Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

DIT UNIVERSITY
Dehradun

Detailed Course Structure
of
B. Des (UX)

Amended by the BoS and approved by the Academic Council at its 9th Meeting held on 14.04.2018

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Year: 1st Semester: I

Course Category	Course Code	Course Title	L/S*	T	P	Credit
DC	BDX 101	Sketching & Drawing	2	0	2	3
DC	BDX 102	Introduction to Visual Design	3	0	0	3
DC	BDX 103	Fundamentals of Design	2	0	4	4
DC	BDX 104	History of Art & Evolution of Design	2	0	0	2
DC	BDX 105	Empathy and Understanding Problems	3	0	0	3
DC	IX 101	Introduction to UX Design	0	0	6	3
DC	IX 102	Design Communication & Visualizing Ideas	0	0	6	3
		Total	12	0	18	21

Year: 1st Semester: II

Course Category	Course Code	Course Title	L/S*	T	P	Credit
DC	BDX 106	Sketching & Drawing Advance	2	0	2	3
DC	BDX 107	Visual Design Tools	1	0	2	2
DC	BDX 108	Basics of UI Development	2	0	2	3
DC	BDX 109	Technology in Experience Design	2	0	2	3
DC	IX 103	UX Design Advance	2	0	2	3
DC	IX 104	Integrated Studio for UX	2	0	6	5
		Total	11	0	16	19

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Year: 2nd Semester: III

Course Category	Course Code	Course Title	L/S*	T	P	Credit
DC	BDX 201	Service Design & Task Flows	2	0	2	3
DC	BDX 202	Introduction to UI Design	1	0	2	2
DC	BDX 203	Information & Data Study	1	0	2	2
DC	BDX 204	Introduction to User Research	2	0	2	3
DC	BDX 205	Design Thinking	2	0	2	3
DC	IX 201	Ethnography & People Design	5	0	0	5
DC	IX 202	Information Architecture	5	0	0	5
		Total	18	0	10	23

Year: 2nd Semester: IV

Course Category	Course Code	Course Title	L/S*	T	P	Credit
DC	BDX 206	User Research Application	2	0	2	3
DC	BDX 207	Introduction to Interaction Design	2	0	2	3
DC	BDX 208	Data Analytics	1	0	2	2
DC	BDX 209	UI Design Advance	3	0	0	3
DC	IX 203	Service Design & Task Flows Advance	0	0	6	3
DC	IX 204	Design Thinking Application	2	0	2	3
DC	IX 205	Introduction to 6D	5	0	0	5
		Total	15	0	14	22

Course Structure& Syllabus of B. Des – UX
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Year: 3rd Semester: V

Course Category	Course Code	Course Title	L/S*	T	P	Credit
DC	BDX 301	Wireframing and Prototyping	2	0	2	3
DC	BDX 302	Visual Design Tools Advance	2	0	2	3
DC	BDX 303	Usability Testing	2	0	2	3
DC	BDX 304	Technology in Experience Design Advance	3	0	0	3
DC	IX 301	UX and Digitalization	3	0	2	4
DC	IX 302	Innovation Management	3	0	0	3
DC	IX 303	Omnichannel Experience Design	2	0	2	3
DE		Departmental Elective-I	3	0	0	3
		Total	20	0	10	25

Departmental Elective-1

BDX 342- CULTURE & DESIGN
BDX 343- SUSTAINABLE DESIGN
BDX 344- APPLIED ERGONOMICS

Year: 3rd Semester: VI

Course Category	Course Code	Course Title	L/S*	T	P	Credit
DC	BDX 305	UI Development Advance	2	0	2	3
DC	BDX 306	UX Design for Futuristic Technologies	3	0	0	3
DC	IX 304	Interaction Design Advance	5	0	0	5
DC	IX 305	UX Design for Rural India	3	0	0	3
DC	IX 306	Industry Specific UX Design	2	0	2	3
DC	IX 307	Integrated Studio for UX Advance	5	0	0	5
DE		Departmental Elective-II	3	0	0	3
OE		Open Elective-1	3	0	0	3
		Total	26	0	4	28

Departmental Elective-2

BDX 346- UX DESIGN FRO WEB
BDX 347- UX DESIGN FOR MOBILE
BDX 348- UX DESIGN FOR PHYSICAL PRODUCT

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Year: 4th Semester: VII

Course Category	Course Code	Course Title	L/S*	T	P	Credit
DC	BDX 401	Business, UX & Design Management	2	0	0	2
DC	BDX 402	Product Design & Life Cycle Management	2	0	2	3
DC	IX 401	Gamification and UX	0	0	6	3
DC	IX 402	HMI	2	0	4	4
PRJT	IX 403	Live Project (Studio)	2	0	4	4
DE		Departmental Elective-III	3	0	0	3
OE		Open Elective-2	3	0	0	3
		Total	14	0	16	22

Departmental Elective-3

BDX-441-DESIGNING FOR IOT
BDX-442-DESIGNING FOR WEARABLES
BDX-443-DESIGNING FOR SMART TVs

Open Elective-2

Course Code	Course Title	L	T	P	Credit
AR481	Graphics & Product Design	3	0	0	3

Year: 4th Semester: VIII

Course Category	Course Code	Course Title	L/S*	T	P	Credit
PRJT	IX 404	Live Project (On Client's Location)	0	0	40	20
		Total	0	0	40	20

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Summary of the Credit

Year	Semester	Credit
1	1	21
	2	19
2	3	23
	4	22
3	5	25
	6	28
4	7	22
	8	20
Total		**180**

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 101	Subject Title	SKETCHING & DRAWING						
LTP	2 0 2	Credit	3	Subject Category	DC	Year	1st	Semester	I

Course Objective:

The course should enable the student to sketch and represent ideas and objects visually from still life or by memory.

Unit 1: Basics of Sketching and Drawing

History of sketching & drawing, Sketching & its types, Drawing & its types, Difference between sketching and drawing, Common drawing media, Basics of drawing - Line, points, squares, circles, triangles, 2d sketching & drawing

Unit 2: Shapes and forms

Creating layout, shape, line & shadows, shine, Overlap, Texture detail, 3D sketching & drawing. Perspective using forms, cuboid, prisms, cones, sphere.

Unit 3: Still and real-life sketching

Application learning with still life, real life sketching

Unit 4: Drawing Techniques

Blind contour drawing, Negative space drawing, One-point perspective, Two-point perspective, Three-point perspective linear perspective, planar analysis and line variations, contours, freehand perspective, line into value., Gesture Drawing, Drawing from a photo, Double image drawing.

Unit 5: Drawing human figure

Human Anatomy- Proportion drawing using shapes and drawing human figure composition. John Muir Laws

LEARNING OUTCOME:

To become familiar with the basic methods, techniques & tools of sketching and drawing
- To take part in a community of artists
- To enjoy the challenging and nuanced process of sketching and drawing
- Developing a working concept of what it means to draw.
- Reinforcing the principles of traditional drawing skills.
- Developing new ways of thinking, seeing, and creating.
- Building confidence through exercises that help explore different types of markmaking

Text Books:

1. Rendering with Pen & Ink – Robert W. Gill

Reference Books:

1. Keys to drawing - Bert Dodson
2. 2. Sketching the basics - KoosEissen and RoselienSteur
3. Artist's Drawing Techniques - Dorling Kindersley

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 102	Subject Title	INTRODUCTION TO VISUAL DESIGN					
LTP	3 0 0	Credit	3	Subject Category	DC	Year	1st	Semester	I

Course Objective:

The course should enable the student to understand visual design and composition.

Unit 1: Basic elements of visual design

Introduction to basic elements of visual design – detailed study of color, color wheel, visual hierarchy, legibility and readability, grid, layout

Unit 2: Typography

What is typography, Typefaces history and study, Types of fonts - serif and non-serif, Font anatomy, Importance of Typography in modern age UI design, Usage of type for print vs digital, Latest Trends in Typography

Unit 3: Iconography

What is iconography, visualization of icons, industry standards and specifications for iconography, designing for various form factors, trends in iconography, User perception about iconography

Unit 4: Introduction to Visual Tools

Introduction to visual design tools including lab session on elements of visual design and tools

Unit 5: Project work

Project work in tools & elements of visual design

LEARNING OUTCOME:

To understand the elements of visual design
- To master the creation of page layouts
- To Obtain and working knowledge of visual design tools
- To comprehend the application of elements and tools of visual design

Text Books:

Reference Books:

1. Graphic Design The New Basics - Ellen Lupton and Jennifer Cole Phillips
2. The Visual Miscellaneum - David McCandless

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 103	Subject Title	FUNDAMENTALS OF DESIGN					
LTP	2 0 4	Credit	4	Subject Category	DC	Year	1st	Semester	I

Course Objective:

The course should enable the student to to understand and apply principals of design

Unit 1: Elements of Design 3

Introduction to design, Colour and its attributes, line, shape including categories texture, space, form.

Unit 2: Design Action Model and Principles of Design

7 Stage model of action cycle for design tools, Unity, harmony and methods, balance and its types, hierarchy, Scale/proportion, dominance/emphasis, rhythm, similarity and contrast

Unit 3: Laws of Design

Gestalt's principle – 1, Hick's law, The Pareto principle - 80/20 rule, The rule of thirds, Proximity, Feedback, Fitts' law, The golden ratio, Occam's razor, Fibonacci sequence, Mental models, emotional design, Composition of Design

Unit 4: Designing for people

Understanding people's psychology and Behaviour, Famous Case studies on people centric design, Things to remember when designing for people

Unit 5: Project Work

Project work on fundamentals of design

LEARNING OUTCOME:

Be able to understand elements and principles of design
- Able to grasp stage model of action cycle
- Be able to understand design laws and their importance in design field
- To comprehend various rules of composition of design
- To gain hands-on experience of fundamentals of design

Text Books:

Reference Books:

1. Universal principles of Design - William Lidwell, Kritina Holden, Jill Butler
2. Design of Everyday life – Don Norman
3. Universal methods of design – Brushanignton
4. Hundred things every designer needs to know about people – Susan WeinsChenk

Course Structure& Syllabus of B. Des – UX
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Subject Code	BDX 104	Subject Title	HISTORY OF ART & EVOLUTION OF DESIGN					
LTP	2 0 0	Credit	2	Subject Category	DC	Year	1st	Semester	I

Course Objective:

The course should enable the student to understand art forms in history

Unit 1: Art Forms in history

Understanding history of different art forms – modern art, contemporary art, classical art, renaissance art

Unit 2: Historical interpretation of art

Art appreciation and historical interpretation of art in its cultural contexts.

Unit 3: Evolution of design in everyday things

Understanding the evolution in design through forms and everyday things.

Unit 4: Paradigm Shift in Design from 19th century to modern time

Journey of design across in the 19th century to modern times.

Unit 5: Project

Project submission on history of Art & design

LEARNING OUTCOME:

- Get to know art forms in history
- To understand art in cultural context
- Able to comprehend evolution in Design and UX
- To envisage the paradigm, shift in design as per the various technology changes

Text Books:

Reference Books:

1. The story of the Art - Ernst Gombrich
2. Gardner's Art Through the Ages - Helen Gardner
3. Design by Evolution: Advances in Evolutionary Design - Luigi C. Barone

Course Structure& Syllabus of B. Des – UX
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Subject Code	BDX 105	Subject Title	EMPATHY AND UNDERSTANDING PROBLEMS					
LTP	3 0 0	Credit	3	Subject Category	DC	Year	1st	Semester	I

Course Objective:
To understand and apply the concept of empathy and empathizing with users effectively

Unit 1: Introduction to Empathy

What is Empathy, learn how to understand users & their problems, techniques to empathize with users and identify key user problems.

Unit 2: Analysing facts from Empathy to Dig Deeper
Learn how to gain insights from empathy and define problems statements

Unit 3: Empathy Tools and Techniques

Empathy tools – techniques for getting empathy insights through interviews

Unit 4: Application of Empathy in design

Empathy maps, emotional mapping, observation, field study with actual users

Unit 5: Project

Project submissions empathy mapping

LEARNING OUTCOME:

- To understand the concept of empathy and empathizing with users effectively
- Discern the facts after dully analyzing the information received from the user
- To learn how to define the problem on the basis of facts
- To grasp various empathy techniques and tools

• To practice various tools to comprehend root cause of the problem leading to correct definition

Text Books:

Reference Books:
1. Empathy: Why it matters, how to get it - Roman Kizanie
2. The Art of Empathy: A complete Guide to life's most essential skill - Karla McLaren

Course Structure& Syllabus of B. Des – UX
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Subject Code	IX 101	Subject Title	INTRODUCTION TO UX DESIGN					
LTP	0 0 6	Credit	3	Subject Category	DC	Year	1st	Semester	I

Course Objective:

The course should enable the student to understand how UX evolved and works.

Unit 1: Evolution of UX Design

Understand the evolution of UX design as an industry practice and learning about UX industry experts, Design around us, Job roles and responsibilities in the UX industry

Unit 2: Processes and Methodologies

Understanding UX design processes and methodologies – user centered design, 5S model

Unit 3: Tools and Technology in UX Design

Tools, prototype, Industry standards, Technology, NFC, Chatbot, Siri

Unit 4: Multiple Domains and Trends in UX Design

UX industry trends in various sectors

Unit 5: Project

Project on UX design process and industry trends

LEARNING OUTCOME:

- To understand the concept of UX design and how it has evolved
- Able to understand UX design process and methodology
- Able to understand how UX industry works
- To know the job, roles and responsibilities in UX industry
- To understand the importance of UX in digitalization and different types of industries **Text Books:**

Reference Books:

1. Designing for Digital Age: How to create human-centered products and services - Kim Goodwin
2. Sketching the User experiences - Bill Buxton
3. The design of everyday things - Don Norman
4. The elements of user experience - Jesse James Garrett

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 102	Subject Title	DESIGN COMMUNICATION & VISUALIZING IDEAS					
LTP	0 0 6	Credit	3	Subject Category	DC	Year	1st	Semester	I

Course Objective:

Unit 1: Visualization techniques

Learning visualization techniques through - visual identity design, metamorphism visualization techniques

Unit 2: Ideation Methods

Brainstorming and mind mapping.

Unit 3: Information Visualization

Information visualization through infographics and designing brand communication.

Unit 4: Communicating Design Ideas

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

Unit 5: Project

Project in design communication and visualization

LEARNING OUTCOME:

- Get to know different visualization techniques
- To learn to generate new ideas
- To grasp the methods of presenting complex information visually
- To comprehend and effectively communicate the design ideas
- To apprehend the application of design communication and visualization

Text Books:

Reference Books:

1. Cool Infographics: Effective Communication with Data Visualization and Design – Randy Krum
2. Information Visualization: Perception for Design - Colin Ware

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Subject Code	BDX 106	Subject Title	SKETCHING & DRAWING ADVANCE						
LTP	2 0 2	Credit	3	Subject Category	DC	Year	1st	Semester	II

Course Objective:

The course should enable the student to sketch and represent ideas and objects visually from still life or by memory.

Unit 1: Exploring mediums

Exploring color mediums like colored papers, color pencils, chalk, charcoal, ink etc.

Unit 2: Perspectives in Sketching and drawing

One-point perspective, Two point perspective, Three point perspective, lettering, typo and Calligraphy

Unit 3: Illusions and human anatomy

Creating tessellation, Human anatomy, Print making, drawing – anatomy, storyboarding, illustration, painting

Unit 4: Real Life sketching

Application learning with still life, real life sketching, still life, nature

Unit 5: Project

Advanced Project on sketching & drawing

LEARNING OUTCOME:

- Draw from objects out of your head
- Understand the fundamentals of art
- Draw the human face and figure
- Draw realistic light and shadow
- Draw perspective drawings

Text Books:

Reference Books:

1. Universal principles of Design - William Lidwell, Kritina Holden, Jill Butler
2. Design of Everyday life – Don Norman
3. Universal methods of design – Brushanignton
4. Hundred things every designer needs to know about people – Susan WeinsChenk

Course Structure& Syllabus of B. Des – UX
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Subject Code	BDX 107	Subject Title	VISUAL DESIGN TOOLS						
LTP	1 0 2	Credit	4	Subject Category	DC	Year	1st	Semester	II

Course Objective:

The course should enable the student to sketch and represent ideas and objects visually from still life or by memory virtually

Unit 1: Photoshop

Photoshop – Interface & Workspace, modifying workspace, tools and layers, blending options

Unit 2: Photoshop Continued

Photoshop – layer effect filters, Image editing and enhancing, mixing, layer masking, External Plug-ins

Unit 3: Illustrator

Illustrator - Interface & Workspace, modifying workspace, tools and layers, blending options

Unit 4: Illustrator Continued

Illustrator – working with vectors, object libraries, layer effect filters, Image editing and enhancing, mixing, layer masking, drawing, External Plug-ins

Unit 5: Project

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

LEARNING OUTCOME:

Be able to Design vector artwork

- Able to prepare graphics for web and print
- To implement useful keyboard shortcuts
- Learn illustrator the way a professional would use it
- Practice everything you learn during the course

Text Books:

Reference Books:

1. The Adobe Photoshop CC Book for Digital Photographers - Scott Kelby
2. Adobe Illustrator CC Classroom in a Book (2017 release) - Brian Wood

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 108	Subject Title	BASICS OF UI DEVELOPMENT						
LTP	2 0 2	Credit	3	Subject Category	DC	Year	1st	Semester	II

Course Objective:

The course should enable the student make website UI

Unit 1: Basic Development

Learning front-end development technologies – HTML, Css, JavaScript, JQuery.

Unit 2: HTML Pages

Structure of HTML Page, Mandatory tags in html page (html, head, body).

Unit 3: CSS

What is CSS, Different ways of applying CSS for elements, and priority chain of CSS.

Unit 4: Attributes

Heading tags (H1...H6), Tags and attributes (Class, Id, style etc.). Inline and block level elements

Unit 5: Project

Project and lab in front-end-development

LEARNING OUTCOME:

To understand the basic structure of the web page

- To learn the basic concepts of HTML and CSS
- To learn CSS' role in creating user interfaces for mobiles and websites
- A deeper understanding of the DOM (document object model) and how CSS interacts with it.

Text Books:

Reference Books:

11. Responsive web design with HTML 5 and CSS 3 - Ben Frain

2. CSS mastery: Advance web standards Solutions - Andy Budd

3. HTML and CSS: Design and Build Websites - Jon Duckett

Course Structure& Syllabus of B. Des – UX
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Subject Code	BDX 109	Subject Title	TECHNOLOGY IN EXPERIENCE DESIGN					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	1st	Semester	II

Course Objective:

The course should enable the student to understand the use of technology in latest UX developments

Unit 1: Technology for digital experience

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

Unit 2: Technological feasibility and viability

Understanding technological feasibility and viability.Technology constraints on design.

Unit 3: Futuristic Technologies

Learning about futuristic technologies and their implementation in design, Wearable medical devices

Unit 4: Futuristic Technologies Continued

Details of Internet of Things, Augmented reality and virtual reality, ATM, KIOSK

Unit 5: Research Project

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

LEARNING OUTCOME:

- Get to know futuristic technologies and their implementation in design
- Able to comprehend technology constraints on design
- To Understand technology for digital experience and product ecosystems
- Research project in design using latest technology

Text Books:

Reference Books:

1. Emotions, technology and design - Sharon Y. Tettegah

2. Augmented Reality: Principles and Practice - Dieter Schmalstieg

3. Augmented Reality: An emerging technologies guide - Gregory Kipper and Joseph Rampolla

Course Structure& Syllabus of B. Des – UX
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Subject Code	IX 103	Subject Title	UX DESIGN ADVANCE					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	1st	Semester	II

Course Objective:

The course should enable the student to comprehend and make an UX Project

Unit 1: UX methodologies

Deep-dive in UX methodologies

Unit 2: Case Studies

Case studies in UX design

Unit 3: Heuristic evaluation

Heuristic evaluation

Unit 4: Product UX Lifecycle

Understanding product UX lifecycle.

Unit 5: Project

Project on UX design

LEARNING OUTCOME:

- To be able to understand how UX works in different sectors
- Capable of comprehending real scenario in digital industries and understand effectiveness of UX design
- To comprehend evaluation method and benefits in project
- Able to document and present evaluation data effectively

Text Books:

Reference Books:

1. 100 things every designer needs to know about people - Susan Weinschenk
2. Don’t make me think - Steve Krug
3. The UX Book - Rex Hartson and PardhaPyla

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Subject Code	IX 104	Subject Title	INTEGRATED STUDIO FOR UX					
LTP	2 0 6	Credit	5	Subject Category	DC	Year	1st	Semester	II

Course Objective:

The course should enable the student to apply the concepts of UX design to the live problem of organization.

Unit - Project on UX design implementation with industry relevant problem statement.

LEARNING OUTCOME:

• Able to effectively apply the concepts of UX design to the live problem of organization.

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 201	Subject Title	SERVICE DESIGN & TASK FLOWS					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	2nd	Semester	III

Course Objective:

The course should enable the student to understand task flow for operators

Unit 1: Introduction to service design

Introduction to Service design, History with case studies

Unit 2: Basics of task flows

What are task flows, basics to create task flows, Implementing into simple problems

Unit 3: Methodology of service design

Defining the users involved with analytical tools, define the requirements for the service and its logical and organizational structure, Representation of the service by means of techniques that illustrate all the components of the service, including physical elements, interactions, logical links

Unit 4: System Design for Public sector

Public services include public goods and governmental services such as the military, police, infrastructure (public roads, bridges, tunnels, water supply, sewers, electrical grids, telecommunications, etc.), public transit, public education, along with health care and those working for the government itself, such as elected officials.

Unit 5: Project on System design for public sector

Project based

LEARNING OUTCOME:

Understanding tasks, processes and systems

- Be able to find and execute user touch points, ecosystem diagram, value proposition map
- Using CJM to understand user flows
- Understanding task flows, creating task flows and systems engineering
- Learning KPIs for efficiency in service design and systems engineering
- Shortest path Service design in different domains
- Be able to understand the importance of User research
- Understanding the different user research methodologies
- Able to grasp hands-on experience of tools for user research
- Understanding cognitive psychology and user behavior

Text Books:

Reference Books:

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SUBJECT CODE	BDX 202	SUBJECT TITLE	INTRODUCTION TO UI DESIGN					
LTP	1 0 2	Credit	2	Subject Category	DC	Year	2nd	Semester	III

Course Objective:
The course should enable the student to make UI design through Digital tools

Unit 1: Basic elements of UI design
Introduction to basic elements of visual design – detailed study of color, color wheel, visual hierarchy, legibility and readability, grid, layout

Unit 2: Typography
What is typography, Typefaces history and study, Types of fonts - serif and non-serif, Font anatomy, Importance of Typography in modern age UI design, Usage of type for print vs digital, Latest Trends in Typography

Unit 3: Iconography
What is iconography, visualization of icons, industry standards and specifications for iconography, designing for various form factors, trends in iconography, User perception about iconography

Unit 4: Introduction to Visual Tools
Introduction to visual design tools including lab session on elements of visual design and tools

Unit 5: Project work
Project work in tools & elements of visual design

LEARNING OUTCOME:

- Learning UI design guidelines for different platforms and operating systems
- Understanding the principles and fundamentals of UI Design.
- To be able to learn and get hands on Iconography & typography for interface design.
- To fundamentals of screen design based on design guidelines and Cross platform screen design.
- To master with the practical training in UI design for digital screens

Text Books:

Reference Books:

1. Graphic Design The New Basics - Ellen Lupton and Jennifer Cole Phillips
2. The Visual Miscellaneous - David Mc Candless

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Subject Code	BDX 203	Subject Title	INFORMATION & DATA STUDY					
LTP	1 0 2	Credit	2	Subject Category	DC	Year	2nd	Semester	III

Course Objective:

The course should enable the student to identify and analyses information and data study

Unit 1: Industry driven by data

Pharma- R&D driven by data, retail- shopping driven by data, E-commerce- what to show driven data, Banking- Personal finance management

Unit 2: Sources of Data

Learn how to gain Google analytics, company internal data

Unit 3: Defining Data driven UX

Learning how to define the data for the User experience, Case study on data driven UX

Unit 4: Basics of Data analysis and information

What is information, actionable input from data collection, process of data analysis, parameters that UX designer can use (location, time, direction), data in the new IOT world-connected device data, what is big data and its effect on users/ux design

Unit 5: Defining parameters for UX

Parameter for UX ROI, Parameters that can be collected and used about user, parameters about customer, how to define parameters

LEARNING OUTCOME:

- To understand the need of information and data study
- Discern the facts after dully analyzing the information received from the user
- To learn how to define the problem based on facts
- To grasp various ecosystems for data
- To practice various tools to comprehend root cause of the problem leading to correct data study

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
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Subject Code	BDX 204	Subject Title	INTRODUCTION TO USER RESEARCH					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	2nd	Semester	III

Course Objective:

The course should enable the student to understand user and design accordingly

Unit 1: Introduction to User Research

Introduction to User Research and its Importance, Understanding User interactions

Unit 2: User Research methodologies

Planning for a User Research User Segment, defining persona for research & recruiting users, preparing a Questionnaire for user research, Focus group discussion - do and don'ts, Online surveys - tools, do and don'ts, Analysis Interview Tips & Techniques

Unit 3: Field study: Hands on practice of methodologies

Preparing and Conducting Stakeholder workshop, Preparing questionnaire for Interviews, and
Online surveys

Unit 4: Tools of Empathy and analysis

Tools of empathy like Persona, Empathy Map and User Journey Map, Documenting Qualitative Research, Documenting Quantitative Research

Unit 5: Project Work

Project work on User research

LEARNING OUTCOME:

- Be able to understand the importance of User research
- Understanding the different user research methodologies
- Able to grasp hands-on experience of tools for user research
- Understanding cognitive psychology and user behavior.
- Performing a user research with users on a chosen problem

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 205	Subject Title	DESIGN THINKING					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	2nd	Semester	III

Course Objective:

The course should enable the student to understand wicked problems and using design to solve them

Unit 1: Introduction to Design thinking and Wicked problems

Learning the meaning of design thinking and how it has evolved to solve wicked problems around the world, four pillars of wicked problems

Unit 2: Design thinking process

Deep dive into the 5D process

Unit 3: Case studies in Design thinking

Getting to know the real-world applications and success stories of different industries

Unit 4: Tools and techniques in Design thinking

Learning the tools and getting hands on practice on each tool

Unit 5: Project

Project on Design thinking

LEARNING OUTCOME:

- Get to know what design thinking and wicked problem is
- To learn to generate new ideas
- To grasp the methods of the design thinking 5d process
- To comprehend and effectively use the tools and techniques to solve wicked problems
- To apprehend the application of design thinking with case studies

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 201	Subject Title	ETHNOGRAPHY & PEOPLE DESIGN					
LTP	5 0 0	Credit	5	Subject Category	DC	Year	2nd	Semester	III

Course Objective:

The course should enable the student to understand different classes of users and design for humans

Unit 1: Introduction to Ethnography and its Importance in UX

History and Origin of Ethnography, How people think and feel, what motivates them, People are social, form and features of Ethnographic anthropology of India research, Theory and ethnography in modern

Unit 2: Ethnography as method

Conducting ethnographic research, Understanding cognitive and organizational psychology, evaluating ethnographic research data

Unit 3: Introduction to semiotics

History and meaning of semiotics, Basics of semiotics, Understanding Symbol, sign and Icon, difference between symbol, icon and sign, Signifier, signified and signification. Applications in real time world in the form of storytelling

Unit 4: Elective- Ethnography study on Globalization

Plutchiks wheel of emotion, K-pop culture effect on design, Bollywood globalization, Study on how colonization changed the ethnography of regions, Nation branding around the world.

Unit 5: Representation of Ethnographic data

Pictorial representation of the study in the form of painting, installation, product, etc.

Assignments: Project in each unit 24 Hours

LEARNING OUTCOME:

- To understand the users
- To understand the user's interaction with the environment, people and culture
- To take part in different UX domains and societies
- Creating ethnography mood boards, user scenarios, storyboards
- Understanding research problems, data gathering techniques
- Perform field study to understand people design

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 202	Subject Title	INFORMATION ARCHITECTURE					
LTP	5 0 0	Credit	5	Subject Category	DC	Year	2nd	Semester	III

Course Objective:

The course should enable the student to understand and implement information architecture.

Unit 1: Introduction to Information Architecture

What is Information architecture, Structure, hierarchy and types of Information architecture, Principles and steps of Information Architecture

Unit 2: Tools and Techniques of Information architecture

Learning affinity mapping, Card sorting, Analysis of Information architecture, Using excel as a tool for card sorting, Activity based.

Unit 3: Dream hooks

Understanding the meaning of dream hooks, Tools like how might we, Idea generation tools and Methodology of dream hooks, Implementing dream hooks

Unit 4: Implementing Dream hooks with Information architecture

Unit 5: Project

Project submission on Dream hooks implemented with Information architecture on any Industry

LEARNING OUTCOME:

- Understanding Information architecture
- Tools and techniques of Information architecture
- Hands on using excel as a tool for card sorting
- Creating IA for different industries,
- Learning types and structures and structures of IA

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 206	Subject Title	USER RESEARCH APPLICATION					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	2nd	Semester	IV

Course Objective:

The course should enable the student to enquire and understand users

Unit 1: User research characteristics

What is user research and how is it performed?

Unit 2: User research methodologies

Detailed orientation on user research methodologies comprising of, Personas for research, preparing questioners, defining focus groups, dos and don'ts, survey tools

Unit 3: Introduction to the tools for user research

Detailed approach into the implementation of user research tools through workshops

Unit 4: Use of cognitive psychology and user behavior

Use of empathy mapping and customer journey mapping to understand user needs

Unit 5: Field research

Solving a pre chosen user problem performing an actual user research

LEARNING OUTCOME:

- The phenomenon of user research is learnt through hands on training
- Exploring different user research methodologies ensuring appropriate solution
- The tools for user research become familiar
- Introduction to basic cognitive psychology and user behavior
- Field experience on user researching through a pre-selected problem

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 207	Subject Title	INTRODUCTION TO INTERACTION DESIGN					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	2nd	Semester	IV

Course Objective:

The course should enable the student design interactive products

Unit 1: Introduction to Interaction design

Understanding scope and history of interaction in design, case studies

Unit 2: User Centered design

What is User Centered Design? User-Centered Design Process, UCD is an Iterative Process, UCD Considers the Whole User Experience, Investment in UCD Pays off, Benefits of UCD and UX,

UCD Waterfall process map

Unit 3: Design of interactive products

Ergonomics (Physical, cognitive and organizational)

Unit 4: Methods of interaction design

Learning the different methods which includes tools and techniques of interaction design, Understanding micro-interactions

Unit 5: Project

Project on Ergonomics

LEARNING OUTCOME:

- Learning the Importance and scope of Interaction design,
- User centered design
- Design of interactive products
- Methods of interaction design
- Tools for interaction design
- Get to know futuristic technologies and their implementation in design

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 208	Subject Title	DATA ANALYTICS					
LTP	1 0 2	Credit	2	Subject Category	DC	Year	2nd	Semester	IV

Course Objective:

The course should enable the student to analyses, comprehend and design for big data

Unit 1: Data in UX Design

Revisit of data driven UX, data driven card sorting, data driven user research, data driven user testing

Unit 2: Data in service design

Task flows and data, Efficiency and data, case study

Unit 3: Data in decision for leadership

How to create actionable dashboard, drill down of data (layers)

Unit 4: Gamification and Data analysis

Scores in gamification, badges and data

Unit 5: Engagement and data analysis

How to provide engagement and personalization with data

Unit 6: Project

LEARNING OUTCOME:

- Able to effectively apply the concepts and phycology to analyze big and complexdata
- To be able to understand the tool and fetch data in a structured form
- To able to read, structure, segment and conclude the heavy information

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 209	Subject Title	UI DESIGN ADVANCE					
LTP	3 0 0	Credit	3	Subject Category	DC	Year	2nd	Semester	IV

Course Objective:

The course should enable the student made advance user interfaces

Unit 1: Advance UI Interface design

Creation of cross platform interface design and responsive design

Unit 2: UI Concept, design guidelines and tools

Introduction to UI design concept and guidelines and Zeplin

Unit 3: UI design documentation

The process of UI design documentation and design delivery documentation

Unit 4: Practical Project

Hands on training through Project on interface designing

LEARNING OUTCOME:

- Advance UI interface designing
- Cross platform interface design and responsive design
- UI concept and design guidelines
- UI design documentation and design delivery documentation
- Understanding how UI/UX work in different sectors together

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 203	Subject Title	SERVICE DESIGN & TASK FLOWS ADVANCE					
LTP	0 0 6	Credit	3	Subject Category	DC	Year	2nd	Semester	IV

Course Objective:

The course should enable the student understand methodologies of service design

Unit 1: Complex service design case studies

Follow through on various Case studies and success stories

Unit 2: Deep dive into task flows

Learning to build complex task flows, Implementing into complex problems

Unit 3: Methodology of service design

Learning analytical tools and systems engineering

Unit 4: System Design for private sector

Learning through projects of MNC's, Hospitals, private roadway services etc.

LEARNING OUTCOME:

- Case studies
- Introduction to task flows
- Methodologies of service design
- Hands on training with private sector companies

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 204	Subject Title	DESIGN THINKING APPLICATION					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	2nd	Semester	IV

Course Objective:

The course should enable the student to understand how to apply design thinking in real world problems

Unit 1: Advance tools in Design thinking

Learning tools like value proposition mapping and canvas, Feature mapping and ROI mapping

Unit 2: Business advantage of Design thinking

Case studies and aspects of design thinking on business of various sectors, Design Management, Product lockdown

Unit 3: Practicing product lockdown

UI design documentation, design delivery documentation

Unit 4: Strategic design thinking

Project based: Strategic Product design (prototypes) and making wearable devices with UX in it

LEARNING OUTCOME:

- Deep dive into complex wicked problems to solve them through strategies
- To be able to understand the various ways in which innovative products can be built
- To be able to follow the 5d process from scratch
- Understanding in the way of business advantages

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 205	Subject Title	INTRODUCTION TO 6D						
LTP	5 0 0	Credit	5	Subject Category	DC	Year	2nd	Semester	IV

Course Objective:

The course should enable the student to understand and implement the 6D process in UX & UI

Unit: Project

Project on implementation of 6D process in any service/product

LEARNING OUTCOME:

- Learning to design with 6D process
- Implementation of different tools and techniques at correct form and place
- Use of advance technology and hands-on implementation on the project
- Practice sessions to concretize the skills learnt

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 301	Subject Title	WIRE FRAMING AND PROTOTYPING					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	3rd	Semester	v

Course Objective:

The course should enable the student to make wireframes and prototypes

Unit 1: Basics guidelines of Wire framing

Unit 2: Designing wireframes on paper

Unit 3: Designing wireframes on Axure/In vision

Unit 4: Designing digital wireframes for different UI platforms

Practice and Project based- Web, Mobile Application, IOS, wearable

LEARNING OUTCOME:

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

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 302	Subject Title	VISUAL DESIGN TOOLS ADVANCE					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	3rd	Semester	v

Course Objective:

The course should enable the student to use digital drawing and graphics tools

Unit 1: Illustrator

Learning and Practicing Advance level tool practice in visual concepts, typography, iconography,Visual elements

Unit 2: Photoshop

Advance level tool practice in interface design for cross-platform, responsive, and web.

Project on the subject

LEARNING OUTCOME:

To be able to master the tools like illustrator and Photoshop for advance level concepts

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 303	Subject Title	USABILITY TESTING						
LTP	2 0 2	Credit	3	Subject Category	DC	Year	3rd	Semester	v

Course Objective:

The course should enable the student to learn the process of conducting usability tests and documenting it

Unit 1: Process of Usability testing

What is Usability testing, Types of testing, Learning the steps to test different types of products/service/methods- planning, executing, information gathering and documentation,case studies

Unit 2: Usability testing for Digital products

Learn how to create questionnaires, test cases and test moderation. Preparing for the testing of products, Understanding people's psychology and Behavior

Unit 3: Tools and Techniques of Usability Testing

Usability testing methodologies – task-based user testing, A/B testing, lab based user testing, remote user testing, moderated & un-moderated user testing

Unit 4: Project Work

Project work on Usability Testing- 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.

LEARNING OUTCOME:

- Learn the process of conducting usability tests
- Learning steps for digital products
- Learning Preparations for usability testing
- Understanding Usability testing methodologies
- To able to Conduct the Usability testing and document it

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 304	Subject Title	TECHNOLOGY IN EXPERIENCE DESIGN ADVANCE						
LTP	300	Credit	3	Subject Category	DC	Year	3rd	Semester	v

Course Objective:

The course should enable the student to understand the role of technology in UX and UI and how it acts as an enabler for the same

Unit 1: Introduction to software teams

Understand how software teams work, roles of different profiles; front end and back end, types of technologies for back end and front end, constraints of each technology

Unit 2: Introduction to SDLC

Types, pros and cons of SDLC, 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.

Unit 3: Agile and design thinking Framework

Deep dive into agile process, case studies, Framework of agile, The State of UX
Agile Development, Agile Process Is Flexible, Top 10 Tips for UX Success From Agile Practitioners

Unit 4: Ecosystem project

Understanding product ecosystems for futuristic technologies – industry 4.0,
Practice – Project in SDLC in any one domain (eg; E-commerce, healthcare, BFSI, Manufacturing)

LEARNING OUTCOME:

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 301	Subject Title	UX AND DIGITILIZATION					
LTP	3 0 2	Credit	4	Subject Category	DC	Year	3rd	Semester	v

Course Objective:

The course should enable the student to understand the aspects of digital media experience

Unit 1: UX and digitalization in different industry segments

Understand by case studies how technology and digitalization is transforming different industry segments

– BFSI, manufacturing, retail, automotive, media, FMCG, logistics, oil & gas. Learning to

Project Work

Project work on any one industry

LEARNING OUTCOME:

Understanding different technologies

Be able to find and execute technologies keeping in mind user

To be able to perform Research and design for all industry segments using a toolkit.

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 302	Subject Title	INNOVATION MANAGEMENT						
LTP	300	Credit	3	Subject Category	DC	Year	3rd	Semester	v

Course Objective:

The course should enable the student to understand the roles of innovation in creative environment

Unit 1: Innovation & Creativity

What is Innovation? What is creativity? Difference between innovation and creativity, dynamics of creative thinking, becoming creatively fit as an individual, creative insight, idea generation

Unit 2: Innovation in organizations

Learn what is innovation and how leading organization across the world are implementing innovation, Role of creativity and innovation in organizations, idea evaluation, creativity in teams, team's environment and creativity, creating climate for creativity and an enterprise, creating an environment that keeps creative people creating, managing creative employees, leading for creativity and innovation, creativity to innovation, Success stories

Unit 3: innovation Management Process

Understanding what Innovation management is, Learn the 4 pillars of innovation, innovation maturity matrix and the innovation management process – problem identification, ideation, and 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.

Unit 4: Project

Research and implementing innovation management process for different industry segments.

LEARNING OUTCOME:

- Understand the roles of skill, experience, motivation and culture in creative endeavor
- Appreciate how the perspective taken on creativity affects the policy used to engender it
- Differentiate between radical and incremental innovation
- Identify some potential disruptive innovations and take advantage of 'open' innovation
- Reflect on experiences of creativity and innovation at work

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 303	Subject Title	OMNICHANNEL EXPERIENCE DESIGN					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	3rd	Semester	v

Course Objective:

The course should enable the student to understand the concept of Omni channel design and build upon it

Unit 1: Introduction to Omni channel experience design

What is Omni-channel experience design, Why do we need omni channel ux , Understanding all Omni-channel experiences will use multiple channels, but not all multi-channel experiences are Omni-channel. Multichannel vs. Omni channel

Unit 2: Case studies

Bank of America's Omni-channel UX, Sephora's Omni channel UX,
Walgreens' Omni channel UX, caratlane and tanishq, fab furnish and home center at future groups

Unit 3: Building Omni channel experiences

Elements of Omni channel experiences, Learn how to design omni-channel experiences – Mobile, web, wearable, cloud.
Customer service and offline touch points. Designing omni-channel product ecosystems and Design multi-channel interaction patterns.

Project: Practice – Omni-channel User Experience Best Practices to Increase Customer Engagement

LEARNING OUTCOME:

- To understand the concept of Omni channel design
- To learn how to build omni channel experience
- To grasp various key elements of building an Omni-channel experience
- To practice and create Omni-channel User Experience to Increase Customer Engagement

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 342	Subject Title	CULTURE AND DESIGN						
LTP	3,0,0	Credit	3	Subject Category	DE	Year	3rd	Semester	V

Course Objectives:

1. To understand design in cultural context
2. To learn cultural design principles and their implementation
3. To comprehend the evolution of Design with cultural Thinking
4. To learn the relevance of cultural design by studying the case studies of Multi-cultural User experience design.

Unit-1 Introduction to concepts of culture and Design

- Cross cultural Design
- What is cross cultural design, How cross cultural design psychology affects UX Domains, different cultural models and dimensions as design guidelines, Understanding cross cultural design principles and culturally responsive experiences- Internationalization and Localization
- Inclusive design
- What is Inclusive Design, Why is it known for building Responsible experiences, what are inclusive design principles, examples like inclusive Skype.

Unit-2 The Evolution of UX design with culture Thinking

What is cultural thinking? , Why cultural thinking revolves around behavior centered design, Cultural Evolution impacting the Design process.

Unit-3 Cultural Trends in UX Industry

- Learn how cross cultural design affecting the Interface Design, bidirectional design, colors, fonts, icons, graphics
- Exploring different terminologies like Cultural Immersion, Design for inclusivity etc.

Unit-4 Case studies of Multi - cultural User experience Design

- Starbucks in the US, Japan, Middle East and Austria; Ikea search field in Sweden, Saudi Arabia, the US and Japan.

Unit-5 Project

- Cultural Research and implementation of cross cultural and inclusive design principles to improvise the user experience products of different sectors.

LEARNING OUTCOME:

- Implement cross cultural design and inclusive design principles into products.
- Able to integrate accessible design features into products and services for multi-cultural audience
- To envisage the paradigm shift in design as per the various cultural models

REFERENCE BOOKS:

1. Cross cultural Design by Senongo Akpem
2. Design for Real Life by Eric Meyer & Sara Wachter-Boettcher
3. Inclusive Design by Heydon Pickering
4. Inclusive: A Microsoft Toolkit
5. An introduction to Design and Culture by Penny Sparke

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 343	Subject Title	SUSTAINABLE DESIGN						
LTP	3,0,0	Credit	3	Subject Category	DE	Year	3rd	Semester	V

Course Objective:

1. To make students empathize with the environment and understand a 360 degree perspective of sustainability
2. To make students understand that design sustainability = design responsibility
3. To learn the tools used for making a sustainable design
4. To able to innovate a sustainable solution for an existing problem

Unit 1: Understanding Sustainability (6 hours)

Learning Sustainability and it's aspects(what is sustainability, history, why it is needed), case studies on sustainable designs, exercise on recognising a sustainable design. Understand Recycle, Reuse and Upcycle. Sustainable lifecycle.

Unit 2: Sustainable Design as a Responsibility (15 hours)

What is a responsible design?, Sustainable Design is not only environmentally responsible but also consumer responsible. How a designer can develop a design sustainably? Factors to create a sustainable design. Sustainability indicators

Unit 3: Tool for Designing Sustainably (18 hours)

Causal loop diagram, Life Cycle Assessment (LCA), Whole system mapping,

Unit 4: Project (21 hours)

Design a solution (physical or digital) for an existing environmental problem

Learning outcome:

- To understand the core of sustainability
- To learn how sustainable design is the need of the hour
- To realize their environmental roles as a responsible designer
- A deeper understanding of a product's environmental lifecycle

Reference Books:

- Cause and Effect by Robert Klanten
- Cradle to Cradle: Remaking the Way We Make Things by William McDonough
- Design for a Living World by Ellen Lupton and J. Abbott Miller, eds.
- The Sustainable Design Book by Rebecca Proctor.

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 344	Subject Title	APPLIED ERGONOMICS						
LTP	3,0,0	Credit	3	Subject Category	DE	Year	3rd	Semester	VI

Course Objectives:

1. To gain the conceptual understanding of applied ergonomics
2. To explore the relationship between applied ergonomics and functionality of the products.
3. To learn the importance of comfort design in UI/UX Industry
4. To build a deeper understanding of integration of applied ergonomics guidelines into web and mobile UX Design.

Unit-1: Introduction to Applied Ergonomics.

Definition of Ergonomics/Human Factors?; Fundamentals of Ergonomics; Domains of ergonomics – Physical, cognitive and organizational; difference between applied and cognitive ergonomics; significance of Ergonomics – Factors affecting human performance when interacting with products; Theories and frameworks of ergonomic design- High level models: Distributed cognition, Activity Theory, situated action and Fitts' Law.

Unit-2: Applied ergonomics and User Interface Design

- Ergonomic Guidelines for Interface Design – Consistency, simplicity, cognitive directness, modality, display issues.

Unit-3: Ergonomics for Mobile UX

- Mobile UI Ergonomics- easy and hard tap zones of mobile interface, how do users hold mobile devices – one hand, cradled two hand, thumb length for phone UI single hand use;
- Relationship between form factors and the application of ergonomics in mobile UI; Correlation of Mobile User Interface Guidelines and ergonomics or comfort design.

Unit-4: Project

- Review various case studies to understand the applied ergonomics in products and services of different sectors and implement the best practices of applied ergonomics to enhance the user experience of badly designed products.

Learning Outcome:

- Implement the best practices of applied ergonomics to enhance the user experience Design
- Able to integrate comfort design features keeping ergonomics design guidelines as the basis.
- To be able to analyze those features affecting the ergonomic aspect of the design.
- Able to execute the design not only from the aesthetical point of view but also from the functional point of view.

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 305	Subject Title	UI DEVELOPMENT ADVANCE					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	3rd	Semester	VI

Course Objective:

The course should enable the student to design and develop User Interfaces

Project and Practice based:

Project in front end development using HTML, CSS and otherUI development technologies

LEARNING OUTCOME:

- Understanding the guidelines for front end developer and back end developer
- To be able to understand the language of designers and developers
- To able to implement visuals to working development
- To be able to learn tools in detail

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 306	Subject Title	UX DESIGN FOR FUTURISTIC TECHNOLOGIES						
LTP	3 0 0	Credit	3	Subject Category	DC	Year	3rd	Semester	VI

Course Objective:

The course should enable the student to have an understanding on futuristic technologies and design for virtual and augmented reality and for IOT.

Unit 1: Designing for AR

What is augmented reality, Examples, Case studies on augmented reality, implementing augmented reality in different industry domains

Project based

Unit 2: Designing for VR

What is virtual reality, Examples, Case studies on virtual reality, implementing augmented reality in different industry domains

Project based

Unit 3: Introduction to Internet of things (IOT)

What is Internet of things, Examples, Case studies on IOT, Implementing IOT in different industry domains

Project based

Project

LEARNING OUTCOME:

- To be able to have an understanding on futuristic technologies
- To be able to practice and implement technologies in new ideas
- To be able to implement after understanding on different platforms

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 304	Subject Title	INTERACTION DESIGN ADVANCE						
LTP	5 0 0	Credit	5	Subject Category	DC	Year	3rd	Semester	VI

Course Objective:

The course should enable the student to understand and develop for micro interactions

Unit 1: Introduction to micro-interactions

To evoke emotions and activity (to compel the user to do something), four triggers of micro-interactions.

Unit 2: Rapid prototyping techniques

Tools and methods of rapid prototyping for idea generation

Crazy 8, Scamper, 6 thinking hats

Unit 3: Multi-Screen Interaction design

Service design case studies - ATM/Healthcare for multi-screen interaction design

Practice & Project based

Unit 4: Designing for futuristic technologies

Interaction design for gesture controls. Designing interactions for futuristic technologies – voice, AI.

Project based on sound/voice and gesture controls

Unit 5: Emotional Design

7 types of emotions- Example as case study for each emotion. Develop your own emotional study onany product/situation. How to manage emotions in interaction design. E.g.: Nostalgic in social media(Facebook feature)

Project

LEARNING OUTCOME:

- To be able to understand micro-interactions in detail
- Have a hands on tools and prototyping practice
- To be able to generate new ideas
- Get to understand technologies and connect with emotional design

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 305	Subject Title	UX DESIGN FOR RURAL INDIA					
LTP	3 0 0	Credit	3	Subject Category	DC	Year	3rd	Semester	VI

Course Objective:

The course should enable the student to understand the need for rural innovation and develop products for them

Project based:

Ethnographic study of rural India.Creating UX for low bandwidthregions.Digitalization for the bottom of the pyramid. Localization ofexperience

LEARNING OUTCOME:

- Understanding the need of innovation in rural areas
- To be able to understand the users and suggest ideas
- To able to create ethnography study and analyze it
- Improve the experience with digitalization

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 306	Subject Title	INDUSTRY SPECIFIC UX DESIGN					
LTP	2 0 2	Credit	3	Subject Category	DC	Year	3rd	Semester	VI

Course Objective:

The course should enable the student to make projects for the industry

Project based:

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

LEARNING OUTCOME:

To be able to implement the grasp the different industries
To be able grasp the working and concepts of different domains

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 307	Subject Title	INTEGRATED STUDIO FOR UX ADVANCE					
LTP	5 0 0	Credit	5	Subject Category	DC	Year	3rd	Semester	VI

Course Objective:

The course should enable the student to work for the industry projects

Project based:

On UX design implementation with industry relevant problem statement including 6D process

LEARNING OUTCOME:

To be able to implement the learnings in a project on any one industry

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 346	Subject Title	UX Design for WEB						
LTP	3,0,0	Credit	3	Subject Category	DE	Year	3RD	Semester	VI

Course Objective:

1. To understand what are the consumer's need when they visit a website and how to fulfill them
2. To make students learn about the purpose of website
3. To able to design a website using coding and software

Unit 1: Understanding UX for Web (7 hours)

- Aesthetics and principles of Web designing,
- who your website users are and what they expect from the website.
- how business goals — yours or your client's — have to be uncovered and addressed for site success
- Information Architecture (IA) for Web

Unit 2: Website Design for Business (6 hours)

- how to design your website depending upon who your visitors are,
- Including all three: whether your website is B2B (business-to-business), B2C (business-to-consumer), or an ecommerce site for selling products online.

Unit 3: Coding and Software (17 hours)

HTML, Photoshop, Dreamweaver, Illustrator and exploring word press, wix etc

Unit 4: Project (15 hours)

- A full-fledged website designed on either of three:
- B2B
- B2C
- E-commerce

LEARNING OUTCOME:

- A good understanding of how websites solve a business purpose
- Knowing how to design for web

Reference Books:

- Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability (Steve Krug) ...
- Thinking, Fast And Slow (Daniel Kahneman)

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 347	**Subject Title**	**UX Design for Mobile**						
LTP	3,0,0	**Credit**	3	**Subject Category**	DE	**Year**	3RD	**Semester**	VI

Course Objective:

1. To understand designing for touch
2. To learn a mobile environment
3. To able to design a app for mobile

Unit 1: Understanding UX for Mobile (15 hours)

- Aesthetic and principle of mobile designing.
- Designing for android vs ios.
- Android sensors, Android APIs
- Information Architecture (IA) for Mobile Design
- Understanding the five big constraints: limited data, finite battery, hand-held usage, divided user attention(include design for interruption) and small screens
- Understanding navigation, screen orientation, touch area, Text, content, Forms, Thumb positions, minimising user input, consistency, margins, icons/symbols, importance of back button, colors, sizing, gestures,
- Understanding the importance of on-boarding experience

Unit 2: Advanced Wireframing (12 hours)

- How to make Skelton screens?
- Prototyping on: Invision, Marvel, Adobe XD, Proto.io, Origami Studio (any one of the mentioned)

Unit 3: Project (18 hours)

- Designing an app from scratch for any field of student's interest

LEARNING OUTCOME:

- A good understanding of details of mobile app
- Knowing how to design for mobile

Reference Books:

- UX Design for Mobile by Pablo Perea Pau Giner
- Designing The User Interface 5th Edition by Steven Jacobs and Ben Shneiderman and Catherine Plaisant and Maxine Cohen, Pearson Education.

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 348	Subject Title	UX Design for Physical Products						
LTP	3,0,0	Credit	3	Subject Category	DE	Year	3rd	Semester	VI

Course Objective:

1. To understand the past, present and future of UX in physical products
2. To identify the various research methods to make a good physical product in UX
3. To identify types and roles of UX products
4. To be able to work on a product that solves a real problem

Unit 1: Introduction to Physical products (6Hours)

- Introduction to UX in physical products and its types.
- Sketching and drawing and creating the concepts

Unit 2: User research in Product design (15 Hours)

- Type of user research tools such as day in a life, persona, interviews, empathy maps, and journey maps.
- Creating scenarios and analyze user touch points and interaction points.
- Methodology and applied research, tools and designs.
- Ergonomics and cognitive psychology

Unit 3: User interface and material study (15 Hours)

- User behavior and his desirability for types of physical products
- Different industries and role of UX designers.
- Material study such as plastic, paper, digital device, screens, GUI and so on with 3D modeling using blender.
- Designing big scale products and role of emerging technology in Physical products

Unit 4: Project (9 Hours)

- Research and design a device using real users and used cases. Apply 3D modeling and design interface using design tools.

LEARNING OUTCOME:

- Understand the roles of skill, experience and meaning of physical products
- Ideate for a real user, empathy and its tools and differentiate between good and bad design
- Prototype and design using ergonomics and basic design guidelines, understand materail and digital tools to design it.
- Identify some potential in real life scenario and industry relevant problem and design a physical product and its interface.

Text Books:

1. Design of everyday things, Don Norman
2. Design for How People Think: Using Brain Science to Build Better Products
3. Don’t make me think, Steve Krug

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 401	Subject Title	BUSINESS, UX & DESIGN MANAGEMENT					
LTP	200	Credit	2	Subject Category	DC	Year	4th	Semester	VII

Course Objective:

The course should enable the student to understand how UX can help businesses

Unit 1: Business UX

Understanding How a UX approach can help any business, The Business Value of UX Design, Strategy building, Aspects of key guidelines in UX business, values and emotions of user Behavior and cognitive psychology of market and business, Design policies

Unit 2: Design Management

What is design management, Different types, Taking Charge of Processes and People The Evolution of Design Management, Areas of Design Management, Why Does Design Management Matter? Where Does Design Management Fall Within Businesses?

Unit 3: Project

Understanding Design management and UX business

LEARNING OUTCOME:

- Understanding business in UX
- Understanding the strategy involved in UX business
- Understanding design management
- Implementing design management in product design and business

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 402	Subject Title	PRODUCT DESIGN & LIFE CYCLE MANAGEMENT					
LTP	202	Credit	3	Subject Category	DC	Year	4th	Semester	VII

Course Objective:

The course should enable the student to design products for users

Unit 1: Introduction to Product lifecycle management

What is Product Lifecycle Management (PLM)? What is the Product Life Cycle? Product life cycle stages, Benefits, areas of PLM

Unit 2: Product Development Platform

PLM, Supply Chain Collaboration, ALM and QMS, Multi-Tenant Cloud-Based PLM Software, How Arena Provided the All-In-One Product Development Platform Apical Instruments Needed. Phases of product lifecycle and corresponding technologies.

Unit 3: Product Lifecycle Management Integration 1

Rootstock Product Lifecycle Management Integration, Shared Product Information, How the Integration Works,

Unit 4: Project Work

Project work on PLM

LEARNING OUTCOME:

- Understanding the cycle of product design
- Be able to find and execute the technology required
- Understanding the importance of product management
- To be able to execute the cycle of product management

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 401	Subject Title	GAMIFICATION & UX					
LTP	0 0 6	Credit	3	Subject Category	DC	Year	4th	Semester	VII

Course Objective:

The course should enable the student to understand and apply the strategy of gamification

Unit 1: Introduction to Gamification

What is Gamification? Why is gamification so popular? Key ingredients of gamification – Motivation, mastery and triggers, Why and how gamification is not the same as game design

Unit 2: Strategy of Gamification

The appeal of gamification in UX Design, Challenges in gamification, the power of gamification and how it can increase user engagement and fulfilment, How to manage, monitor, and measure of the impact of gamification work

Unit 3:Gamification – The play centered design

Gamification in UX -Increasing User Engagement, Types of game mechanics forUX improvement, Player-Centred Design: Moving Beyond User-Centred Design for Gamification

Unit 4: Project

Implementing Gamification in banking, healthcare, retail or management portal

LEARNING OUTCOME:

To understand the strategy of gamification
To learn the key ingredients of gamification
To implement gamification for customer engagement
Creating appeal in UX design by gamification

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 402	Subject Title	HUMAN MACHINE INTERFACE					
LTP	2 0 4	Credit	4	Subject Category	DC	Year	4th	Semester	VII

Course Objective:

The course should enable the student to understand and create human machine interfaces

Unit 1: Introduction to HMI

What is HMI? Who Uses HMI? Common Uses of HMI, What is the Difference between HMI and SCADA?

Unit 2: Trends in HMI Technology

Understanding the different technologies of HMI, Past trends and current technologies, High Performance HMIs, Touch Screens and Mobile Devices, Remote Monitoring, Edge-of-Network and Cloud HMIs

Case studies in detail

Unit 3: Futuristic HMI's

Understanding the current trends, exploring ways to implement Augmented Reality (AR) and Virtual Reality (VR) to visualize manufacturing functions.

Unit 5: Project Work

Project work on HMI which includes current trends

LEARNING OUTCOME:

- Be able to understand the interactions between human and machine
- Understanding the different machines
- Able to grasp hands-on experience of tools for creating interfaces for human and machine
- Understanding cognitive psychology and user behavior.
- Implementing the study to create interfaces for human machine interactions

Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	IX 403	Subject Title	LIVE PROJECT (STUDIO)					
LTP	2 0 4	Credit	4	Subject Category	PRJT	Year	4th	Semester	VII

Course Objective:

Live Project should be in any one domain and should be technology driven and aesthetically done to be able to strategically prove its importance in the real-time world.

LEARNING OUTCOME:
Text Books:

Reference Books:

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 441	Subject Title	DESIGNING FOR IOT						
LTP	3,0,0	Credit	3	Subject Category	DE	Year	4th	Semester	VII

Course Objective:

1. To understand the past, present and future of emerging technology
2. To identify the various sectors and industries and how they have implemented it
3. To understand the tools used in IOT
4. To be able to innovate and apply IOT to an existing problem

Unit 1: Introduction to Internet of things (6Hours)

- What is IoT? The 5 internet revolutions? Evolution and its application. Past present and future of IOT.

Unit 2: IOT in various industries (12 Hours)

- IOT used in various sectors such as education, construction, healthcare, agriculture. Famous works in the field of IOT. How does IOT help in solving a big problem and case study. Role of a UX designer, developer and other experts in IOT. Job roles and opportunities.

Unit 3: Tools and innovation (9 Hours)

- Tools used to design an IOT interface, sensors, connectivity and function
- Data and IOT and cloud computing
- Design and code, interfaces and problem solving with IOT.
- IOT devices and its functions, hardware, software, used cases (seebo.com), ergonomics.

Unit 4: Project (18 Hours)

- Research and working on an industry relevant problem. How can we provide solutions using IOT in any sector or a house problem? Explain the mechanics.

LEARNING OUTCOME:

- Understand the roles of skill, experience and meaning of IOT
- Ideate for a technology driven future
- Jobs roles, tools and role in UX/UI
- Identify some potential in real life scenario and industry relevant problem

Text Books:

- The Amazon Way on IoT: 10 Principles for Every Leader from the World's Leading Internet of Things Strategies
- Book by John Rossman
- User Experience Design for the Internet of Things by Claire Rowland

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 442	**Subject Title**	**Designing for Wearables**						
LTP	3,0,0	**Credit**	3	**Subject Category**	DE	**Year**	4th	**Semester**	VII

Course Objective:

1. To understand the past, present and future of wearable devices
2. To identify the various sectors and industries and how they have implemented it
3. To identify types and roles of wearable devices
4. To be able to conceptualize a wearable device

Unit 1: Introduction to Wearable devices (6Hours)

- What is a wearable device? History and evolution. Companies manufacturing and how has it impacted a customer.

Unit 2: Types of wearable devices (6 Hours)

- Types of wearable devices.
- Technologies used in designing them.
- Case study and Industry constrains

Unit 3: Tools and innovation (15 Hours)

- Use persona, empathy maps and CJM to understand the various touchpoints.
- User behavior and his desirability for wearable devices
- Gestures-Bite sized information, non-intrusive design.
- Synchronization, design and aesthetics of a wearable design from a user's point of view

Unit 4: Project (18 Hours)

- Research and design a device using real users and used cases. Apply 3D modeling and design interface using design tools.

LEARNING OUTCOME:

- Understand the roles of skill, experience and meaning of wearable devices
- Ideate for a real user, empathy and its tools
- Prototype and design using ergonomics and basic design guidelines
- Identify some potential in real life scenario and industry relevant problem and design a wearable device and its interface.

Text Books:

1. Designing for wearable devices. Effective UX for Current and Future Devices author Scott Sullivan
2. Design for How People Think: Using Brain Science to Build Better Products

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Subject Code	BDX 443	Subject Title	Designing for Smart TVs						
LTP	3,0,0	Credit	3	Subject Category	DE	Year	4th	Semester	VII

Course Objective:

1. To understand how a Smart TV works
2. To learn smart TV environment
3. To be able to design an app for Smart TVs

Unit 1: Introduction to Smart TVs (12 hours)

- What is a smart TV, Evolution and history(generation of TV and contents), what purpose do TVs solve today in the era of Netflix, youtube, online channels, laptops and mobile phones along with deeply understanding the consumer group of smart TVs. Understanding that TV is a shared device.
- TVs and Gaminng - Xbox
- Remote control in a smart TV. Bluetooth Keyboard/mouse
- Understanding TV UI and its Importance.
- Case studies on smart TVs talking about LG, Samsung, Korean Tech, Apple TV, Android TV, Roku TV, Panasonic etc

Unit 2: Application of designing interactive TV experience (12 hours)

- TV appropriate apps and Designing for TV Apps, Smart TV interface, Information Architecture for TV.
- Understanding navigation, screen, contrast, focus state, different standards among various platforms, content, screen size and resolution, color, typography, list view vs detail view, visual hierarchy, search and density.
- 10-foot UI

Unit 3: Project (21 hours)

- Designing an app for smart TV that can also be controlled via smart phones.

Learning Outcome:

- A good understanding of details of a Smart TV from UX point of view
- Knowing how to design for Smart TV screens

Reference Books:

- Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Guidelines by Jeff Johnson
- Designing Multi-Device Experiences: An Ecosystem Approach to User Experiences across Devices by Michal Levin.

Course Structure& Syllabus of B. Des – UX
Applicable for Batch: 2018-2022

Code	AR-481	Subject Title	GRAPHICS & PRODUCT DESIGN						
LTP	3 0 0	Credit	3	Subject Category	OE	Year	4th	Semester	VII

Course Objective:

To introduce the various aspects og graphics design and important stages of product design and development.

Unit 1: Introduction

Introduction and importance of graphics and product design. Principles and elements of design. History of Design. Colour Theory. Techniques and processes to communicate graphically.

Unit 2: Product Design Cycle

Stages of product development. Introduction to ergonomics

Unit 3: Design Process

Introduction to concept. Concept development. Role of sketching in concept development. Implementation stages of concept for product development

Unit 4: Technology & Market Assessment

Customer needs identification, Market research essentials. Advertising and marketing tools.

Unit 5: Design Tools

Introduction to various design tools.

LEARNING OUTCOME:

1. The student will be able to understand the importance of Graphics.
2. The students will be able to understand and demonstrate their ideas visually.
3. The students will be able to understand the various stages of product development.

Text Books:

1. The Elements of Graphic Design, Alex W. White
2. The Design of Everyday Things, Don Norman

Reference Books:

1. Product Design & Development, Karl T. Ulrich & Steven D. Eppinger

Subject Code	IX 404	Subject Title	LIVE PROJECT (ON CLIENT'S LOCATION)					
LTP	0 0 40	Credit	20	Subject Category	PRJT	Year	4th	Semester	VIII

Course Objective:

Final Degree project in the industry.

Degree Project in Industry

LEARNING OUTCOME:

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

Text Books:

Reference Books: