Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

DIT UNIVERSITY
Dehradun

Detailed Course Structure & Syllabus
of
M. Des - User Experience Design

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

Course Structure & Syllabus of
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M.Des Course Structure

Year: 1 **Semester: 1**

Course Category	Course Code	Course Title	L/S*	T	P	Credit
DC	MDX 101	Fundamentals of Design	2	0	0	2
DC	MDX 116	Visual Design Tools and Basic Development	2	0	4	4
DC	MDX 103	Cognitive Design and Ethnography	2	0	2	3
DC	MDX 104	UX Design	3	0	2	4
DC	MDX 105	User Interface Design	2	0	2	3
DC	MDX 117	Fundamentals of Information Design and Introduction to 6D Process	3	0	0	3
DC	MDX 107	Introduction to Design Research	2	2	0	3
DC	MDX 108	Presentation and Communication Skills	2	0	0	2
		Total	19	2	8	24

Year: 1 **Semester: 2**

Course Category	Course Code	Course Title	L/S*	T	P	Credit
DC	MDX 118	Omnipresence Design	3	0	2	4
DC	MDX 119	Digital Experience Strategy	2	0	2	3
DC	MDX 106	Design Thinking & Innovation	3	0	0	3
DC	MDX 121	HCI Advance & User Experience	2	0	2	3
DC	MDX 122	Design Methodologies Used By Industries and Project with 6D	3	0	0	3
DC	MDX 114	UX Design for Emerging technology	3	0	2	4
DC	MDX 115	Seminar 1	0	0	4	2
		Total	15	2	12	22

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Course Structure

Year: 2 **Semester: 3**

Course Category	Course Code	Course Title	L/S*	T	P	Credit
PRJ	MDX 205	Thesis Project	-	-	-	6
DC	MDX206	Live Project	0	0	4	2
DC	MDX 207	Service Design and Enterprise UX	1	0	2	2
DC	MDX 208	Customer Experience in Fintech	1	0	2	2
DC	MDX 209	Human Factors in Healthcare	2	0	2	3
DC	MDX 211	Data Analytics, Data Sorting, Risk Analysis & Management	3	0	0	3
DC	MDX212	UX Case Study	2	0	0	2
DE		Elective Subject 1 - Project Based UX for New Technologies	2	0	2	3
DE		Elective Subject 2 - Project Based G2C (Government to Citizen) User Experience	2	0	2	3
		Total	13	0	14	26

Elective Subject 1 - Project Based
(Select one of the following)

MDX 241- UX for IOT
MDX 242- UX for AR
MDX 243- UX for Wearable
MDX 244- UX for Logistics

Elective Subject 2 - Project Based
(Select one of the following)

MDX 245- G2C in Healthcare
MDX 246- G2C in Banking
MDX 247- G2C in Citizen Services
MDX 248- G2C in Digital Agriculture

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Year: 2 **Semester: 4**

Course Category	Course Code	Course Title	L/S*	T	P	Credit
DC	MDX 213	Practical Training	-	-	-	16
		Total				16

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Detailed Syllabus

Program/Branch: M.DES – UXD

Subject Code	MDX101	Subject Title	Fundamentals of Design						
LTP	2 0 0	Credit	2	Subject Category	DC	Year		Semester	I

Course Objective:
The students will learn the fundamentals of design, study various elements and principles of design. Better understanding of Visualizing techniques and ideation. Learn how to do sketching and drawing.

Units:

Elements and principles of design

- Introduction to design
- History of design
- Basic Understanding of design elements and principles
- Gestalt law of design
- Design around us.
- Elements of forms and structures

Sketching and drawing

- 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 understanding 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.

Visualization techniques

- Learn 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

Ideation Methods

- Divergent Thinking
- Convergent Thinking
- Brainstorming techniques
- Different ideation activities

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Course Outcome:
The students will be able to
Apply the fundamentals, laws and elements and principles of design
Ideate and visualize design using various techniques.

Reference Books:

- Universal principles of Design - William Lidwell, Kritina Holden, Jill Butler
- Design of Everyday life – Don Norman
- Universal methods of design – Brus hanignton
- Hundred things every designer needs to know about people – Susan Weins Chenk

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Subject Code	MDX116	Subject Title	Visual Design Tools and Basic Development						
FOD	2 0 4	Credit	4	Subject Category	DC	Year		Semester	

Course Objective:
The students will learn the software used in User experience design and the student will be able to understand the role of development in design.

Unit:1 Introduction to Adobe XD

- Study about the tools anatomy, layout, grid, vector design, screen design, responsiveness and iconography.

Unit:2 Introduction to Figma

- Design basics and learn about Figma as a powerful tool for team collaboration, wireframe and graphic design.

Unit:3 Introduction to Zeplin

- Understand Zeplin anatomy, development basics and collaboration with developers, stakeholders as a designer. Learn about style guide, design margins, layouts and grids.

Course Outcome:

- Students will be able to understand the UX softwares
- They will be able to ideate and design elements for a digital design
- Collaborate with developers and various stakeholders
- Design and understand the basic development components.

Reference Books:

- A Companion to Cognitive Anthropology, David B. Kronefeld (Editor), Giovanni Bennardo (Editor), Victor C. de Munck (Editor), Michael D. Fischer (Editor)
- Cognition, Assessment and Debriefing in Aviation – Wolf-Michael Roth
- In Search of Respect: Selling Crack in EL Barrio – Philippe Bourgois
- Cognitive Architecture: Designing for How we respond to the built environment – Ann Sussman

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Subject Code	MDX103	Subject Title	Cognitive Design & Ethnography						
LTP	2 0 2	Credit	3	Subject Category	DC	Year		Semester	

Course Objective:
This course will help students in understanding various study methods to learn about the mental model of a user like cognitive psychology, Ethnography, Empathy. Students will be able learn user research methodologies.

Units:

Cognitive psychology study, ethnography study, Understanding Empathy

- Introduction to Cognitive psychology, Ethnography, understanding Empathy, cultural studies
- Importance of cognitive, ethnography and empathy.
- Relation between all three studies.
- How it plays an important role in UX.

User research preparation and planning, field study

- How cognitive psychology, ethnography and empathy plays an important factor in User Research
- What is User Research? Its importance in UX
- How to plan User Research.
- How to conduct field study – contextual enquiry and ethnography

Quantitative and Qualitative Research

- Introduction to research
- Types of research - Quantitative and Qualitative
- Methodologies of Quantitative and Qualitative Research
- How to conduct Quantitative and Qualitative Research
- When to conduct Quantitative and Qualitative Research

User Research Report, heuristic evaluation

- Components of a User Research report.
- How to create a User Research report.
- Introduction to Heuristic Evaluation
- 10 laws of Heuristic Evaluation
- When to do Heuristic Evaluation
- Case studies of Heuristic Evaluation.

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Course Outcome:

- Students will be able to differentiate between different user research methods.
- They will be able to conduct a field study for user research.
- Make a User Research report
- Conduct Heuristic Evaluation

Reference Books:

- A Companion to Cognitive Anthropology, David B. Kronefeld (Editor), Giovanni Bennardo (Editor), Victor C. de Munck (Editor), Michael D. Fischer (Editor)
- Cognition, Assessment and Debriefing in Aviation – Wolf-Michael Roth
- In Search of Respect: Selling Crack in EL Barrio – Philippe Bourgois
- Cognitive Architecture: Designing for How we respond to the built environment – Ann Sussman

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Subject Code	MDX104	Subject Title	UX Design						
LTP	3 0 2	Credit	4	Subject Category	DC	Year		Semester	

Course Objective:
Understanding the evolution of User Experience design, design process, various aspects of UX and methodologies. Trends in User Experience Design.

Units:

Evolution of UX

- History of UX
- Importance of UX
- Examples

Processes and Methodologies

- The recap of 6D ImaginXP UX process
- How and when to apply it.
- Methodologies within 6D
- Importance of methodologies
- Case studies

Tools and Technology in UX Design

- Introduction to tools for UX Design
- Emerging technologies in UX
- Future technology and tools in UX industries.
- Project

Multiple Domains and Trends in UX Design

- Current UX trends
- UX in various industries. (Health care, Fintech, Entertainment, Retail, etc)
- Understanding of UX and its role in various industries with examples.

Micro Interactions, Gamification

- What is Micro Interaction
- Examples
- Micro Interaction for different devices.
- Gamification in UX
- Gamification in enterprise application.

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Course Outcome:

- To be able to define user experience design,
- Identify various stages of UX process, advance techniques of micro interaction and gamification
- To understand current and future stages of user experience industry.

Reference Books:

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

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Subject Code	MDX105	Subject Title	User Interface Design						
LTP	2 0 2	Credit	3	Subject Category	DC	Year		Semester	

Course Objective:
The course will help students understand what user interface design is, how is it different from user experience design, various platforms of UI, understanding of material design.

Units:

Fundamentals of UI design

- What is user interface design?
- Difference between UX and UI design.
- Changing interfaces with technology advances (eg: Voice based, Gesture based, etc)

Understanding UI Platforms

- Introduction to leading platforms – Android & IOS
- Difference between Android and IOS (material vs flat design)
- Understanding UI for various devices - Smart phones, Tablets, Kiosks, Smart TV, Wearables.

Understanding brand and business

- Brand and brand guidelines.
- UI Design Strategy and its relation to Business.

Elements of Visual Design

- Grids
- Layouts.
- Iconography, Imagery
- Typography
- Understanding the use of Color
- Assets and Specs

Course Outcome:

- To be able to differentiate between types of platforms.
- To understand principles and elements of UI design.

Reference Books:

- Designing Interfaces – Jenifer Tidwell
- User Interface Design for programmers – Joel Spolsky
- UI is Communication: How is Design intuitive, user centered Interfaces – Everett N. McKay
- GUI Bloppers 2.0 – Jeff Johnson

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Subject Code	MDX117	Subject Title	Fundamentals of Information Design and Introduction to 6D Process						
LTP	3 0 0	Credit	3	Subject Category	DC	Year		Semester	

Course Objective:
The course intends to introduce the basic principles used in design. The student will be able to apply various laws, color theory and understand the main elements that make up a good design.

Unit 1: Elements of Design
Introduction to design, colour and its attributes, point, line, size, shape, volume, categories of texture, space, form, scale & proportion.

Unit 2: Principles of Design
Golden Ratio, Gestalt's principles - continuation / closure / proximity / figure & ground / foreground background / white space, rhythm, contrast, sequence, visual balance, harmony in design, shape transition, emphasis, gradation, pattern, composition, movement, hierarchy, unity and variety, typography, rule of thirds

Unit 3: Colour Schemes
Colour wheel, basic primary, secondary and tertiary colours, cool & warm colours, Hue, Value, saturation, understand the various colour schemes- monochromatic, achromatic, and complementary, split complementary, triadic, tetradic etc. & discuss their examples
Colour relativity. Observe and analyse colour combinations in various industries

Unit 4: Designing visuals for people
Designing for people - physiological & psychological factors, people's psychology and behaviour, aesthetics, eye tracking, introduction to ergonomics, case studies on people centric design. Introduction to UX design process

Course Outcome:
- The students will be able to apply the fundamentals, laws and elements and principles of design Ideate and visualize design using various techniques.
- Students will be introduced to various visual communication tools and software used in information design, such as graphic design software, data visualization tools, and presentation software.
- Students will learn about user-centered design approaches and techniques.

Reference Books:
- Universal principles of Design - William Lidwell, Kritina Holden, Jill Butler
- Design of Everyday life – Don Norman
- Universal methods of design – Brus hanignton
- Hundred things every designer needs to know about people – Susan Weins Chenk.

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Subject Code	MDX107	Subject Title	Introduction to Design Research						
LTP	2 2 0	Credit	3	Subject Category	DC	Year		Semester	

Course Objective:
The course intends to introduce the design research.

Units:

Introduction

- Meaning of design research
- Importance of user research and its objectives.
- KPIs in user research
- Heuristics Analysis

Elements of User Research

- User segmentation, user personas
- Identification of users for research
- Preparation of questionnaire

Methodologies

- Qualitative and Quantitative Analysis.
- User interviews and focused group discussion, expert reviews
- Tools for user research

Understanding Users

- Understanding cognitive psychology and user behaviour

Project

- Performing a user research with 20 users on a chosen problem.

Course Outcome:

1. To understand the design research and key performance indicators of user research
2. To create user personas
3. To understand the methodologies and tools for user research
4. To understand the psychology of users
5. To demonstrate the understanding of design research through a design problem

Reference Books:

- "Observing the User Experience, Second Edition: A Practitioner's Guide to User Research"
- by Elizabeth Goodman, Mike Kuniavsky, and Andrea Moed
- Quantifying the User Experience: Practical Statistics for User Research" by Je_ Sauro
- and James R. Lewis
- "Interviewing Users: How to Uncover Compelling Insights" by Steve Portigal
- "It's Our Research: Getting Stakeholder Buy -in for User Experience Research Projects" by
- Tomer Sharon
- "Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics"

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Subject Code	MDX108	Subject Title	Presentation and Communication Skills						
LTP	2 0 0	Credit	2	Subject Category	DC	Year		Semester	

Course Objective:
The course intends to improve the presentation and communication skills required.

Units:

Introduction to presentation methods and techniques.

- Communicating and presenting ideas to stakeholders
- Understanding components of good presentation (Reading, writing and Speaking).
- Conducting and Planning your presentation (Reading, writing and Speaking).
- Proper Implementation of presentation components.

Understanding and creative application of media

- Introduction to different media elements
- Better understanding of beginning and closure of presentation.
- Usage of media:
- Audio
- Video
- Imagery
- Content
- Text
- Animation

Structure of presentation

- Report Writing structure- Goals, Objectives, main content, conclusion.
- Effective usage of media into the structure.

Project

- Project based on Creative writing, articulation and narration exercises.
- Documentation and presentation exercises

Course Outcome:

- Students will be able to document, present and communicate well.

Reference Books:

- Effective communication - Rodrix, M.V - Makarthi, Himalaya Publishing House
- The essence of effective communication, Ludlow R and Panton F – Prentis hall
- Essentials of business communication, Guffrey, Mary E – South western college publishing
- Technical Communication: Principles and Practice - Raman, Meenakshi and Sharma – Oxford.

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Subject Code	MDX118	Subject Title	Omnipresence Design						
LTP	3 0 2	Credit	4	Subject Category	DC	Year		Semester	

Course Objective:
The course helps students to understand the omnipresence of design and its application across platforms.

Units:

UX for multiple form factors, User touch points

- Changing user journeys – Context /Device switching
- Multiple user touch points – Physical and Digital.
- Synchronization of multiple devices.

Omnipresence across web & mobile, UX in wearable devices

- Wearables
- Gestures-Bite sized information, non-intrusive design.

UX for consumer facing products.

- Understanding B2B, B2C
- UX in B2B and B2C
- Project

User Experience design in ecommerce.

- Understanding of Ecommerce industry
- UX in Ecommerce industry with examples
- Implementing design process for a ecommerce project

Course Outcome:

- Students will understand the concept of omnipresence design
- To understand the importance of UX in Omnipresence industry.

Reference Books:

- Universal principles of Design - William Lidwell, Kritina Holden, Jill Butler
- Design of Everyday life – Don Norman
- Universal methods of design – Brus hanignton
- Hundred things every designer needs to know about people – Susan Weins Chenk

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Subject Code	MDX119	Subject Title	Digital Experience Strategy						
LTP	2 0 2	Credit	3	Subject Category	DC	Year		Semester	

Course Objective:
The course helps students to understand the role of UX is digital strategizing and design management. Understanding the project and budget it in accordance to the needs and requirement.

Units:
Role of UX in digital strategy

- Defining a digital strategy
- Design Management, budgeting for a project
- Creating digital roadmap
- What is Software development lifecycle?
- Where UX fits in Software development lifecycle
- Mapping user need to digital strategy

Course Outcome:

- The students will get a high-level overview how UX adds value not only to user but also to the business.

Reference Books:

- Leading Digital Strategy: Driving Business Growth Through Effective E-commerce – Prof. Christopher Bones and James Hammersley
- Strategize: Product Strategy and Product Roadmap Practices for the Digital Age – Roman Pichler
- UX Strategy: How to devise innovative digital products that people want – Jaime Lev
- The Design of Everyday Things – Don Norman

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Subject Code	MDX106	Subject Title	Design Thinking & Innovation						
LTP	3 0 0	Credit	3	Subject Category	DC	Year		Semester	

Course Objective:
Implementation of design thinking processes and tools to drive innovation, Understanding the role of people in successful design thinking. Using tools like visualization, mapping, and storytelling to create solutions. Applying the design thinking methodology to your specific challenges, testing, refining, and improving new ideas, business models, and processes

Units:

Introduction to Design Thinking and Innovation

- What is design Thinking?
- What is the role of Innovation in Design?
- Examples of Design Thinking and Innovation

ImaginXP 5D process

- What is 5D process?
- Understanding of each stage of 5D process
- Learn how to apply 5D

Tools for Design Thinking

- Recap of Empathy
- Tools of Empathy – Persona, Empathy map, Customer Journey map.

Application of Design Thinking Methodologies

- When can be design thinking applied:
- Creating project from scratch
- Adding new features to project
- Redesigning a project.

Project on 5D

Course Outcome:

To be able to understand and apply the design thinking process.
To understand the ImaginXP 5D process.
To be able to implement 5D process on a project

Reference Books:

- Design Thinking for Innovation: Research and Practice – Walter Brenner and Falk Uebernickel
- Different Thinking: Creative Strategies for developing the innovative business 01 – Peter Kreuz and Anja Foerster
- Design Thinking: Integrating Innovation, Customer Experience and Brand Value – Thomas Lockwood

- Building Smart Cities: Analytics, ICT, and Design Thinking – Carol L. Stimmel

Subject Code	MDX121	Subject Title	HCI Advance and User Experience						
LTP	2 0 2	Credit	3	Subject Category	DC	Year		Semester	

Course Objective:
The course is intended to make students understand the Human computer interaction and its relation to user experience and how it plays a vital role in UX design process.

Units:

Understanding human computer interaction

- Introduction of Human computer interaction
- Importance of HCI
- Examples
- Industrial HCI and Interfaces

History, evolution and future

- Introduction to History and Evolution
- Current state of HCI
- Factory of the future

HCI in everyday life

- UX and HCI
- Human Factors in HCI
- Visual design in HCI / Interaction design in HCI
- HCI for Automotive
- Project: Creating HCI for Smart Mirror

Introduction 6D iMAGIN© UX process

- Introduction to 6D Process of UX Design
- Learn how to apply 6D
- Project on 6D

Course Outcome:

- Students will be able to understand the relation of Human computer interaction and UX, its working, evolution and future.
- Will be able to understand and apply ImaginXP 6D process.

Reference Books:

- HCI and User-Experience Design - Aaron Marcus, Springer – Verlag London
- User Experience and Experience Design – Marc Hassenzahl
- Interaction Design: Beyond Human: Computer interaction SE – Helen Sharp, Jenny Preece, and Yvonne Rogers
  HCI Redux: The Promise of Post-Cognitive Interaction – Phil Turner

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Subject Code	MDX122	Subject Title	Design Methodologies Used by Industries & Project with 6D						
SDE	3 0 0	Credit	3	Subject Category	DC	Year		Semester	

Course Objective:

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

Unit 1: Approaches for Product Development

Revise product development lifecycle
Importance of innovation and product renewal requirements- driven perspective on design

Unit 2: Developments and Deliverables

Product development processes and design methodology
Requirements specifications – guidelines and methods
Naming conventions
Assets and specifications

Unit 3: Critical Analysis and Decision-making

Function analysis – definitions and methods
Idea generation – methods and representations
Synthesis of product concepts – methods and mindsets
Evaluation and decision-making – methods and mindsets

Unit 4: Feedback and Refinement

Feedback, bugs and troubleshoot
Refinement of product concepts
Discussion of potential benefits and drawbacks of design methodology in practical use

Unit 5: Project with 6D: Industry relevant case studies

Course Outcome:

- Understanding different technologies and understand different industries
- 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.

Reference Books:

1. Universal Principles of Design – William Lidwell, Kritina Holden, and Jill Bulter
2. Smashing UX Design – Jesmond Allen and James Chudley
3. A Project Guide to UX Design – Russ Unger and Carolyn Chandler
4. Measuring the User Experience – Thomas Tullis and William Albert.

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Subject Code	MDX114	Subject Title	UX Design for Emerging technology						
LTP	3 0 2	Credit	4	Subject Category	DC	Year		Semester	

Course Objective:
The course intends to help students understand emerging technologies better in UX, future possibilities of UX, tools and technology for emerging technologies.

Units:

Emerging technology in UX

- AR
- VR
- IOT
- MR
- AI
- ML

Future in UX

- How UX will change in future – (Focus will change from screen interface to voice interface).
- Examples of future technologies in UX
- Various emerging platforms

Tools of UX design for emerging technology

Human behavior for emerging technology

The hype cycle, Empathy map for emerging technology.

Course Outcome:
Students will able to understand and delve in the amazing and growing scope of UX across the world and understanding the in depth transformation in UX.

Reference Books:

- Designing for Emerging Technologies – Jonathan Follett
- Keeping up with emerging technologies – Nicole Hennig
- Designing for wearable: Effective UX for current and Future Devices – Scott Sullivan
- Sketching User Experience – Bill Buxton

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Subject Code	MDX115	Subject Title	Seminar 1						
LTP	0 0 4	Credit	2	Subject Category	DC	Year		Semester	

Course Objective:
To discuss the Problem definition, need identification and literature studies for dissertation project

Units:
Discussion with mentor about the thesis topic and related aspects.
Addressing the concern of students regarding thesis.

Course Outcome:

- The students will be able to identify and define the problem for dissertation project
  The students will be able to do literature study for dissertation project

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Subject Code	MDX205	Subject Title	Thesis Project						
LTP	---	Credit	6	Subject Category	DC	Year		Semester	

Course Objective:
This project will help students to explore the selected industry and also help in, how to find design opportunity?

Project Details:

This project is based on the Elective I and Elective II. Students must choose the project according to their area of interest and students must submit this project in the end-semester evaluation.

Course Outcome

The students will be able to explore the selected industry
The students will be able to understand how to find design opportunity.

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Subject Code	MDX206	Subject Title	Live Project						
LTP	0 0 4	Credit	2	Subject Category	DC	Year		Semester	

Course Objective:
This will help university to evaluate the performance of student in industry.

Dissertation Details:
Students must compile all the work in the format of report (Work done by student in internship). This report should be presented by student along with the Design Project – 1 in the End- semester evaluation.

Course Outcome
The student will be able to

1. Compile the work done during internship in the form of a report.
2. Present the report.

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Subject Code	MDX207	Subject Title	Service Design and Enterprise UX						
LTP	1 0 2	Credit	2	Subject Category	DC	Year		Semester	

Course Objective:
Understanding Service design and UX, ROI of UX, a system, process, and task.
How to bring efficiency to a system, technological efficiency that helps in UX.

Units:

Introduction to Service Design and Enterprise UX

- What is Service design and Enterprise UX
- How UX is different for enterprise application.
- Example of Service design and Enterprose UX

Task flow analysis, AS IS and TO BE task flows

- What is task flow analysis?
- In which UX stage does the task flow analysis fit
- AS IS Task flows
- TO BE Task flows
- Types of task flows - Decomposition and Hierarchal.

Parameters of technology in UX

- Technological advancements for better UX (QR Code, Voice automation, face recognition, Finger print detection).
- Limitation of Technology

Course Outcome:

- To understand service design and task flow
- To understand enterprise UX
- Students will be able to understand the role of Technology in enhancing UX.

Reference Books:

- Universal Principles of Design – William Lidwell, Kritina Holden, and Jill Bulter
- Smashing UX Design – Jesmond Allen and James Chudley
- A Project Guide to UX Design – Russ Unger and Carolyn Chandler
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Subject Code	MDX208	Subject Title	Customer Experience in Fintech						
LTP	1 0 2	Credit	2	Subject Category	DC	Year		Semester	

Course Objective:
Better knowledge of digital and real time experience in Fintech, the banking ecosystem and digital banking, Life stage banking.

Units:
Digital and Real Time Experience in Fintech.

- Understanding the Fintech industry
- How UX plays an important role in Fintech Industry
- User expectation from digital and physical banking

Touch points in banking.
Banking Customer end to end journey – Digital and Physical components.

Project in banking – mobile banking or wallet or payment bank or insurance or any product in fintech.

Course Outcome:
Students will be able to acknowledge that user experience is the sum of digital and physical experience with the company.

Reference Books:

- Customer experience in the era of 3.0 FinTech – Gustavo Imhof
- The FINTECH Book: The Financial Technology Handbook for Investors, Entrepreneurs, and Visionaries the Ascent of Money – Niall Ferguson
- Open Banking Strategy Formation – Paul Rohan

Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Subject Code	MDX209	Subject Title	Human Factors and Healthcare						
LTP	2 0 2	Credit	3	Subject Category	DC	Year		Semester	

Course Objective:
The course will help in understanding healthcare better. The patient dynamics, Digital patient support program. Also understanding doctors and their role in digital healthcare, healthcare value chain,

Units:

Dynamics of digital healthcare

- What is healthcare in general and the different streams in healthcare
- What is digital healthcare.
- People involved in the healthcare ecosystem

Human Factors and healthcare

- Humans at the centre of healthcare, so healthcare has to be human-centered.
- See paragraph - Application of human factors in healthcare https://www.hopkinsmedicine.org/armstrong_institute/centers/human_factors_engineering/human_factors_in_health_care.html
- Increasing awareness among patients. - They are more exposed to B2C health and wellness apps and products; They expect more control, online consultations, better and constant connectivity with doctors, location aware mobile services, online medication ordering etc.

UX design for healthcare

- Focus on the types of interfaces and then how to improve their UX - E.g. Medical room, emergency room devices, kiosks, mobile apps, web interfaces, training material to doctors through AR/ AI or via tablets.
- Some pointers here: https://uxplanet.org/how-to-apply-design-thinking-in-healthcare-d8cd328b5b6a

Project in Healthcare

Course Outcome:
Students will be able to understand the domain of health care industry in context to UX.

Reference Books:

- Advances in Human Factors and Ergonomics in Healthcare – Vincent
- Cognitive Systems Engineering in Health Care – Ann M. Bisantz, Catherine M. Burns, and Rollin J. Fairbanks

Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Subject Code	MDX211	Subject Title	Data Analytics, Data Sorting, Risk Analysis & Management						
DP1	3 0 0	Credit	3	Subject Category	DC	Year		Semester	

Course Objective:
This project will help students to explore the selected industry and also help in, how to find design opportunity?

Unit 1: Unit 1: Data in UX Design

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

Data in service design Task flows and data, Efficiency and data, case study

Unit 3: Data in Decision for Leadership

Risk analysis, how to create actionable dashboard, drill down of data (layers)

Unit 4: Data Analysis in Gamification

Gamification and Data analysis 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, Scores in Gamification, badges and data

Unit 5: Project Work

Engagement and data analysis, how to provide engagement and personalization with data Project.

Course Outcome

1. The students will be able to explore the selected industry and apply gamification laws.
2. Able to effectively apply the concepts and phycology to analyze big and complex data.
3. To be able to understand the tool and fetch data in a structured form.
4. To able to read, structure, segment and conclude the heavy information.

Reference Books:

1. Python for Data Analysis" by Wes McKinney,
2. Practical Statistics for Data Scientists" by Andrew Bruce and Peter Bruce
3. The Data Warehouse Toolkit, "Data Analysis Using SQL and Excel" by Gordon S. Linoff and Michael J. A. Berry

Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Subject Code	MDX212	Subject Title	UX Case study						
SMR2	2 0 0	Credit	2	Subject Category	DC	Year		Semester	

Course Objective:
To discuss the Problem definition, need identification and literature studies for thesis.

Unit: Study how UX strategies have impacted major companies and analysis of factors to their success.

- Apple
- Ola
- Zomato
- Droom
- Phonepe
- Axis Bank

Course Outcomes

1. The students will be able to identify and define the problem for thesis project
2. The students will be able to do literature study for thesis project
3. Students will gain a thorough understanding of the UX design process, including user research, ideation, prototyping, testing, and iteration. They will learn how to apply these principles to real-world design challenges.
4. Students will learn various user research techniques, such as interviews, surveys, and usability testing, to gather valuable insights and feedback from users.

Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Subject Code	MDX213	Subject Title	Practical Training						
LTP	- --	Credit	16	Subject Category	DC	Year		Semester	

Course Objective:
This will help the students to face the professional challenges.

Practical Training:

Students must compile all the work done in industry and this should be in a form of report. This report should be presented by student for semester evaluation.

Course Outcomes

1. Compile the work done in industry in the form of a report.
2. Present the report

Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Subject Code	MDX 241	Subject Title	UX FOR IOT						
LTP	0-0-6	Credit	3	Subject Category	DE	Year		Semester	

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. IOT in various industries.

Unit 2: 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 3: Project (30 Hours)

- Ask students to pick an industry of their interest and do an extensive research including the past and present. Explain the mechanics of the same. Come up with a well-defined problem statement and give a futuristic solution for the same. This should include Physical or Digital full-fledged solution.

COURSE OUTCOME:

1. Understand the roles of skill, experience and meaning of IOT
2. Ideate for a technology driven future
3. Identify some potential in real life scenario and industry relevant problem

Text Books:

Reference Books:

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

Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Subject Code	MDX 242	Subject Title	UX for AR						
LTP	0-0-6	Credit	3	Subject Category	DE	Year		Semester	

Course Objective:

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

Unit 1: Introduction to AR (6Hours)

- What is AR? Great Examples of AR- Evolution and Future. AR in every day life.
- How does AR work?
- What Does Augmented Reality Mean for UX Designers?

Unit 2: Tools and Principles (9 Hours)

- Tools used to design AR (wiARframe, TORCH AR etc)
- Translucent vs transparent UI
- AR in different industries
- Understanding points like- Off-screen exploration, Audio exploration, Haptic Feedback, Depth collisions, Inside Object, Multiplayer Experience,

Unit 3: Project (30 Hours)

- Taking Covid 19 as an example, students can work on solving any such problem that they believe can be a future takeaway.

COURSE OUTCOME:

1. Understand the need of future and how AR can be a part of it
2. Ideate for a technology driven future
3. Identify some potential in real life scenario and industry relevant problem

Text Books:

Reference Books:

1. The Design of Everyday Things by Don Norman
2. Creativity Inc. by Ed Catmull

Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Subject Code	MDX 243	Subject Title	UX for Wearable						
LTP	0-0-6	Credit	3	Subject Category	DE	Year		Semester	

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

Unit 2: Tools and innovation (9Hours)

- User 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 3: Project (18 Hours)

In a group- students should pick a wicked problem (example Pollution, Poverty, Plastic and Population etc). Create a self-explanatory problem statement focusing on their wicked problem.
By following the Imaginxp 6D process, create a strategic product design (prototype), which is a wearable device with UX in it.

COURSE OUTCOME:

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

Text Books:

Reference 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
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Subject Code	MDX 244	Subject Title	UX FOR Logistics						
LTP	0-0-6	Credit	3	Subject Category	DE	Year		Semester	

Course Objective:

1. To understand the definition and role of logistics as a service
2. To identify the different ecosystems involved within logistics management system
3. To understand the importance of User Experience in logistics management

Unit 1: Introduction to Logistics and Logistic management (6Hours)

- Definition of logistics, different fields and domains of logistics, Military and business logistics, what is logistics management? importance of logistics management
- Ecosystem of logistics management, methods and types of logistics management, major activities involved in logistics management

Unit 2: UX for logistics (9 Hours)

- Understanding the correlation between logistics and customer experience
- Identifying various touchpoints and interaction within the ecosystem through journey maps
- Using UX processes, tools and other methodologies to identify, analyze and bridge various pain points within the logistics management and user

Unit 4: Project (30 Hours)

- Students are to choose one activity or domain within the logistics management ecosystem. Using the UX processes, conduct an extensive study on identifying potential challenges faced within the chosen domain through user research, secondary studies and analysis. Create a prospective design solution- physical or digital, to improve and enhance the user experience within the management.

COURSE OUTCOME:

1. Understand the roles and importance of logistics and UX
2. Identifying challenges in different relationships and different users within the logistics management
3. Understand how innovations influence the customer experience in logistics

Text Books:

Reference Books:

1. Strategic Supply Chain Design: Theory, Concepts and Applications- Werner Delfmann, Thorsten Klaas-Wissing
2. User Experience in the Age of Sustainability: A Practitioner's Blueprint- Kem-Laurin Kramer

Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Subject Code	MDX 245	Subject Title	G2C in Healthcare						
LTP	0-0-6	Credit	3	Subject Category	DE	Year		Semester	

Course Objective:

1. Understanding the health sector and health system extensively
2. Understand dynamics of digital health and patient-system interactions
3. Understanding doctors and their role in digital healthcare
4. Understand the domain of health care industry in context to UX

Unit 1: Introduction to Healthcare and Health systems (6 Hours)

- What is healthcare? History and Evolution of healthcare, Different streams of healthcare
- Introduction to Digital health- mhealth, Telehealth and telemedicine, technologies and trends in digital health, digital patient support system
- Understanding the ecosystem of healthcare- different interactions between the stakeholders of the health system, healthcare value chain, touchpoint within the health system.

Unit 2: UX for healthcare (9 Hours)

- Understanding user needs and mapping clinical/non-clinical experiences in health sector
- Using tools to identify and curate ideal patient and system journeys in the health sector through User experience design

Unit 3: Project (30 Hours)

- Ask students to pick a domain of health system interactions (patient-provider/provider-payer etc…) Identify prospective pain points within the relationship. Strategise and ideate design solutions to improve the experience and interactions between the same.

COURSE OUTCOME:

1. Understand the roles of doctors, patients, insurance companies and other stakeholders within the health system
2. Identify real time challenges and opportunity areas in healthcare through mapping eco systems and patient journeys
3. To ideate and design a patient centred care system through UX and Service Design processes

Text Books:

Reference Books:

1. Advances in Human Factors and Ergonomics in Healthcare – Vincent
2. Cognitive Systems Engineering in Health Care – Ann M. Bisantz, Catherine M. Burns, and Rollin J. Fairbanks

Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Subject Code	MDX 246	Subject Title	G2C in Banking						
LTP	0-0-6	Credit	3	Subject Category	DE	Year		Semester	

Course Objective:
1. To understand Banking and Its system
2. Better knowledge of digital and real time experience in the banking ecosystem and digital banking, Life stage banking.

Unit 1: Introduction to Banking (9Hours)
- What is banking? History and evolution.
- How digital banking has changed banking
- How UX plays an important role in the banking Industry
- User expectation from digital and physical banking
- How blockchain and crypto currencies will affect the future of banking

Unit 2: Touch points in banking (6Hours)
- Banking Customer end to end journey – Digital and Physical components
- Life stage banking. Banking ecosystem

Unit 3: Project (30Hours)
Students should be able to understand that how digital banking functions and they should take of banking as a holistic approach.
Example of project:
1. Keeping Gpay and other such competitors in mind, design an app which stands out among all other competitor's app that run on UPI platform
- Competitor analysis and SWAT of your product/service
- What will be the USP/dream hook of your app
- How are you planning to place the product in the market? (target user group, target market, etc)
- What will be your chosen advertising platform and why?

2- Design an entire website with reference to net banking keeping user friendliness in mind for a new user in banking and net banking
- Study existing net banking websites (for ex: AXIS bank)
- You need to design/re-design minimum 10 major website pages
- Justify how your design stands stronger and more user friendly for a non tech person or for a new person in the banking world among the already existing one's

COURSE OUTCOME:
Students will be able to acknowledge that user experience is the sum of digital and physical experience in the banking industry.

Text Books:
- Open Banking Strategy Formation – Paul Rohan

Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Subject Code	MDX 247	Subject Title	G2C in Citizen services						
LTP	0-0-6	Credit	3	Subject Category	DE	Year		Semester	

Course Objective:

1. Understanding the different kinds of citizen services
2. Understand the ecosystem of government-citizen interactions with respect to citizen services
3. Understand the roles of government, respective officials and personnel involved in the journey, citizens within the G2C ecosystem

Unit 1: Introduction to citizen services (6 Hours)

- What are citizen services? Different kinds of citizen services, Dynamics of G2C citizen services- decoding the ecosystems and various stakeholders involved in delivering G2C related services
- Introduction to E-services— Registrations, certifications and identity, safety and security, report and complaint registrations etc…, identifying touch-points within the ecosystem.

Unit 2: UX for G2C services (9 Hours)

- Identifying user journeys and needs in different stages involved in availing citizen services- online and offline
- Using UX tools and methodologies to design potential system journeys in obtaining/providing effective G2C citizen services

Unit 3: Project (30 Hours)

- Ask students to pick at least one citizen service provided by the government. Identify challenges and pain points in the services chosen, with respect to the user journey (government/citizen). Strategies to bridge the identified gap through a digital design solution.

COURSE OUTCOME:

1. Identify the existing point of interactions involved between the government and citizens and the efficiency of such interaction in a given such citizen service
2. Understand the scope of UX in G2C services

Text Books:

Reference Books:

Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Approved by the Academic Council in its 22nd Meeting held on 06.03.2023

Course Structure & Syllabus of
M. Des-User Experience Design
Applicable for Batch: 2023-2025

Subject Code	MDX 248	Subject Title	G2C in Digital Agriculture						
LTP	0-0-6	Credit	3	Subject Category	DE	Year		Semester	

Hours: 45

Course Objective:

1. to understand government policies and rural India on Digitalization
2. to be able to empathize with farmers and learn about challenges faced by them

Unit 1: Introduction to Digital Agriculture (6Hours)

- What is Digital Agriculture? Technology, potential and barriers in it.
- India and Digital Agriculture
- BASIC CONDITIONS FOR DIGITAL TRANSFORMATION – IT infrastructure and networks in rural areas, 2 Educational attainments, digital literacy and employment in rural areas, Policies and programs for enabling digital agriculture
- ENABLERS FOR DIGITAL AGRICULTURE TRANSFORMATION

Unit 2: Research and communication (9Hours)

- Revolutionizing Agriculture through ICT
- Challenges to connect marginalized and remote communities
- Secondary research including case studies and research papers on Indian farmers taking up technology

Unit 3: Project (18 Hours)

In a group- students should do ethnography field study to understand farmers and agriculture, understand their problem, get primary research insights and give a solution on how Digital Agriculture can be taken forward in an improvised manner to the rural India

COURSE OUTCOME:

Identifying potential and relevant problem faced by agriculture industry on the base level

Reference Books:

1. Letters to a Young Farmer: On Food, Farming, and Our Future by Stone Barns Center for Food and Agriculture