



Design Thinking and UX Design

Course – Bachelor of Design in UX
Duration – 4 years

Curriculum

Course Structure –

Year 1	Code	Semester 1	Credit	Hours
Subject 1	SD	Sketching & drawing	3	45
Subject 2	FOD	Fundamentals of design	5	75
Subject 3	IUXD	Introduction to UX Design	3	45
Subject 4	HE	History of art & Evolution of design	5	75
Subject 5	IVD	Introduction to Visual Design	3	45
Subject 6	DV	Design Communication and visualizing ideas	3	45
Subject 7	EUP	Empathy and understanding problems	3	45
			25	375
Year 1	Code	Semester 2	Credit	Hours
Subject 1	SD-A	Sketching & drawing Advance	3	45
Subject 2	VDT	Visual Design Tools	3	45
Subject 3	TED	Technology in experience design	5	75
Subject 4	UXD-A	UX Design Advance	3	45
Subject 5	BUID	Basics of UI Development	5	75
Subject 6	ISUX	Integrated studio for UX	5	75
			24	360
Year 2	Code	Semester 3	Credit	Hours
Subject 1	EPD	Ethnography & people design	5	75
Subject 2	IUR	Introduction to user research	3	45
Subject 3	SDTF	Service design & task flows	3	45
Subject 4	IA	Information Architecture	5	75
Subject 5	IUID	Introduction to UI Design	3	45
Subject 6	DT	Design Thinking	3	45
Subject 7	IDS	Information & Data Study	3	45
			25	375
Year 2	Code	Semester 4	Credit	Hours
Subject 1	URA	User research application	3	45
Subject 2	SDTFA	Service design & task flows advance	3	45
Subject 3	IID	Introduction to Interaction Design	5	75
Subject 4	UID-A	UI Design Advance	3	45
Subject 5	DTA	Design Thinking Application	3	45
Subject 6	DA	Data Analytics	3	45
Subject 7	I6D	Introduction to 6D	5	75
			25	375

Year 3	Code	Semester 5	Credit	Hours
Subject 1	WP	Wireframing & Prototyping	3	45
Subject 2	UT	Usability Testing	5	75
Subject 3	UX&D	UX & Digitalization	5	75
Subject 4	IM	Innovation Management	3	45
Subject 5	VDT-A	Visual Design Tools Advance	5	75
Subject 6	TED-A	Technology in Experience Design Advance	3	45
Subject 7	OED	Omnichannel experience design	3	45
			27	405
Year 4	Code	Semester 6	Credit	Hours
Subject 1	ID-A	Interaction Design Advance	5	75
Subject 2	UXDF	UX Design for futuristic technologies	3	45
Subject 3	UXDR	UX Design for rural India	3	45
Subject 4	UID-A	UI Development - Advance	5	75
Subject 5	ISUX	Industry specific UX design	3	45
Subject 6	ISUX-A	Integrated studio for UX - Advance	5	75
			24	360
Year 4	Code	Semester 7	Credit	Hours
Subject 1	GUX	Gamification & UX	3	45
Subject 2	HMI	HMI	5	75
Subject 3	PDL	Product design & lifecycle management	5	75
Subject 4	BDM	Business, UX & Design management	5	75
Subject 5	LP	Live Project	5	75
			23	345
Year 4	Code	Semester 8	Credit	Hours
Subject 1	DP	Degree Project	27	405
Subject 2	PR	Project Reviews		
Subject 3	JR	Jury		
			27	405
			200	3000

Summary	
Credits	200
Total Hours	3000 hours
Class Lectures	1150 hours
Practical	730 hours
Studio Session	1120 hours
	6200 hours

BACHELOR OF DESIGN COURSE DETAILS

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Year 1

Semester 1: 25 credits | 375 Hours

Sketching & Drawing

CODE: SD | CREDITS: 3 | HOURS: 45

Introduction to basics of drawing - Line, points, squares, circles, triangles, 2d sketching & drawing - Creating layout, shape, line & shadows, shine, Overlap, Texture detail, 3D sketching & drawing. Perspective using forms, cuboid, prisms, cones, sphere. Application

learning with still life, real life sketching. Human Anatomy- Proportion drawing using shapes and drawing human figure composition.
Project on 2D drawing, 3D drawing and human figure composition

Fundamentals of Design

CODE: FOD | CREDITS: 5 | HOURS: 75

Introduction to elements and principles of design. Learning basics of design – dot, line, shape, form as fundamental design components. Principles of design – simplicity, unity, proportion, emphasis, rhythm and balance. Learning design laws such as Gestalt's law. Project work on elements and principles of design.

Introduction to UX Design

CODE: IUXD | CREDITS: 3 | HOURS: 45

Understand the evolution of UX design as an industry practice and learning about UX industry experts. Understanding UX design processes and methodologies – user centred design, 5S model. Job roles and responsibilities in the UX industry. UX industry trends. Project on UX design process and industry trends

History of Art & Evolution of Design

CODE: HE | CREDITS: 5 | HOURS: 75

Understanding history of different art forms – modern art, contemporary art, classical art, renaissance art, art appreciation and historical interpretation of art in its cultural contexts. Understanding the evolution in design through forms and everyday things. Journey of design across in the 19th century to modern times. Project submission on Art & design history

Introduction to Visual Design

CODE: IVD | CREDITS: 3 | HOURS: UX

Introduction to basic elements of visual design - color theory, color wheel, visual hierarchy, legibility and readability. Learn creating page layouts, grids and patterns. Introduction and exploration of trends in visual design.

Introduction to visual design tools – illustrator & Photoshop

Lab sessions on elements of visual design & tools

Project in elements of visual design & tools

Design Communication & Visualizing Ideas

CODE: DV | CREDITS: 3 | HOURS: 45

Learning visualization techniques through - visual identity design, metamorphism visualization techniques, brainstorming and mind mapping. Information visualization through infographics and designing brand communication.

Documenting and communicating design ideas through presentations, role play and group activities.

Project in design communication and visualization

Empathy & understanding problems

CODE: EUP | CREDITS: 3 | HOURS: 45

Learn how to understand users, techniques to empathize with users and identify key user problems. Learn how to gain insights from empathy and define problems statements.

Empathy tools – techniques for getting empathy insights through interviews empathy maps, emotional mapping, observation, project submissions empathy mapping

Year 1

Semester 2: 24 credits | 360 Hours

Sketching & Drawing Advance

CODE: SD-A | CREDITS: 3 | HOURS: 45

Exploring color mediums like colored papers, color pencils, chalk, charcoal, ink etc. learning one-point, two-point, three-point linear perspective, planar analysis and line variations, contours, freehand perspective, line into value. Creating tessellations and illusions.

Application learning with still life, real life sketching.

Project on sketching & drawing advance

Visual Design Tools

CODE: VDT | CREDITS: 3 | HOURS: 45

Learning advanced visual design tools – illustrator, Photoshop. Creating layouts, iconography, digital color schemes, infographics, typography, screen design.

Lab work on visual design tools, Project on visual design tools

Technology in Experience design

CODE: TED | CREDITS: 5 | HOURS: 75

Understanding technology for digital experience and product ecosystems – form factors, operating systems, wifi, Bluetooth, sensors and other hardware components.

Understanding technological feasibility and viability. Technology constraints on design.

Learning about futuristic technologies and their implementation in design – IoT, AR, VR

Research project on upcoming technologies and defining product ecosystems and constraints of key technologies

UX Design Advance

CODE: UXD-A | CREDITS: 3 | HOURS: 45

Deep-dive in UX methodologies, case studies in UX design, heuristic evaluation, understanding product UX lifecycle.

Project on UX design

Basics of UI Development

CODE: BUID | CREDITS:5 | HOURS: 75

Learning front-end development technologies – HTML, Css, JavaScript, JQuery. Structure of HTML Page, Mandatory tags in html page (html, head, body). What is CSS, Different ways of applying CSS for elements, and priority chain of CSS. Heading tags (H1...H6), Tags and attributes (Class, Id, style etc.). Inline and block level elements

Project and lab in front-end-development

Integrated studio for UX

CODE: IS-UX | CREDITS: 5 | HOURS: 75

Project on UX design implementation with industry relevant problem statement.

Year 2

Semester 3: 25 credits | 375 Hours

Ethnography and people design

CODE: EPD | CREDITS: 5 | HOURS: 75

Understand the users, user's interaction with the environment, people and culture, UX and societies, creating ethnography mood boards, user scenarios, storyboard, ethnography and user research, understanding research problems, data gathering techniques
Perform field study to understand people design

Introduction to user research

CODE: IUR | CREDITS: 3 | HOURS: 45

User research importance, KPIs in User Experience, user research goals, heuristics analysis, user segmentation, user personas, identifying and recruiting users for the research, preparing a questionnaire for user research, user research methodologies – Qualitative and Quantitative analysis, user interviews, focussed group discussion, expert reviews, tools for user research.

Understanding cognitive psychology and user behaviour.

Performing a user research with 20 users on a chosen problem

Service design and task flow

CODE: SDTF | CREDITS: 3 | HOURS: 45

Understanding tasks, processes, systems; user touch points, ecosystem diagram, value proposition map, using CJM to understand user flows, understanding task flows, creating task flows, systems engineering, KPIs for efficiency in service design, systems engineering, shortest path

Service design in the banking sector, understand task flow for operators

Information Architecture

CODE: IA | CREDITS: 5 | HOURS: 75

Introduction to Information architecture, card sorting, open card sorting, semi closed card sorting, closed card sorting, using excel as a tool for card sorting, Understanding Information architecture, creating IA for different industries, IA types and structures

Introduction to UI Design

CODE: IUID | CREDITS: 3 | HOURS: 45

UI design guidelines for different platforms and operating systems – Material guidelines, iOS, web, responsive, windows etc. Principles and fundamentals of UI Design. Iconography & typography for interface design. Fundamentals of screen design based on design guidelines. Cross platform screen design.
Practical training in UI design for digital screens.

Design thinking

CODE: DT | CREDITS: 3 | HOURS: 45

Introduction to design thinking, history of design thinking, wicked problems, case studies in design thinking, design thinking process, implementing the process in driving innovation, design thinking in social innovations
Tools of design thinking – persona, customer journey map, AS-IS, TO-BE Processes, product lockdown workshops
An exercise in design thinking – implementing design thinking for making the process of a user better. Student to choose one industry segment to implement design thinking process

Information and Data Study

CODE: IDS | CREDITS: 3 | HOURS: 45

Understanding and collection of data, methods of collecting data, tools for collecting data, analysing data, using data analytics tools like Google analytics for user experience, heat mapping tools.
Data visualization and dashboard design.
Quantitative analysis and user research with 1000 users

Year 2

Semester 4: 25 credits | 375 Hours

User Research application

CODE: URA | CREDITS: 3 | HOURS: 45

Application of user research, building a user lab, creating a user day, constant user feedback, listening posts and user research, understanding user problems, empathy map
Performing user research in the ecommerce industry

Performing user research in the insurance industry

Service Design and task flow advance

CODE: SDFT-A | CREDITS: 3 | HOURS: 45

Actor – process – relation model, AS-IS process map, TO-BE process map, user research as a tool to refine task flows, tools for creating service design, bringing efficiency in service design. Service design in the manufacturing sector, service design in retail sector.

Introduction to Interaction Design

CODE: IID | CREDITS: 5 | HOURS: 75

Importance of Interaction design, User centered design, design of interactive products, understanding micro interactions, analyse and critique interaction design, the scope of interaction design, methods of interaction design, tools for interaction design, sketching and paper wireframing.

UI Design advance

CODE: UID-A | CREDITS: 3 | HOURS: 45

Advance interface design - Cross platform interface design, responsive design. Create UI concept and design guidelines. UI design documentation, design delivery documentation

Tools – Zeplin

Multiple projects in interface design.

Design thinking application

CODE: DTA | CREDITS: 3 | HOURS: 45

Design thinking case studies in retail, design thinking case studies in banking, design thinking case studies in management decisions

Design thinking process and implementing it for a digital product

Data Analytics

CODE: DA | CREDITS: 3 | HOURS: 45

Using and understanding data analytics tool – Google Analytics, mobile analytics. Reading and decoding data analytics. Project work in data analytics.

Introduction to 6D

CODE: I6D | CREDITS: 5 | HOURS: 75

Deep dive in the Imagin 6D UX process – Discover, Design, Dream, Design, Develop, Deliver. Project and studio assignment in executing the Imagin 6D process.

Year 3

Semester 5: 27 credits | 405 Hours

WIREFRAMING & PROTOTYPING

CODE: WP | CREDITS: 3 | HOURS: 45

Practice based module to learn the tools required to design wireframes and prototypes. Design wireframes on paper and translate paper concepts into digital wireframes and Understand and practice the techniques involved in designing digital wireframes for web, mobile, wearables, HMI and other digital screens. Understand and practice the techniques involved in creating digital prototypes.
Tools to be taught – AxureRP, invision

USABILITY TESTING

CODE: UT | CREDITS: 5 | HOURS: 75

Learn the process of conducting usability tests for digital products - planning, executing, information gathering and documentation. Learn how to create questionnaires, test cases and test moderation.
Usability testing methodologies – task based user testing, A/B testing, lab based user testing, remote user testing, moderated & unmoderated user testing.
Project – students will pick up a real-life digital application and conduct end-to-end usability testing on the product and submit a report for evaluation.

UX & DIGITALIZATION

CODE: UX&D | CREDITS: 5 | HOURS: 75

Understand how technology and digitalization is transforming different industry segments – BFSI, manufacturing, retail, automotive, media, FMCG, logistics, oil & gas. Learn how to understand industry specific problems and user needs and design experiences for different industries.
Research and design for all industry segments using a toolkit.

INNOVATION MANAGEMENT

CODE: IM | CREDITS: 3 | HOURS: 45

Learn what is innovation and how leading organization across the world are implementing innovation. Learn the 4 pillars of innovation, innovation maturity matrix and the innovation management process – problem identification, ideation, implementation. Understanding innovation as a culture
Innovation management tools – user study, social listening, customer care reports, data analytics, hackathons, paper prototyping, digital roadmap, market gap analysis, commercialization.
Research and implementing innovation management process for different industry segments.

Visual design tools advance

CODE: VD | CREDITS: 5 | HOURS: 75

Illustrator – advance level tool practice in visual concepts, typography, iconography, visual elements
Photoshop – advance level tool practice in interface design for cross-platform, responsive, web

Technology in Experience design advance

CODE: TED-A | CREDITS: 3 | HOURS: 45

Understand how software teams work, what are the processes that they use and frameworks that they use. Learn SDLC methodologies such as agile, lean, and traditional/waterfall – pros & cons of each process.

Understanding product ecosystems for futuristic technologies – industry 4.0, chatbot, machine learning, AI.

Practice – Project in SDLC

Omni-channel experience design

CODE: OED | CREDITS:3 | Hours: 45

Learn how to design omni-channel experiences – mobile, web, wearable, cloud, customer service and offline touchpoints. Designing omni-channel product ecosystems and design multi-channel interaction patterns.

Practice – Project in Omni-channel experience design

Year 3

Semester 6: 24 credits | 360 Hours

Interaction design advance

CODE: ID-A | CREDIT: 5 | HOURS: 75

Interaction design patterns, micro-interactions, multi-screen interaction patterns, paper prototyping. Rapid prototyping techniques. Interaction design for gesture controls.

Designing interactions for futuristic technologies – voice, AI. Emotional design in digital experiences.

UX Design for futuristic technologies

CODE: UXDF | CREDIT: 3 | HOURS: 45

Designing UX for AR, VR, IoT. Implementation of designing IoT for different industry segments. Case study of experience design for IoT in retail, case study of experience design for IoT in manufacturing.

UX Design for rural India

CODE: UXDF | CREDIT: 3 | HOURS: 45

Ethnographic study of rural India. Creating UX for low bandwidth regions. Digitalization for the bottom of the pyramid. Localization of experience.

UI Development advance

CODE: UID-A | CREDIT: 5 | HOURS: 75

Project in front end development using HTML, CSS and other UI development technologies.

Industry specific UX design

CODE: ISUX | CREDIT: 3 | HOURS: 45

Experience design case studies in banking, retail, insurance, media, healthcare, pharma, logistics & travel, education.

Integrated studio for UX – Advance

CODE: ISUX-A | CREDIT: 5 | HOURS: 75

Project on UX design implementation with industry relevant problem statement.

Year 4

Semester 7: 23 credits | 345 Hours

Gamification and UX Design

CODE: GUX | CREDIT:3 | HOURS:45

Importance of gamification, motivation and psychology of user, gamification and games, feedback, achievement and reward, intrinsic rewards and extrinsic rewards, motivation theory, fogs behavioural model, application of gamification.

Applying gamification in a project.

Human Machine Interface

CODE: HMI | CREDIT:5 | Hours:75

Definition of HMI, designing for machines, designing for wearables, designing for automotive, implementation of Interaction design to HMI, the importance of visual design for HMI, factory of the future. Projects like creating the HMI of a smart mirror.

Product design & lifecycle management

CODE: PDL | CREDIT:5 | Hours:75

Understanding product ecosystem, product lifecycle, case study in customer acquisition, role of UX in product lifecycle, case study in creating dream hooks, role of UX post product launch, product management techniques, understanding business requirement document, creating a PRD, creating a digital user loyalty programme, setting up products for user feedback, UX writing.

Business UX and design management

CODE: BDM | CREDIT:5 | HOURS: 75

Business roles and responsibilities, understanding business models, business value proposition, understanding business goals, creating a project plan for a design project, estimation of a design project, creating a design team, setting up business for innovation, creating a design lab

Live Project

CODE: LP | CREDITS: 5 | HOURS: 45

Project in UX design to be done as an industry relevant problem statement.

Year 4

Semester 8: 23 credits | 345 Hours

Degree Project

CODE: DP | CREDITS: 27 | HOURS: 405

Industry project to be completed in semester 8 as an internship. Projects reports are to be submitted in a set format and mentors are assigned to each student for guidance through the project. The project is evaluated as the end-term examination in the form of a jury conducted by an industry and academic panel.