Geometry & Construction 2D**

Course Code: **GC1104**

Credits: 3.0

Course Description

This Course helps the student to appreciate geometrical patterns in natural forms and understand geometrical relations. The contents of this course includes geometry and its relevance to design, drawing instruments and their usage, methodology of geometric construction: perpendiculars, divisions, parallels, etc., straight and curved lines, squares and grids, construction of regular polygons and ellipse, study of properties of geometric forms in nature through visual analysis, introduction to golden proportion, tessellations.

Learning Outcomes

- Students get to inculcate skills and precision in drawing with instruments.
- Students get to understand the basic geometrical patterns on two-dimensional surfaces.
- Students understand to stimulate imagination based on the fundamentals of geometric logic.

Methodology

- Lectures, Demonstrations and Presentations.
- Assignments.
- Analysis and feedback.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	10%
2	Skills	10%
3	Process and management	Nil
4	Application of concepts	10%
5	Understanding & clarity of concepts	10%
6	Attitude towards learning	10%
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	10%
9	Overall output	Nil
10	Innovation & creativity	Nil
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Reading

1. Gail Greet Hannah, Elements of Design, Princeton Architectural Press 2002.
2. Lauer, David; Design Basics, Wadsworth Publishing, 1999.
3. W. Wong; Principles of Two-Dimensional Design, John Wiley and Sons, 1972.
4. J. Bowers; Introduction to Two.
5. Dimensional Design: Understanding Form and Function, John Wiley & Sons 1999.
6. Proctor, R.M.; The Principles of pattern, Dover Publications, 1990.
7. Elam, Kimberly; Geometry of Design: Studies in Proportion and Composition, Princeton Architectural Press, 2001.



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B. Des in Product Design Programme

Course Title: **Elements of Composition**

Course Code: **EC1105**

Credits: 3.0

Course Description & Content

This course is essential for students to understand the basic elements and principles of visual composition this course contents are Basic elements of composition, manipulation of elements in two dimensions to induce specific effects, concepts of harmony, rhythm, balance, contrast and movement, Gestalt theory. The course also takes into consideration new developments in social media content compositional strategies and looks into that as a specialized segment.

Learning Outcomes

- Students develop visual perception ability among students.
- Students can understand the visual dynamics that exists between elements.
- Students will create compositions using basic elements of point, line, plane, volume, etc. and use the same to communicate ideas.

Methodology

- Lectures, demonstrations and presentations.
- Assignments.
- Analysis and feedback.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	Nil
2	Skills	20%
3	Process and management	10%
4	Application of concepts	Nil
5	Understanding & clarity of concepts	10%
6	Attitude towards learning	Nil
7	Levels of improvement	10%
8	Levels of thinking & Reflection	Nil
9	Overall output	10%
10	Innovation & creativity	Nil
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Readings

1. Gail Greet Hannah, Elements of Design, Princeton Architectural Press, 2002.
2. Lauer, David; Design Basics, Wadsworth Publishing, 1999.
3. W. Wong; Principals of Two-Dimensional Design, John Wiley and Sons, 1972.
4. J. Bowers; Introduction Design: Understanding of form and function, John Wiley & Sons 1999.
5. L. Hotzschue; Understanding Colour, VNR, 1995.
6. Itten, Johannes; The Art of Color: The Subjective Experience and Objective Rationale of Color, Wiley Publications, 1997.
7. Proctor, R.M.; The Principles of Pattern, Dover Publications, 1990.



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B. Des in Product Design Programme

Semester - 1

Course Title: **Culture Studies**

Course Code: **CU1107**

Credits: 2.0

Course Description & Content

This course introduces the students to the visual culture of India, the deep-rooted Indian traditions, values and cultural practices. This course contents are cultural traditions of India, design as a reflection of culture, globalization and its effects on cultural traditions.

Methodology

- Lectures.
- Reading Assignments.
- Field Visits to craft clusters and museums.
- Group discussions and feedback.

Evaluation Criteria:

S. No	Components	Weightage
1	Communication/Presentation	20%
2	Skills	Nil
3	Process and management	Nil
4	Application of concepts	20%
5	Understanding & clarity of concepts	20%
6	Attitude towards learning	Nil
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	Nil
9	Overall output	Nil
10	Innovation & creativity	Nil
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Readings

1. Village India by Stephen P. Huyler.
2. Daughters of India by Stephen Huyler.
3. Introducing Anthropology by (writer) Merryl Wyn Davies. Piero (Illustrator).
4. Mankind Behaving Human needs & Material Culture by James K. Feible.
5. Tribes of India The Struggle for Survival by Christopher Van Furer – Haimendorf).
6. Handmade in India a Geographic Encyclopedia of Indian hand crafts by Sir M.P Ranjan and Aditi Ranjan.



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Semester - 1

Course Title: Personal Growth

Course Code: US1106

Course Title: Personal Growth

Course Instructor: R.L. Raina

Credits: 2.0

Number of hours: 20 Hrs.

Duration of the course: Aug-Oct 2019

Course Description & Content:

Personal growth is something that we all want to achieve, whether we know it or not. It is about our journey towards continuous improvement and seeing life from a different perspective. Personal growth is guided by principles such as purpose, vision, belief, commitment and knowing oneself. Ultimately, personal growth is about understanding exactly how you think, why you do things the way you do, having clarity around your purpose and direction in life and taking steps towards continual learning and development to evolve and enhance yourself. It is not something that is achieved overnight, but rather something that each and every one of us strive towards in our journey of life, fostering a more satisfying, successful, happier and fulfilling life.

Course Objectives:

In line with the above backdrop, this course on 'Personal Growth' focuses on the development of self from a holistic perspective. It aims to enhance self-awareness, expand capacity of self-management and self-development. The course is designed for students to learn more about themselves by taking them on a journey of self-discovery and self-reflection. It guides them on the strategies and skills that will make them shine and thrive in their personal as well as professional lives.

Course Pedagogy:

It will involve mix of lectures, discussions, group assignments and reflective exercises.

Course Learning Outcomes:

Students will be able to explore, identify, understand, demonstrate, and relate to the following:

- Their core personal strengths and values.
- Their capacity of development.
- A positive mind set and a humanistic attitude to human actions.

Course Content:

- Overview of course
- Self-Understanding
- Personal Vision and Purpose
- Self-Discipline
- Positive Attitude
- Overcoming Fears
- Balance in Life
- Contribution to Others
- Achieving Success
- Achieving Happiness

Evaluation Scheme:

Components	Weightage
1. Continuous Evaluation (Exercises, Quizzes, Assignments, Group Work)	55%
2. Final Presentation	15%
3. Class Participation	10%
4. Term-End Exam	20%

Recommended readings for students:

1. Corey, G., & Corey, M. S. (2010). I Never Knew I Had a Choice: Explorations in Personal Growth. (9th ed) Thomson
2. Unless You're Oprah, "Be Yourself" Is Terrible Advice (Adam Grant, The New York Times, 2016
3. Dalai Lama & Desmond Tutu with Douglas Abram. The Book of Joy, Cornerstone Publishers, 2016
4. Dalai Lama & Howard C Cutler. The Art of Happiness at Work. Easton Press, 1998.



JK LAKSHMIPAT UNIVERSITY

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B. Des in Product Design Programme

Semester - 1

Course Title: **Fundamentals of Communication**

Course Code: **CC1101**

Credits: 2.0

Course Description & Content

This course provides an introduction to the importance of effective communication, the consequences of poor communication, and the different elements of verbal and non-verbal communication. Students learn about, and enhance, the components of communication: kinesics, paralanguage (voice) and language.

Learning Outcomes

The students will be able to:

- Identify different cultural differences and their impact on communication.
- Deliver effective oral presentations following appropriate kinesics and paralinguistic features.
- Apply appropriate communication skills across settings, purposes, and audiences.
- Compose grammatically correct sentences and paragraphs.

Topics to be Covered

1. Nature and importance of communication
2. Mehrabian's Communication Theory
3. Ethos, Pathos, Logos: The three pillars of persuasive communication
4. English as a Foreign Language
5. Consequences of poor communication
6. Writing Strategy

7. Basic of Effective Presentation
8. Influence of culture on communication
9. Common Errors in English

Methodology

- Lectures, demonstrations and presentations.
- Assignments.
- Analysis and feedback.

Assessment Plan

Components	Weightage
1. Continuous Evaluation	30%
2. Class Participation	20%
3. Quiz/Tests	20%
4. Written Exam	30%

Suggested Readings

Technical Communication: Principles and Practice. Second Edition. New Delhi: Oxford University Press, by Sangeeta Sharma.

Websites

Using rhetorical appeals to credibility, logic, and emotions to convince people, <https://link.springer.com>

<https://www.businessballs.com/communication-skills/mehrabians-communication-theory-verbal-non-verbal-body-language/>

<https://www.businessballs.com/communication-skills/presentation-skills-and-techniques/>



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Film Appreciation (Elective – 1)**

Course Code: **FL1110**

Credits: 2.0

Course Description & Content

The first elective of Foundation semester, Film Appreciation course would deal with the history, theory, and practice with respect to design. The elective course would look into film language, techniques and history from the perspective of design and introduce students to the fundamental concepts of application of design thinking in films.

Learning Outcomes

The students will be able to:

- Trace the trajectory of moving images and how it affected societies globally.
- Study regarding the various methodologies of filmmaking approaches.
- Distinguish between facts, assumptions and opinions.
- Have a holistic understanding of visual culture and the trajectory from still to moving images.

Methodology

- Lectures
- Assignments
- Analysis
- Discussions

Evaluation Criteria.

S. No	Components	Weightage
1	Communication/Presentation	10%
2	Skills	Nil
3	Process and management	Nil
4	Application of concepts	10%
5	Understanding & clarity of concepts	10%
6	Attitude towards learning	Nil
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	10%
9	Overall output	Nil
10	Innovation & creativity	Nil
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	20%
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Readings

1. Introducing Critical Theory by Stuart Sim.
2. Starting Point: 1979-1996 by Hayao Miyazaki.
3. Film Theory: An Introduction Through the Senses by Malte Hagener and Thomas Elsaesser.
4. How to Read a Film by James Monaco.



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B. Des in Product Design Programme

Course Title: **Animation (Elective – 2)**

Course Code: **AN1109**

Credits: 2.0

Course Description & Content

The Animation elective offers an introduction to the basic animation techniques. Amongst the various techniques available, Stop-Motion is the choice of medium. Stop Motion is a software free technique wherein one can manipulate objects and capture images to create an illusion of motion. After initial trials the students will animate simple self-made stories.

Learning Outcomes

The students will be able to:

1. Learn how the illusion of animation works
2. Work with timeline and understand frames per second
3. Communicate ideas through animation films
4. Deconstruct animation techniques
5. Gain skills to build sets and aid to assist in animation shots

Methodology

- Lectures
- Assignments
- Analysis

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	Nil
2	Skills	10%
3	Process and management	Nil
4	Application of concepts	Nil
5	Understanding & clarity of concepts	10%
6	Attitude towards learning	Nil
7	Levels of improvement	10%
8	Levels of thinking & Reflection	Nil
9	Overall output	10%
10	Innovation & creativity	20%
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Readings

1. **Animator's Survival Kit by Richard Williams**
2. **The Illusion of Life / Frank Thomas and Ollie Johnston**
3. <https://www.renderforest.com/blog/35-motion-graphics-animation-blogs>



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Institute of Design

BATCH: 2019-2023 (4 YEAR)

B.DES IN PRODUCT DESIGN PROGRAMME

FOUNDATION SEMESTER - II



JK LAKSHMIPAT UNIVERSITY

Institute of Design

B. Des in Product Design Programme

Course Title: **Colour**

Course Code: **CL1115**

Credits: 3.0

Course Description & Content

This course helps in the perception of colour and the interaction of colour and form. This course content includes the theory of colour, interaction of colours, the relationship of colour and form, perception of light and colours, pigments, chromatic and achromatic colours.

Learning Outcomes

- Helps students to understand the science of colour as an element of design, and its application.
- Students get to understand colour perception and its relationship with form.
- Students can develop visual sensitivity through application of colour.

Methodology:

- Lectures, demonstrations and presentations.
- Experimentation with pigments.
- Discussions and feedback.

Evaluation Criteria

- Observation and Perception.
- Understanding and clarity of concepts.
- Levels of improvement.
- Skills.

Evaluation Criteria:

S. No	Components	Weightage
1	Communication/Presentation	Nil
2	Skills	10%
3	Process and management	Nil
4	Application of concepts	Nil
5	Understanding & clarity of concepts	20%
6	Attitude towards learning	Nil
7	Levels of improvement	10%
8	Levels of thinking & Reflection	Nil
9	Overall output	Nil
10	Innovation & creativity	Nil
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	20%
15	Jury	40%
	Total	100%

Suggested Readings

1. L. Hotzschue; Understanding Colour, VNR, 1995.
2. Itten, Johannes; The Art of Colour: The Subjective Experience and Objective Rationale of Color, Wiley Publications, 1997.



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B. Des in Product Design Programme

Course Title: **Visual Documentation**

Course Code: **VD1117**

Credits: 4.0

Course Description & Content

This course introduces students to the fundamentals of typography in design and its application in effective product interface/communication, basics of photography and videography, ways of documenting design work and photo imaging/manipulation and illustration manipulation techniques in succession. The course looks at elements of visual documentation in parts as well as in succession and brings them together for a holistic understanding of visual culture and approaches in design.

Learning Outcomes

- Students will understand the fundamentals of typography in communication.
- Students will understand the concept of graphic layouts, type hierarchy, white space.
- Students get to understand typography as an element of graphic design.
- Students will learn basics of photography and cutting-edge digital techniques.
- Students will learn the methodologies of documenting design works.
- Students will learn photo manipulation with regards to illustration and digital image processing.

Methodology:

- Lectures, demonstrations and presentations.
- Experimentation with traditional and modern methods.
- Group discussions and feedback.

Evaluation Criteria:

S. No	Components	Weightage
1	Communication/Presentation	20%
2	Skills	Nil
3	Process and management	10%
4	Application of concepts	Nil
5	Understanding & clarity of concepts	10%
6	Attitude towards learning	Nil
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	10%
9	Overall output	Nil
10	Innovation & creativity	Nil
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	10%
15	Jury	40%
	Total	100%

Suggested Readings

1. The Elements of Typographic Styles by Robert Bringhurst.
2. TYPOGRAPHIE - A manual of Design, by Emil Ruder.
3. Cultural Connectives by Rana Abou Rjeily.
4. Thinking with TYPE by Ellen Lupton, Just My Type by Simon Garfield.
5. Ways of Seeing by John Berger.
6. Understanding Exposure by Bryan Peterson.
7. The Decisive Moment by Henri Cartier Bresson.
8. Dreams of India by Raghu Rai.
9. Photoshop: Photo Manipulation Techniques to Improve Your Pictures to World Class Quality by John Slavio.



JK LAKSHMIPAT UNIVERSITY

Institute of Design

B. Des in Product Design Programme

Course Title: **Geometry & Construction 3D**

Course Code: **GC1114**

Credits: 2.0

Course Description & Content

This course helps the student to understand the geometry of solids and its application in form generation. This course includes enhanced geometric construction: derivation of regular and semi-regular tessellations, geometry of solids, construction of regular polygons and ellipse, derivation of Archimedean solids, subdivision of regular polyhedron into symmetric components.

Learning Outcomes

- Students would have a good understanding of geometrical patterns in three-dimensional forms.
- Students would appreciate and articulate the language of form, pattern and structure.
- Students will be stimulated by the fundamentals of geometric logic.

Methodology:

- Lectures, Demonstrations and Presentations.
- Assignments.
- Analysis and feedback.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	Nil
2	Skills	20%
3	Process and management	10%
4	Application of concepts	Nil
5	Understanding & clarity of concepts	20%
6	Attitude towards learning	Nil
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	Nil
9	Overall output	10%
10	Innovation & creativity	Nil
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Readings

1. Sacred Geometry by Stephen Skinner.
2. Islamic Ornamental Design by Humbert Claude.



JK LAKSHMIPAT UNIVERSITY

Institute of Design

B. Des in Product Design Programme

Course Title: **Habitat Studies**

Course Code: **HS1112**

Credits: 2.0

Course Description & Content

This course makes the students sensitive towards the social, cultural and physical environment and understands the relevance of design in that context. The course contents are Introduction to the socio-cultural structure of Indian society, Introduction to field work; preparatory exercises to understand the methodology for studying an environment, field study in a chosen location and communication of its understanding through maps, sketches, illustrations and textual reports, observation and study of detailed aspects of the chosen environment.

Learning Outcomes

- This course broadens students' perception about Indian habitat; appreciate the interrelationships and interdependence of the physical components.
- It helps to develop the ability and desire to establish contact with people, share their experiences and learn from their living.
- This course can develop the ability to collect and analyze information from the grassroots level and present it in the form of a document.

Methodology:

- Lectures, field study and group discussions.
- Interviews and interactions with people.
- Sketching and illustrations.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	10%
2	Skills	Nil
3	Process and management	Nil
4	Application of concepts	Nil
5	Understanding & clarity of concepts	10%
6	Attitude towards learning	Nil
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	10%
9	Overall output	Nil
10	Innovation & creativity	Nil
11	Research & analysis	20%
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	10%
15	Jury	40%
	Total	100%

Suggested Readings

1. Village India by Stephen. P. Huyler.
2. ManKind Behaving – Human Needs and Material Culture by James K Feible.
3. Daughters of India – Art & Identity by Stephen. P. Huyler.
4. Tribes of India – The Struggle for Survival by Christoph Van Furer, Haimendorf.
5. The Beautiful Tree – A Personal Journey into How the World's poorest people are educating themselves.



JK LAKSHMIPAT UNIVERSITY

Institute of Design

B. Des in Product Design Programme

Course Title: **Design Process / Problem Solving**

Course Code: **DE1116**

Credits: 4.0

Course Description

This course gives students an overview of the process of design. This overview is essential for them to appreciate the learning through various courses. The course content includes analysis and mapping of the design process, the morphology of the problem-solving process, role of creativity in design, methodologies and strategies related to the different stages of the design problem and case studies.

Learning Outcomes

- Students will understand and demonstrate the different stages in the design process – from perception of a problem to generating a solution to the problem through investigation, analysis, and synthesis
- Students will understand the methodology of the problem-solving process.

Methodology:

- Lectures
- Assignments.
- Individual Design Projects
- Discussions and feedback.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	Nil
2	Skills	Nil
3	Process and management	Nil
4	Application of concepts	10%
5	Understanding & clarity of concepts	10%
6	Attitude towards learning	10%
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	Nil
9	Overall output	Nil
10	Innovation & creativity	10%
11	Research & analysis	20%
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Readings

1. D. Norman; The Design of Everyday things, London, The MIT Press, 1998.
2. A Forty; Objects of Desire, Thems & Hudson, 1993.
3. Julier, G.; 20th Century Design, Thames & Hudson, 1993.
4. Potter, Norman; What is a Designer: Things, Places, Messages, Princeton Architectural Press 2002.
5. Victor Papanek, Design for The Real World.
6. Indian Design Edge – Strategic insights for success in the creative economy by Darlie Koshy.
7. Design the International Movement by H Kumar Vyas.



JK LAKSHMIPAT UNIVERSITY

Institute of Design

B. Des in Product Design Programme

Course Title: **Craft Study**

Course Code: **CR1113**

Credits: 2.0

Course Description & Content

The course looks at the craft history and hands on study of diverse craft techniques from India and further looks into application of the same in design. The course contents are introduction to craft history, craft and society, craft and its cultural relevance, study of traditional materials associated with craft and allied craft techniques and its application through design thinking.

Learning Outcomes

- This course broadens students' perception about Indian handicrafts, design culture with regards to geographical diversity and the roots of craft imagination.
- It helps to develop the ability to understand cultures and approach processes and techniques associated with them.
- This course aims at developing holistic understanding of craft techniques with regards to the cultural, sociological and geographical aspects of the same.

Methodology:

- Lectures, field study and group discussions.
- Interviews and interactions with craft engineers and craft-based designers.
- Study of techniques and processes and documentation.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	10%
2	Skills	Nil
3	Process and management	Nil
4	Application of concepts	Nil
5	Understanding & clarity of concepts	10%
6	Attitude towards learning	Nil
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	10%
9	Overall output	Nil
10	Innovation & creativity	Nil
11	Research & analysis	10%
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	20%
15	Jury	40%
	Total	100%

Suggested Readings

1. Handmade in India: Crafts of India by Aditi Ranjan, M P Ranjan.
2. Craft Atlas of India by Jaya Jaitley.
3. Handmade in India: A Geographical Encyclopedia of India Handicrafts by Aditi Ranjan, M P Ranjan.
4. Tribes of India – The Struggle for Survival by Christoph Van Furer, Haimendorf.
5. The Beautiful Tree – A Personal Journey into How the World's poorest people are educating themselves.



JK LAKSHMIPAT UNIVERSITY

Institute of Design

B. Des in Product Design Programme

Course Title: **Coding 101 / HTML CSS**

Course Code: **CD1111**

Credits: 2.0

Course Description & Content

The course looks at coding in context of digital design and introduces coding languages, backend coding principles and interrelation between the digital design workflows and coding methods for the same with regards to interaction design.

Learning Outcomes

- This course introduces students to fundamental principles of coding and its correlation with interaction design.
- It helps to develop a holistic knowledge of digital design processes, from workflow to coding and finally to being launched on the web platform.
- This course aims at developing systems thinking at the basic level through study of interconnections between larger systems in web design processes.

Methodology:

- Study of coding languages, application and systems.
- Practicing variations and language-based probabilities and tracing their connection with design workflows.
- Study of the various developer platforms and DIY methods of digital design launching and publication.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	Nil
2	Skills	Nil
3	Process and management	10%
4	Application of concepts	10%
5	Understanding & clarity of concepts	10%
6	Attitude towards learning	Nil
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	20%
9	Overall output	Nil
10	Innovation & creativity	Nil
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	10%
15	Jury	40%
	Total	100%

Suggested Readings

1. Code Complete by Steve McConnell.
2. Clean Code by Robert Cecil Martin.
3. Don't Make Me Think by Steve Krug.
4. Designing Mobile Interfaces: Patterns for Interaction Design by Eric Berkman and Steven Hooper.



JK LAKSHMIPAT UNIVERSITY

Institute of Design

B. Des in Product Design Programme

Course Title: **History of Design**

Course Code: **HD1118**

Credits: 2.0

Course Description & Content

The course looks at history of design from a global context, taking into account the ways in which design imagination emerged out of it following separate social, economic and cultural paths. The course includes study of design history of India, Europe, Asia, America and Africa with respect to the histories and developments over years.

Learning Outcomes

- The course introduces students to historical and sociological transformations and their implications on world design.
- It helps to develop a deeper understanding of design proper, the signification of its diversity and ramifications.
- The course also develops contextual understanding of design in its myriad forms across the globe.

Methodology:

- Study of history and cultures in context of design.
- Study of political and social scenarios with respect to design.
- Study of influences of diverse cultures in design disciplines.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	10%
2	Skills	Nil
3	Process and management	Nil
4	Application of concepts	Nil
5	Understanding & clarity of concepts	10%
6	Attitude towards learning	Nil
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	20%
9	Overall output	Nil
10	Innovation & creativity	Nil
11	Research & analysis	20%
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Readings

1. Thinking Design by S Balaram.
2. White by Kenya Hara.
3. Designing Design by Kenya Hara.
4. Graphic Design: A Concise History by Richard Hollis.
5. On Beauty by Umberto Eco.
6. On Ugliness by Umberto Eco.
7. Sagmeister and Walsh: Beauty by Stefen Sagmeister and Jessica Walsh.



JK LAKSHMIPAT UNIVERSITY

Institute of Design

B. Des in Product Design Programme

Course Title: **Semiotics (Elective - II)**

Course Code: **SE1119**

Credits: 2.0

Course Description & Content

The third elective of Foundation semester, Semiotics would deal with studying of the basis of meaning making through signs and symbols. Semiotics will introduce the culture of studying visual signs and their historical, psychological and unconscious connect with the human mind and how that has seen applications in design proper. The elective course would look at study of visual signs, semiotic theory along with fundamentals of visual semiotics in the digital domain.

Learning Outcomes

- Learning fundamentals of semiotic theory and its application in design thinking.
- Understanding of elements of semiotics and visual semiotics.
- Understanding of visual semiotic theory and practice with regards to visual communication and industrial design.

Methodology:

- Study of Saussurian and Peircean theory of semiotics.
- Study of analytical psychology models and their application in design.
- Study of cognition, signification, representation and meaning making through semiotics.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	Nil
2	Skills	Nil
3	Process and management	10%
4	Application of concepts	10%
5	Understanding & clarity of concepts	10%
6	Attitude towards learning	Nil
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	10%
9	Overall output	Nil
10	Innovation & creativity	20%
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Readings

1. Course in General Linguistics by Ferdinand de Saussure.
2. A Theory of Semiotics by Umberto Eco.
3. The Essential Pierce by Nathan Houser and Christian Kloesel.
4. On Norms and ideals by Charles Saunders Pierce
5. Archetypes and the Collective Unconscious by Carl Jung.
6. Logos: The Development of Visual Symbols by Steven Skaggs.
7. Type, Sign, Symbol by Adrian Frutiger.
8. Man and His Symbols – Carl Jung.



JK LAKSHMIPAT UNIVERSITY

Institute of Design

B. Des in Product Design Programme

Course Title: **Biomimicry (Elective - II)**

Course Code: **BM1120**

Credits: 2.0

Course Description & Content

The fourth elective of Foundation semester comprises Biomimicry course. Biomimicry would deal with studying the fundamental approaches in emulating nature's strategies in design. The elective course would look into strategies in biomimicry design, fundamentals of fractal-based design and levels of biomimicry and their applications in design.

Learning Outcomes

- The course looks at introducing nature's grand design theory and developing design thinking in keeping with the same.
- Designing through biomimetics: approaches, strategies and case studies.
- Study of existing biomimicry-based design models and their nature of functioning.

Methodology:

- Study of nature's grand design theory and biomimicry levels
- Study of material innovation through biomimicry.

Evaluation Criteria

S. No	Components	Weightage
1	Communication/Presentation	Nil
2	Skills	Nil
3	Process and management	10%
4	Application of concepts	10%
5	Understanding & clarity of concepts	10%
6	Attitude towards learning	Nil
7	Levels of improvement	Nil
8	Levels of thinking & Reflection	10%
9	Overall output	Nil
10	Innovation & creativity	20%
11	Research & analysis	Nil
12	Class participation	Nil
13	Teamwork	Nil
14	Observation and perception	Nil
15	Jury	40%
	Total	100%

Suggested Readings

1. Biomimicry by Janine Benyus.
2. Biomimetics for Designer by Veronica Kapsali.
3. Bulletproof Feathers: How Science Uses Nature's Secrets to Design Cutting-Edge Technology – Ed. Robert Allen
4. Biomimicry Resource Handbook: A Seed Bank of Best Practices by Danya Baumeister and Sherry Ritter.



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Critical Thinking & Story Telling**

Course Code: **CC1102**

Credits: 2.0

Course Description & Content

The modern world offers confounding opinions and choices that need to be navigated judiciously. This course explores frameworks and processes to critically examine narratives, reconstruct them, and craft well-reasoned stories that can be told using impactful communication.

Learning Outcomes

The students will be able to:

- Formulate intelligent questions to investigate.
- Evaluate information and argument for correctness, consistency, relevance and validity.
- Compose well-structured and well-reasoned arguments.
- Articulate and evaluate the impact of narratives.
- Distinguish between facts, assumptions and opinion.

Prerequisites		N/A
Hours per Week		L-T-P: 2-1-0
Credits		2
Sr. No	Specifications	Weightage
01	Attendance	Nil
02	Assignment	20
03	Class Participation	20
04	Quiz	Nil
05	Theory Exam	Nil

06	Theory Exam	Nil
07	Theory Exam	40
08	Report-1	20
09	Report-2	Nil
10	Report-3	Nil
11	Project -1	Nil
12	Project -2	Nil
13	Project -3	Nil
14	Lab Evaluation	Nil
15	Lab Evaluation	Nil
16	Course portfolio	Nil
	Total (100)	100

Evaluation scheme for re-test

7	Theory Exam	40
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Syllabus of Critical Thinking and Storytelling

- I. **Introduction to Critical Thinking-** Definitions of Critical Thinking, its applications and the methods to think critically. Paul & Elder model will be used.
- II. **Importance of questioning-**The key to critical thinking is the ability to formulate intelligent questions. Students will be able to create, improve and prioritize their questions. They will be able to use different types of question by using Bloom's taxonomy to understand the root of any situation, problem or subject.
- III. **Examine data Critically-**Students will be able to filter information, separate fact from opinion, identify cognitive biases and become aware of the ladder of inference. They will also be taught to conduct responsible research and basics of bibliography and citation.
- IV. **Construct and reconstruct argument-** Students will be taught to construct arguments with sound reasoning. They will be able to support their claims and opinions with compelling data and facts, and present well-informed arguments. Evaluate argument using logical fallacies.
- V. **Building a compelling Narrative-** Stories that we create and narrate influence how we see ourselves and our association with others. The students will be able to observe, think, create and narrate their stories in an effective manner.

Textbooks and Reference Books

Critical thinking: an introduction

Alec Fisher - Cambridge University Press - 2011

Critical thinking its definition and assessment

Alec Fisher-Michael Scriven - Centre for Research in Critical Thinking - 1997

Art of thinking clearly

Rolf Dobelli - Harper Collins USA – 2014

Critical thinking skills: developing effective analysis and argument

Stella Cottrell - Palgrave Macmillan – 2017

Thinking, fast and slow

Daniel Kahneman - Farrar, Straus and Giroux - 2015



JK LAKSHMIPAT UNIVERSITY
Institute of Design

BATCH: 2019-2023 (4 YEAR)

B. DES IN PRODUCT DESIGN PROGRAMME

(2ND, 3RD AND 4TH YEAR)



JK LAKSHMIPAT UNIVERSITY
Institute of Design

BATCH: 2019-2023 (4 YEAR)

B.DES IN PRODUCT DESIGN PROGRAMME

SEMESTER - III



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: Elements of Form 1

Course Code: EF1184

Credits:3

Course Description & Content

Purpose of the course is to introduce the students to explore and understand the basic elements like line, shape, form and texture and to work on creating new forms using elements in 2dimension (2D) and 3dimension (3D). Further leads to form abstractions through nature inspiration in 3D. Studio assignments help students to gain hand-on experience to develop forms.

Learning Outcomes

- Enables understanding of 2 dimensional and 3-dimensional form.
- Exploration supported understanding of surface textures in different materials.
- Development of imagination and insight through exploration of form.
- Enabling methodologies that draw from metaphors, to generate new forms.
- Understanding of the concept of family of forms.
- Introductory understanding of 3D geometry.
- Understanding of the concept of polyhedrons and their imaginative and critical use in the creation of complex structures.
- Understanding of the relationship between form, material and process.

References and Readings:

1. Itten, Johannes; The Art of Color: The Subjective Experience and Objective Rationale of Color, John Wiley & Sons; 1 edition (December 1997)
2. Hannah, Gail Greet; Elements of Design, Princeton Architectural Press, 1, July 2002
3. Byers, Mel; The Design Encyclopedia, Publisher: John Wiley & Sons Publications, (8 August 1994)
4. Livio, Mario; The Golden Ration: The Story of PHL, the World's Most Astonishing Number, Publisher: Broadway, 2003.



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Ergonomics**

Course Code: **EG1123**

Credits: 3.0

Course Description & Content

This course is for brief idea about Ergonomics/Human Factors and its application in product design. It aims to provide basic concept about Ergonomics/Human Factors and its implementation in design and to illustrate the application of elementary ergonomic principles in product design

Learning Outcome:

- Observation based understanding of materials, processes and interactions in a system
- Understanding of the concept of an “object” in order to find the modes of human interaction with product or service(tangible/intangible)
- Understanding through identifying how sensory experience is influenced by product/service in a given context.
- Learning through research into “user interaction and behavior” with objects in a contextual environment.
- Conclusive understanding of ergonomic design interventions in opportunity areas as well as potential areas.

Suggested Readings:

1. Handbook of Human Factors and Ergonomics – Ed. Gavriel Salvendy
2. The Design of Everyday Things – Don Norman
3. The Measure of Man and Woman: Human Factors in Design – Alvin Tilley



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Workshop Skill Project 1**

Course Code: **WS1186**

Credits: 3.0

Course Description & Content:

The Workshop Skill Project1 is a lab course that introduces students to the ways in which a designer would operate inside a workshop setup. The course would help a student to understand workshop safety, know-hows on operation of workshop machines and hands on operation of diverse tools. Various paints, finishes, prototyping materials, prototyping techniques and processes are also introduced in context of strategies of prototyping for design projects.

Learning Outcome:

- Enables hands-on learning of workshop machines and hand tools.
- Understanding of safety precautions and smooth operational processes inside workshop setup.
- Introductory understanding of prototyping techniques and strategies.

Suggested Readings:

1. Basic Lathework for Home Machinists (Fox Chapel Publishing) Essential Handbook to the Lathe by Stan Bray
2. Metalsmithing Made Easy: A Practical Guide to Cold Connections, Simple Soldering, Stone Setting, and More by Kate Richbourg
3. The Complete Manual of Woodworking: A Detailed Guide to Design, Techniques, and Tools for the Beginner and Expert by Albert Jackson



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Representation Techniques**

Course Code: **RT1187**

Credits: 2.0

Course Description & Content:

Representation Techniques will introduce students to develop skills and techniques in ideation and communicational representation that spans across diverse design disciplines. From initial conceptual sketches and quick sketches to more sophisticated visual representations, the course will introduce students to different skill sets including drawing, sketching, and image creation tools and media. The course will introduce students to effective articulations and represent ideas through traditional tools, digital tools, and photography.

Learning Outcomes:

- Enables application of drawing skills for contextual design description.
- Ability to generate visuals for design applications and presentations.
- Enables application of different tools (imaging and rapid visual prototyping) for ideation and communication.
- understanding of modern photographic techniques

Suggested Readings:

1. Sketching, product design presentation by Koos Eissen and Roselien Steur



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Material and Processes-Metals**

Course Code: **MP1188**

Credits: 2.0

Course Description & Content:

Materials and Processes-Metals focus on the intended understanding of various aspects of materials, including its properties, techniques, structural possibilities, application, and functional expressions. Students are introduced to a variety of materials and encouraged to explore and understand their properties which can be utilized in tangible expression of the material via design thinking, product development, exhibition planning, and experiential expositions, etc.

Learning Outcome:

- Introductory understanding of different forms of metals, wood and stone etc.
- Exploration driven understanding of structures and basic form generation in metal and wood.
- Understanding of the material through basic manipulations like bending, cutting, shearing, heating, and fusing (welding and soldering).
- Holistic understanding of the subject through exposure to various form languages in metals to understand how the material lends to the design's personality
- Material analysis and peer discussion-based understanding of the material.

Suggested Readings:

1. Materials and Design: The Art and Science of Material Selection in Product Design by Michael F. Ashby and Kara Johnson
2. Materials for Design by Chris Lefteri
3. Materials for Design by Victoria Ballard Bell



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Design Project 1: Simple Product Design**

Course Code: **DP1189**

Credits: 6.0

Course Description & Content:

Design Project 1 is the first major project-based course for students of Product design. The course necessitates the students to take up an individual project in the area of Simple product Design (SPD) or Simple Furniture Design (SFD). The project requires the student to research, define, speculate, plan and execute individual projects within the precincts of a well-defined context. The project would also draw significantly from a collective learning of previously introduced courses.

Learning Outcome:

- Learning to plan a project with regards to context, possibilities and design thinking.
- Exploration based understanding of a plan of action/actions that lead to a direction in which a product/furniture would be ideal.
- Understanding research, analysis and ideation/iteration-based methodologies with regards to a specific core area/opportunity area
- Ability to present and document the entire process/individual process for further learning and referencing
- Material analysis and peer discussion-based understanding of the material.

Suggested Readings:

1. Product and Furniture Design, Rob Thompson, Young Yun Kim, Thames & Hudson, 2011
2. Furniture: Furniture That Transforms Space 1st Edition by Anna Yudina
3. Prototyping and Modelmaking for Product Design, Bjarki Hallgrímsson
4. Big-Game: Everyday Objects: Industrial Design Works, Anniina Koivu



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Presentation Skills**

Course Code: **PS1190**

Credits: 2.0

Course Description & Content:

Presentation Skills deals with the strategies, tools, approaches and intent of presenting a topic, context, product, service or reflection/understanding in the light of design. The course would orient and develop students to the concepts of effective presentation while introducing them to various tools that exist for the same purpose.

Learning Outcome:

- Introductory understanding of basic planning for a presentation.
- learning into effective presentation through creation of narrative flows.
- Enabling learning to codify complex data and present them simply for clarity of understanding and internalization.
- Introductory and working understanding of digital and online tools which would aid a design presentation process.

Suggested Readings:

1. Art and copy, film by doug pray
2. Typographic Systems of Design: Frameworks for Type Beyond the Grid (Graphic Design Book on Typography Layouts and Fundamentals) by Kimberly Elam.



JK LAKSHMIPAT UNIVERSITY

Institute of Design

B. Des in Product Design Programme

Course Title: **Perspective on Contemporary Issues**

Course Code: **CC1103**

Credit: 3.0

Course Description

In an era of globalization, there is an increasing need for the youth to be able to empathize with others, value diverse perspectives and cultures and understand how events around the world are intertwined. Global issues revolve around social, economic and environmental factors which ultimately add to the interconnectedness of countries. In this course, students will employ key critical thinking concepts to analyze contemporary issues from multiple perspectives. They will explore the impact at micro and macro levels.

Course Outcomes

The students will be able to:

- Identify different perspectives objectively.
- Explain interconnectedness of the issues and their impact at micro and macro levels.
- Recognize their own beliefs, biases, claims and assumptions.
- Evaluate sources, argue and defend effectively.

Methodology

This course will be an amalgamation of brief lectures and activity based learning i.e. films, group discussions, debates, and case studies. The objective behind utilizing activity based learning is for the learners to have a more hands on experience. This will encourage and ensure active participation and longer retention. The idea is for learners to feel engaged and also express their views in a conducive environment. The takeaway from this course will not only be awareness about certain issues but equipping learners with skills of decision making and reasoning in alignment with certain global contexts.

Evaluation Scheme		
Prerequisites		N/A
Hours per Week		L-T-P: 2-0-1
Credits		2
Sr. No	Specifications	Weightage
01	Attendance	Nil
02	Assignment	20
03	Class Participation	20
04	Quiz	20
05	Theory Exam	Nil
06	Theory Exam	Nil
07	Theory Exam	20
08	Report-1	20
09	Report-2	Nil
10	Report-3	Nil
11	Project -1	Nil
12	Project -2	Nil
13	Project -3	Nil
14	Lab Evaluation	Nil
15	Lab Evaluation	Nil
16	Course portfolio	Nil
Total (100)		100

Course Content	
Introduction to contemporary perspective	Introduction to the course, skills and the topics. Revision of critical thinking.
Research, analysis & evaluation of a topic from local, national and global perspectives	<u>Climate Change and Sustainability</u> Understanding the magnitude of the issue, its impact and future challenges. How we can meet our current needs without diminishing the quality of the environment or reducing the capacity of future generations to meet their own needs.
	<u>Globalization</u> With increasing development throughout the world, the focus of this theme will be on the impact of globalization in India.
	<u>Nationalist Movement</u> There is a sense that excesses of globalization have created an identity crisis across the world, facilitating the rise of nationalist movements. Rising nationalism is seen everywhere, from the election of Donald Trump to Brexit, the success of far-right parties in Italian, German and Austrian elections in 2017 and 2018, nationalism appears to be on rise globally. We will look at its reasons and implication.
	<u>Technology</u> Impact of unprecedented technological growth, challenges and opportunities.

Readings:

1. Harari, Y. N. (2019). *21 Lessons for the 21st century*. Toronto: CELA.
2. GUHA, R. (2019). *India After Gandhi: the history of the world's largest democracy*. NEW YORK: ECCO.
3. Rosling, H., Rosling, O., & Rönnlund Anna Rosling. (2019). *Factfulness: ten reasons were wrong about the world - and why things are better than you think*. London: Sceptre.
4. Kolbert, E.(2015). *The Sixth Extinction: An unnatural History*. Bloomsbury

Articles
https://www.theguardian.com/environment/2015/mar/08/how-water-shortages-lead-food-crises-conflicts
<u>The Cultural Challenges of Meeting Climate Change Goals: Montreal Weighs an Emissions Ban on Iconic Wood-Fire Bagel Shops</u> Andrew Hoffman Pub Date: Apr 11, 2019 Source: WDI Publishing at the University of Michigan
<u>Prototyping a Scalable Smart Village to Simultaneously Create Sustainable Development and Enterprise Growth Opportunities</u> Solomon Darwin; Henry W. Chesbrough Pub Date: Jan 1, 2017 Source: UC Berkeley - Haas School of Business
<u>bKash: Financial Technology Innovation for Emerging Markets</u> Ishtiaq Mahmood; Marleen Dieleman; Narmin Tartila Pub Date: Jun 28, 2017 Source: Ivey Publishing
<u>The Panic of 2008 and Brexit: Regional Integration versus Nationalism</u> Robert F. Bruner; Kevin Hare Pub Date: Oct 9, 2017 Source: University of Virginia Darden School Foundation
<u>Biblio Credit Union: Social Inequality and the Living Wage</u> Kent Walker; Curtis Labutte Pub Date: Jan 30, 2017 Source: Ivey Publishing



JK LAKSHMIPAT UNIVERSITY
Institute of Design

BATCH: 2019-2023 (4 YEAR)

B.DES IN PRODUCT DESIGN PROGRAMME

SEMESTER - IV



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: Elements of Form 2

Course Code: EF1291

Credits: 3.0

Course Description & Content

EOF 2 focuses on the aspects of aesthetics, perception and materialization of architectural compositions. insight into the creative process and how it helps innovative design solutions. Knowledge and understanding of the various aesthetic outcomes through an integrated design approach in order to come to optimized spatial and structural solutions. By using the physical model as a main research tool, students develop design related research skills.

Learning Outcomes

- Enables advanced understanding of 2 dimensional and 3-dimensional form.
- Exploration supported understanding of generative structures and forms.
- Enabling methodologies that help process complex spatial problems pertaining to form.
- Understanding of the concept of traits and personalities in forms.
- Advanced understanding of 3D geometry.
- Understanding of the concept of polyhedrons and their complex spatial applications

References and Readings:

1. Kimberly Elam, Geometry of Design: Studies in Proportion and Composition, Princeton Architectural Press, 2001
2. Thompson, Darcy Wentworth; Bonner, John Tyler (Editor); On Growth and Form by D'Arcy Thompson, Cambridge University Press; Rei Abr edition (31 July 1992)
3. Doczi, Gyorgy; Power of Limits, Publisher: Shambhala; Shambhala; Reissue edition (12 August 1981)
4. Lawlor, Robert; Sacred Geometry: Philosophy and Practice (Art and Imagination), Publisher: Thames & Hudson, 1989
5. Kepes, Gyorgy; Language of Vision, Dover Publications, 1995
6. Abhikalpa: The journal of Industrial Design Centre, IIT Bombay, January 1984



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: Ergonomics 2 UI

Course Code: EG1292

Credits: 3.0

Course Description & Content:

This course deals with ergonomics/human factors and its application in product design, particularly in the domain of user interaction. It aims to provide basic concepts about ergonomics/human factors and their implementation in design and to illustrate the application of elementary ergonomic principles in products, especially UI.

Learning Outcome:

- Observation based understanding of human interactions in a system
- Understanding of the concept of an “object” in order to find the modes of human interaction with product or service (tangible/intangible)
- Understanding through identifying how sensory experience is influenced by product/service in a given context.
- Learning through research into “user interaction and behavior” with objects in a contextual environment.
- Conclusive understanding of ergonomic design interventions in opportunity areas as well as potential areas.

Suggested Readings:

1. Handbook of Human Factors and Ergonomics – Ed. Gavriel Salvendy
2. The Design of Everyday Things – Don Norman
3. The Measure of Man and Woman: Human Factors in Design – Alvin Tilley



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **CAD – Modelling, Rendering and Printing**

Course Code: **MD1193**

Credits: 6.0

Course Description & Content

The course introduces students to basics of computer-aided drawing. Over the last decade, computer aided drawing and technical tools have become increasingly prevalent in design industry. Basic design fundamentals and essentials including drafting, illustration, technical drawing, production and exhibition drawings are majorly conducted on CAD Programmes. Students will be introduced to essential programmes and encouraged to explore and learn to utilize them in drawing, drafting and further apply in digital based visual work as per requirement. 3d modelling will deal with understanding of the digital 3-dimensional space and creation of digital “assets/objects” in this paradigm. The course integrates the geometric understanding of the physical environment or “reality” to the nuances of an ever growing and generative virtual 3-dimensional digital space through modelling tools and specific software. The modules take the learner through a variety of tools that can help visualize a digitally modelled “object” with a particular and intentional environment. It makes the learner capable of understanding and manipulating triggers like surface finish, texture, camera logics, lighting etc. within the 3d digital space enabled by specific software tools.

Learning Outcomes

- Students will learn the foundations of hardware-software interface in CAD drawing.
- Students will be introduced to the standard processes and techniques of CAD.
- Students will learn to work within a combination of programmes and thereby learn to use them effectively.
- Enables application of software rendering skills for contextual design description.
- Ability to generate visuals for design applications and presentations digitally.
- Enables application of different tools (imaging and rapid virtual prototyping) for ideation and communication.

- understanding of modern digital 3d photographic and lighting techniques
- Enables hands-on learning of digital 3-dimensional tools
- Understanding of logics and validity of forms in a digital 3d space.
- Introductory understanding of digital visualization and building techniques and strategies.

References and Readings:

1. Fusion 360 for Makers: Design Your Own Digital Models for 3D Printing and CNC Fabrication by Lydia Sloan Cline
2. AutoCAD 2020 For Beginners: by CAD Folks
3. Inside Rhinoceros 5 by Ron K.C. Cheng
4. Digital Lighting & Rendering by Jeremy Birn
5. 3D Photorealistic Rendering: Interiors & Exteriors with V-Ray and 3ds Max by Jamie Cardoso
6. Keyshot 3D Rendering by Jei Lee Jo



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Sustainable Production Techniques**

Course Code: **SP1196**

Credits: 2.0

Course Description & Content:

The module deals with various processes and production methods that hold sustainability as a driving factor. The module sensitizes the learner as to how an effective system designs approach can help build and employ sustainable production, retail and consumption techniques. The course employs a case study method to effectively understand specific interventions that help enable sustainability in a particular value chain.

Learning Outcome:

- Introductory understanding of various triggers that affect sustainability of a particular system.
- Research driven understanding of individuals and organizations who have effectively employed sustainable design solutions
- Understanding of the concept through deep research into a case study where sustainability has been employed through effective design interventions

Suggested Readings:

1. Fashion Fibers: Designing for Sustainability by Annie Gullingsrud
2. Technology-Driven Sustainability: Innovation in the Fashion Supply Chain by Gianpaolo Vignali
3. Sustainability and Design Ethics by Tom Russ



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Design Project 2: Digital Product/Interface**

Course Code: **DP1197**

Credits: 5.0

Course Description & Content:

Design Project 2 drives the understanding of the individual modules of the semester towards a conclusive project that demands the learners to undertake the task of providing design solutions within the domain of User Interface design of a product. This project will help bridge the understandings of physicality of form and user interaction and hence, deliver a holistic understanding of an object and its behavior with users.

Learning Outcome:

- Learning to plan a project with regards to context, possibilities and design thinking.
- Exploration based understanding of the subject of product design and user behavior.
- Understanding research, analysis and ideation/iteration-based methodologies with regards to User Interface design in context of products such as appliances etc.
- Ability to present and document the entire process/individual process for further learning and referencing
- Analysis and peer discussion-based understanding of the material.

Suggested Readings:

1. The Design of Everyday Things: Revised and Expanded Edition by Don Norman, Neil Hellegers
2. Emotional Design: Why We Love (or Hate) Everyday Things by Don Norman
3. User Friendly: How the Hidden Rules of Design are Changing the Way We Live, Work & Play by Cliff Kuang and Robert Fabricant



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Proposal Writing**

Course Code: **PW1198**

Credits: 2.0

Course Description & Content:

The course deals with strategies of writing a proposal/pitch for a design project. The course introduces a student to the formats, approaches and information that become part of a successful proposal. Students are introduced to and expected to explore the ways in which budget, promise, workflow and task management can become part of a proposal.

Learning Outcome:

- Understanding of the use and utility of targeted words, phrases, linguistic cues to showcase promise and garner trust in a proposal.
- Being able to compartmentalize the proposal into segments/sections that would benefit effective communication of the idea
- Understanding scenario building and opportunity mapping.
- Enabling realization of the pitch and its responsible demonstration by the learner.

Suggested Readings:

1. Writing Winning Business Proposals by Richard Freed.
2. One Perfect Pitch: How to Sell Your Idea, Your Product, Your Business--or Yourself March 24, 2016, by Marie Perruchet
3. Pitch Anything: An Innovative Method for Presenting, Persuading, and Winning the Deal by Oren Klaff



JK LAKSHMIPAT UNIVERSITY

Institute of Design

B. Des in Product Design Programme

Course Title: **Communication and Identity**

Course Code: **CC1104**

Credit: 2.0

Course Description

This course enables students to explore their personal and professional identities, to create their distinctive presence. It intends to help them gain an understanding of the basic purpose, benefits, and responsibilities of self-presence, and to begin the process of defining their values, strengths, and goals

Learning Outcomes

The students will be able to:

- Analyze their personal identities, both private and social
- Identify their different values, strengths and areas of professional interest
- Articulate their personal statement and use it to craft an influential pitch
- Express themselves through various communication formats, on different platforms

Topics to be Covered

1. Self and Social identity
2. Labelling Theory
3. External and internal locus of Identity
4. Personal Statement
5. Steps to build Personal Brand
6. Online presence
7. Elevator Pitch, Cover Letter
8. Presence in Personal Interviews



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B.DES IN PRODUCT DESIGN PROGRAMME

SEMESTER - V



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Nature & Form**

Course Code: **NF1199**

Credits: 3.0

Course Description & Content

The course deals with fundamentals from generation in context to examples from nature. It takes the learner through the variety of forms that are found in nature and understand the semantics of these forms in relevance to their purpose and utility/functionality. The course enables the learner to understand effective metamorphosis of natural forms into intended artificial forms through hands-on explorations with drawing, material manipulation and digital representational techniques.

Learning Outcomes

- Enables advanced understanding of 2 dimensional and 3-dimensional form.
- Exploration supported understanding of generative structures and forms.
- Understanding of the concept of traits and personalities in natural forms.
- understanding of 3D geometry in context of natural environment and objects.
- Understanding of the concept of metamorphosis to effectively generate intended forms while drawing inspirations from the natural world.

References and Readings:

1. Kimberly Elam, Geometry of Design: Studies in Proportion and Composition, Princeton Architectural Press, 2001
2. Thompson, Darcy Wentworth; Bonner, John Tyler (Editor); On Growth and Form by D'Arcy Thompson, Cambridge University Press; Rei Abr edition (31 July 1992)
3. Doczi, Gyorgy; Power of Limits, Publisher: Shambhala; Shambhala; Reissue edition (12 August 1981)
4. Lawlor, Robert; Sacred Geometry: Philosophy and Practice (Art and Imagination), Publisher: Thames & Hudson, 1989
5. Kepes, Gyorgy; Language of Vision, Dover Publications, 1995
6. Abhikalpa: The journal of Industrial Design Centre, IIT Bombay, January 1984



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: Packaging Design

Course Code: PD11100

Credits: 3.0

Course Description & Content

The course deals with concepts of packaging and how to effectively deliver a packaging solution of a particular product. The learners shall learn about various materials and associated techniques that are employed in the design and execution of a successful packaging design. Concepts of brand identity, storage, logistics etc. would also be introduced.

Learning Outcomes

- Enables advanced understanding packaging design
- Exploration and research supported understanding of materials and techniques employed in the packaging industry
- Understanding of the concept of sustainability in the domain of packaging industry.
- Understanding geometry in context of dielines and flat packing systems.

References and Readings:

1. Structural Packaging: Design your own Boxes and 3D Forms (Paper engineering for designers and students) by Paul Jackson
2. Package Design Workbook: The Art and Science of Successful Packaging by Steven DuPuis and John Silva
3. Material Innovation: Packaging Design by Andrew H Dent and Leslie Sherr
4. Packaging Structure & Die-cutting Design by sun cheng



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: Workshop Skills: Prototyping

Course Code: PR12101

Credits: 3.0

Course Description & Content

The course entails workshop-based learning that enables effective prototyping of a design solution concept. The module shall take the learners through various techniques and processes associated with different materials. The module shall also develop understanding into material allocation, resource management and effective compartmentalization of prototyping process into substages.

Learning Outcomes

- Enables advanced understanding materials in terms of their features and associated utility
- Exploration supported understanding of various techniques and processes associated with material use.
- Enables hands-on learning of workshop machines and hand tools.
- Understanding of safety precautions and smooth operational processes inside workshop setup.
- Advanced understanding of prototyping techniques and strategies.

References and Readings:

1. Basic Lathework for Home Machinists (Fox Chapel Publishing) Essential Handbook to the Lathe by Stan Bray
2. Metalsmithing Made Easy: A Practical Guide to Cold Connections, Simple Soldering, Stone Setting, and More by Kate Richbourg
3. The Complete Manual of Woodworking: A Detailed Guide to Design, Techniques, and Tools for the Beginner and Expert by Albert Jackson



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: Hardware Prototyping

Course Code: AR11102

Credits: 2.0

Course Description & Content

The course will deal with electronics and programming, starting from the very basics and building up to mastery of the Arduino platform. Learners will understand how to use sensors to detect external events, such as light or sound, and how to perform an action linked to these events. The course also provides a natural introduction to the world of FabLabs, an international network of over a thousand spaces where people can access digital manufacturing machines and practice using Arduino alongside other makers.

Learning Outcomes

- Enables introductory understanding of arduinos in terms of their features, capabilities and associated stimuli receptors.
- Exploration supported understanding of various components of physical arduino system and its associated virtual programming
- Advanced understanding of digital prototyping techniques and strategies for dynamic products.

References and Readings:

1. Arduino: The Complete Beginner's Guide - Step by Step Instructions (The Black Book) by Byron Francis
2. Make: Getting Started with Arduino - The Open Source Electronics Prototyping Platform by Massimo Banzi and Michael Shiloh
3. Make: Electronics: Learning Through Discovery by Charles Platt



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: Internet of Things

Course Code: IT11103

Credits: 2.0

Course Description & Content

This course will be dealing with the basics of electronics and programming that will give learners the necessary triggers to start creating substantial devices capable of sensing, controlling physical signals, using Arduino and ESP boards. This module will provide basic concepts related to the Internet of Things, discuss statistics about IoT and describe IoT networks types.

Learning Outcomes

- Enables advanced understanding of the concept of IoT
- Exploration supported understanding of various types of IoT devices and touchpoints
- Understanding of the concepts of network, basic systems design, digital autonomous interactions etc.
- Understanding of various network and connection types and how they affect functionality of the IoT environment.

References and Readings:

1. SPEED no limits in the digital era by Aleksander Poniewierski
2. Digital Transformation: Survive and Thrive in an Era of Mass Extinction by Thomas M. Siebel and Audible Studios



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Design Project 3: Internet of Things (IoT) product**

Course Code: **DP11104**

Credits: 6.0

Course Description & Content:

Design Project 3 entails the understanding of the individual modules of the semester towards a conclusive project that demands the learners to undertake the task of providing design solutions within the domain of an IoT product. This project will help bridge the understandings of physicality of form and user interaction and hence, deliver a holistic understanding of an object and its behavior with users. It would make the learners understand the nuances of IoT systems in terms of its physical touchpoints and its digital neural network(s).

Learning Outcome:

- Learning to plan a project with regards to context, possibilities and design thinking.
- Exploration based understanding of the subject of product design and user behavior and its application through IoT products.
- Understanding research, analysis and ideation/iteration-based methodologies with regards to IoT in context of products such as appliances, home assistants etc.
- Ability to present and document the entire process/individual process for further learning and referencing
- Analysis and peer discussion-based understanding of the concepts of IoT.

Suggested Readings:

1. Speculative Everything: Design, Fiction, and Social Dreaming (The MIT Press) by Anthony Dunne and Fiona Raby
2. Discursive Design: Critical, Speculative, and Alternative Things (Design Thinking, Design Theory) by Bruce M. Tharp and Stephanie M. Tharp
3. Internet of Things for Architects: Architecting IoT solutions by implementing sensors, communication infrastructure, edge computing, analytics, and security by Perry Lea



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Entrepreneurship**

Course Code: **ET111054**

Credits: 2.0

Course Description & Content

The course entrepreneurship teaches a student to build an independent design-led business model from scratch. Students will learn to understand, plan and execute an innovative idea and support it with design thinking, strategy and resource development approaches. Entrepreneurship is an integral part of design learning, where for major innovations/ unique ideas and opportunity areas, a designer is encouraged to set up a circular model that generates value. The course will concentrate on traditional areas of target along with opportunity area mapping, operational models to ensure growth, calculated risk management models and mind to market strategy formulation.

Learning Outcomes

- Conceptualization of entrepreneurship as a model of innovation to be practiced in reality, within a specific market/opportunity area.
- Introductory understanding of diverse factors, which relate to an entrepreneurship model – the risk factors as well as the unique opportunity quotients.
- Sequential understanding of an entrepreneurship model, the necessary actions and the fundamentals.
- Understanding how innovation and demand can be bridged via an entrepreneurship-based model in a particular context.

References and Readings:

1. This Is Service Design Doing: Applying Service Design Thinking in the Real World by Marc Stickdorn, Markus Edgar Hormess
2. Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers by Alexander Osterwalder and Yves Pigneur
3. Value Proposition Design: How to Create Products and Services Customers Want (Strategyzer) by Alexander Osterwalder, Yves Pigneur



JK LAKSHMIPAT UNIVERSITY

Institute of Design

B. Des in Product Design Programme

Course Title: **Understanding and Managing Conflict**

Course Code: **CC1105**

Credit: 2.0

Course Description

In today's increasingly complex and fragmented world, it is important to be able to resolve conflicts and build healthy relationships. Interpersonal and Group Dynamics is a course designed to prepare students to identify conflicts, manage emotions, analyze the situation and characters, and practice different frameworks to deal with conflicts.

Course Outcomes

The students will be able to:

- Define a group and explain the stages of group development
- Describe conflict and explain types and causes of conflict
- Use inquiry and advocacy to engage with groups
- Give and receive feedback effectively
- Identify sources of conflict and manage them using difference conflict handling styles

Topics to be Covered

1. Introduction to the stages of group development
2. Introduction to Personality, Perception and Learning as source of differences in individual and groups
3. Nature, Types and sources of Conflict
4. Conflict Resolution Strategies
5. Emotional Intelligence
6. Empathy and Feedback
7. Inquiry & Advocacy – Concept of silence (Masking, Avoiding, Withdrawing) and violence (Controlling, Labeling, Attacking)



JK LAKSHMIPAT UNIVERSITY
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B.DES IN PRODUCT DESIGN PROGRAMME

SEMESTER - VI



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: Portfolio Preparation

Course Code: PP11106

Credits: 2.0

Course Description & Content

The course introduces students to the process of creating a design portfolio. A primary communication tool for any designer, the course will introduce students to ways in which their respective design projects/concepts/innovations can be presented to a potential client. Areas including project presentation, ideation, exploration, representation, visualization and understanding are introduced as a part of a successful portfolio making process. Students will learn to understand the context in which portfolios operate, strategies of standing out in terms of a targeted portfolio presentation, fast-viewing formats and industry standard tools for creation of the same.

Learning Outcomes

- Ability to codify information/projects/innovations in an understandable and desirable manner.
- Ability to create engagement in presentation and clarity in representational methodology.
- Garnering familiarity with existing tools for portfolio building and knowledge of fast iteration for case-specific requirements.

References

1. Design: Portfolio: Self-promotion at its best by Craig Welsh
2. Start at the End: How to Build Products That Create Change by Matt Wallaert
3. Product Design (Portfolio) by Alex Milton and Paul Rodgers



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: Product Photography

Course Code: PP11107

Credits: 2.0

Course Description & Content

Introduction to a variety of traditional and digital photographic techniques and processes through the principles and practice and digital imaging and production giving the learner a strong technical foundation in location and studio lighting, analogue and digital capture and digital post-production techniques.

Learning Outcomes

- understanding of the basics of photography
- hands on experience of cameras and camera settings
- understanding of nuances of natural and artificial light photography
- exploration based learning of picture framing and composition
- nuanced understanding of advertising and branding concepts used in advertising photography
- conceptual and practical understanding picture processing with adobe photoshop

References and Readings:

1. Lighting for Digital Photography: From Snapshots to Great Shots (Using Flash and Natural Light for Portrait, Still Life, Action, and Product Photography) by Syl Arena
2. Graphic Design for Art, Fashion, Film, Architecture, Photography, Product Design and Everything in Between by Andy Cooke and Angharad Lewis



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: Techno Aesthetic Detailing

Course Code: TD12108

Credits: 4.0

Course Description & Content

The course takes the learner through various techniques of analog and digital representational skills that augment the presentation/generation of a particular design.

The module helps the learner to develop intricate, functional and working details of his/her design concepts and representing their technical and aesthetic features in an efficient manner

Learning Outcomes

- understanding product development in terms of form generation and manipulation
- understanding of nuances of detailing through analog and digital processes
- exploration based learning of nuances of form generation and detailing

References and Readings:

1. Architectural Detailing: Function, Constructability, Aesthetics by Edward Allen and Patrick Rand
2. Interpreting Engineering Drawings by Ted Branoff



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Design Project 4: Technically Complex Product**

Course Code: **DP12109**

Credits: 6.0

Course Description & Content:

Design Project 4 entails the understanding of the individual modules of the semester towards a conclusive project that demands the learners to undertake the task of providing design solutions within the domain of a technically complex product. This project will help develop a holistic as well as specific understanding(s) pertaining to the design process of a product with complex features, processes and composition (in terms of its components).

Learning Outcome:

- Learning to plan a project with regards to context, possibilities and design thinking.
- Exploration based understanding of the subject of product design and component system of a particular product/service/concept
- Understanding research, analysis and ideation/iteration-based methodologies with regards to products with technically complex features.
- Ability to present and document the entire process/individual process for further learning and referencing
- Analysis and peer discussion-based understanding of the concepts taught.

Suggested Readings:

1. Beyond the Prototype: A roadmap for navigating the fuzzy area between ideas and outcomes by Douglas Ferguson.
2. Making It, Second edition: Manufacturing Techniques for Product Design by Chris Lefteri



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Entrepreneurship 2**

Course Code: **ET12110**

Credits: 2.0

Course Description & Content

The course entrepreneurship teaches a student to build an independent design-led business model from scratch. Students will learn to understand, plan and execute an innovative idea and support it with design thinking, strategy and resource development approaches. Entrepreneurship is an integral part of design learning, where for major innovations/ unique ideas and opportunity areas, a designer is encouraged to set up a circular model that generates value. The course will concentrate on traditional areas of target along with opportunity area mapping, operational models to ensure growth, calculated risk management models and mind to market strategy formulation.

Learning Outcomes

- Conceptualization of entrepreneurship as a model of innovation to be practiced in reality, within a specific market/opportunity area.
- Introductory understanding of diverse factors, which relate to an entrepreneurship model – the risk factors as well as the unique opportunity quotients.
- Sequential understanding of an entrepreneurship model, the necessary actions and the fundamentals.
- Understanding how innovation and demand can be bridged via an entrepreneurship-based model in a particular context.

References and Readings:

1. This Is Service Design Doing: Applying Service Design Thinking in the Real World by Marc Stickdorn, Markus Edgar Hormess
2. Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers by Alexander Osterwalder and Yves Pigneur
3. Value Proposition Design: How to Create Products and Services Customers Want (Strategyzer) by Alexander Osterwalder, Yves Pigneur



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B.DES IN PRODUCT DESIGN PROGRAMME

SEMESTER - VII



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Strategic Design Management**

Course Code: **SD12111**

Credits: 2.0

Course Description & Content

The course on Strategic Design Management (SDM) orients the students to the interplay within design and business strategies, the various aspects of it and explores the tactile and tangible nature of requirement in modern businesses. The course deals with the design of business models in terms of strategic ideas that benefit businesses. In that way, the course is different from a generic management course; it does not aim for management of designers or design projects. Rather it redesigns management, leadership and business paradigms within a given context. The course takes a holistic view of diverse ecosystems - micro/macro, global/local and rural/urban contexts and thereby explores ways in which value and profit can be intertwined in deeper ways to create long lasting sustainable imprints in businesses.

Learning Outcomes

- Understanding through exploration of the tactile, psychological and metaphorical aspects of businesses and learning to maximize on the value generations of it.
- Understanding through case studies in social and corporate sectors in order to learn from and analyze different approaches.
- Increased competence to analyze and map opportunities and design transformational strategies in diverse fields.
- Acquiring knowledge of behavioral economics and neuro-marketing which will lead to understanding of psychological values and triggers in respective businesses and approaches of making them function more efficiently.

References and Readings:

1. The Regenerative Business: Redesign Work, Cultivate Human Potential, Achieve Extraordinary Outcomes by Carol Sanford
2. Creative Strategy and the Business of Design by Douglas Davis
3. Iconic Advantage®: Don't Chase the New, Innovate the Old by Soon Yu and Dave Birss



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Colloquium Paper**

Course Code: **CP11112**

Credits: 2.0

Course Description & Content

The course on Colloquium paper prepares the student for design academic disciplines and helps them to research, plan and formulate ways of writing a colloquium paper on a chosen design topic. A colloquium deals with current concerns in the field or allied fields of design and is a major part of research interest for the student. It concerns itself with preparatory study, which is academic in nature and is common to researchers and students alike. The course develops the research acumen of the student by orienting them to the ways of presenting a research-based paper for a journal, seminar or conference.

Learning Outcomes

- Understanding of the formats, approaches and considerations concerning preparation of a colloquium paper.
- Enabling learning through exposure to design-academic discourses, the ways in which academic research is presented in the form of a paper or case study.
- Ability to articulate personal knowledge into writing and presenting papers on topics of choice and associated learning to present it in a setting.
- Exposure to different annotation styles, footnote and endnote styles and other technical know-hows associated with colloquium papers.

References and Readings:

1. The Faithful Imagination: Papers from the 2018 Frances White Ewbank Colloquium on C.S. Lewis & Friends by Joe Ricke and Ashley Chu
2. Garden History: Issues, Approaches, Methods (DUMBARTON OAKS COLLOQUIUM ON THE HISTORY OF LANDSCAPE ARCHITECTURE// PAPERS) by John Dixon Hunt
3. The Twilight of Byzantium: Aspects of Cultural and Religious History in the Late Byzantine Empire: Papers from the Colloquium Held at Princeton Univ. by Slobodan Curcic and Doula Mouriki



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: Project Management

Course Code: PM11114

Credits: 3.0

Course Description & Content

The course on Project Management introduces a student to the diverse aspects of managing a design project, the factors and considerations that go on to define the ways in which a project requires management guidance. Over the span of this course, students are introduced to the nature of design projects they would normally deal with, how they are structured and in which ways they require supervision and action to be taken forward. Management in the context of design project introduces the students to a holistic approach towards a project and what kind of decisions will help in taking it forward. The course also interacts with leanings of entrepreneurship and Strategic design management to clarify the role of a designer as a project manager in context of a design project.

Learning Outcomes

- Introductory understanding of basics of project management in design.
- Case study-based learning of projects which saw successful management intervention in design.
- Live project-based learning in terms of successful decision-making processes with respect to a particular project.

References and Readings:

1. Agile for Instructional Designers: Iterative Project Management to Achieve Results by Megan Torrance
2. Design Thinking for Program and Project Management by George Anderson, PhD, PMP, Rebecca Whitworth, et al.
3. Introduction to Social Entrepreneurship by Teresa Chahine



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: Design Project 5: Systems Design/Social Design

Course Code: DP1251

Credits: 10.0

Course Description & Content

The Design project 5 offers Systems design and Social Design as options to students. Systems design deals with systems thinking that acts as a decisive tool to organize and maximize the qualitative and quantitative processes of large-scale systems. Social Design would look at ways in which empathy and innovation are used as tools to create a project that becomes beneficial to a targeted social group, community, or a larger demographic where traditional solution-based models have not been able to provide a justifiable solution.

Learning Outcomes

- Deep understanding of complex systems and structures, their tenets and how to take them into consideration in order to develop/understand a system better.
- Ability to provide systems-based design solutions that work across multiple levels.
- Case study-based learning of social design projects/ systems projects with regards to product and service design.

References and Readings:

1. Critical Design in Context: History, Theory, and Practice by Matt Malpass
2. Critical Theory and Interaction Design (The MIT Press) by Jeffrey Bardzell
3. Can't Not Do: The Compelling Social Drive that Changes Our World by Paul Shoemaker
4. Giuseppe Pagano: Design for Social Change in Fascist Italy by Flavia Marcello



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Course Title: **Leadership**

Course Code: **LD11116**

Credits: 2.0

Course Description & Content

The course on Leadership concentrates on how to become a more effective leader through communication, management and strategy. The course introduces students to the various aspects of leadership and how it affects organizations and smaller startups. Ideas on what would constitute balanced leadership and how it can be designed better to maximize potential is also explored. Students are also introduced to the various thinking tools that can help a leader to operate and perform better in context of leadership driven businesses and organizations.

Learning Outcomes

- Learning to design effective ideas that percolate down an organization creating harmonious work culture.
- Sensitizing the learner to bring in positive change in environments where capital is not the primary requirement to compete against large organizations.
- Understanding to transform the organization into a more agile, responsive and creative mode of working.
- Exploration of better ways of collaborative and proactive design intervention through opportunities.

References and Readings:

1. Design Leadership: How Top Design Leaders Build and Grow Successful Organizations by Richard Banfield
2. Steve Jobs: A Biography by Walter Isaacson
3. Less and More: The Design Ethos of Dieter Rams by Klaus Klemp and Keiko Ueki-Polet



JK LAKSHMIPAT UNIVERSITY

INSTITUTE OF DESIGN

B. Des in Product Design Programme

Semester 8

Course Title: **Graduation Project**

Course Code: **GP12117**

Credits: 18.0

Course Description & Content:

The focus of the graduation project is to demonstrate the ability to contribute and collaborate in a professional manner with experts in the industry, with project partners and prospective users of the intended product. The students will justify the design decisions taken during the tenure of the project with regards to the design process, argue for relevant facts, social context and a user focus.

Learning Outcome:

- Identify and define relevant design problems of high complexity and discuss its relevance in relation to both the profession and the social context.
- Communicate effectively with experts during different phases of the project, as well as demonstrate maturity in the processing and evaluation of the obtained response.
- Work and contribute efficiently to a professional environment and deliver great user experiences
- Collaborate with other team members and stakeholders.
- Take a user-centered design approach and rapidly test and iterate designs.

References and Readings:

- As per the project choices.