

**Course Structure & Syllabus of
M. Des- User Experience Design
Applicable for Batch: 2020-2022**

**DIT UNIVERSITY
Dehradun**



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

Course Structure & Syllabus of M. Des- User Experience Design Applicable for Batch: 2020-2022

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 102	HCI and User Experience	3	0	2	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 106	Design Thinking and Innovation	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 109	Omnipresence Design	2	0	0	2
DC	MDX 110	Digital Experience Strategy	2	2	0	3
DC	MDX 111	Service Design and Enterprise UX	3	0	2	4
DC	MDX 112	Customer Experience in Fintech	2	0	2	3
DC	MDX 113	Human Factors in Healthcare	3	0	2	4
DC	MDX 114	UX Design for Emerging technology	3	0	2	4
DC	MDX 115	Seminar 1 (Problem definition, need identification and literature survey for thesis)	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
DC	MDX 201	Design Project - 1 (Complex problem)	2	0	16	10
DC	MDX 202	Summer Internship	-	-	-	2
PRJT	MDX 203	Dissertation Project	0	0	6	3
DE		Elective Subject 1 - Project Based UX for New Technologies	0	0	6	3
DE		Elective Subject 2 - Project Based G2C (Government to Citizen) User Experience	0	0	6	3
		Total	2	0	34	21

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 204	Seminar 2	0	0	4	2
THESIS	MDX 205	Thesis Project	0	0	36	18
Total			0	0	40	20

Summary of the Credit

Year	Semester	Max Credit	Total Credit
1	1	24	24
	2	22	22
2	3	21	21
	4	20	20

Category wise classification of the Credit

Category	Max Credit	Min Credit
UC		
AC		
SC		
DC	10	
HE		
DE	3	
OE		
EC		
PRJT/THESIS/ST/IND	18	
VAT/EEP/APT		

Course Structure & Syllabus of M. Des- User Experience Design Applicable for Batch: 2020-2022 Detailed Syllabus

Program/Branch: M.DES – UXD

Subject Code	MDX-101	Subject Title	Fundamentals of Design						
FOD	200	Credit	2	Subject Category	DC	Year	1 st	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. Learning 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.

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

Visualization techniques

- Learning visualization techniques through - visual identity design, metamorphism visualization techniques, brainstorming and mind mapping. Information visualization through infographics and designing brand communication. Documenting and communicating design ideas through presentations, role play and group activities.
- Project in design communication and visualization

Ideation Methods

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

Learning Outcome:

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

Course Structure & Syllabus of M. Des- User Experience Design Applicable for Batch: 2020-2022

Reference Books:

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

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Subject Code	MDX-102	Subject Title	HCI and User Experience						
HCIX	3 0 2	Credit	4	Subject Category	DC	Year	1 st	Semester	I

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
- Learning how to apply 6D
- Project on 6D

Learning Outcome:

- Students will be able to understand the relation of Human computer interaction and UX, its working, evolution and future.
- Also, 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

Course Structure & Syllabus of M. Des- User Experience Design Applicable for Batch: 2020-2022

Subject Code	MDX-103	Subject Title	Cognitive Design & Ethnography						
CDE	202	Credit	3	Subject Category	DC	Year	1 st	Semester	I

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
- 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.

Learning 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)

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- 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

Course Structure & Syllabus of M. Des- User Experience Design Applicable for Batch: 2020-2022

Subject Code	MDX-104	Subject Title	User Experience Design						
UXD	3 0 2	Credit	4	Subject Category	DC	Year	1 st	Semester	I

Course Objective:

Understanding the evolution of User Experience design, learning the 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

- Therecap of 6D ImaginXPUX 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.

Learning Outcome:

- Students will be able to define user experience design, identify various stages of UX process, advance techniques of micro interaction and gamification, they will be aware of current future stages of user experience industry.

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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

Course Structure & Syllabus of M. Des- User Experience Design Applicable for Batch: 2020-2022

Subject Code	MDX-105	Subject Title	User Interface Design						
UID	202	Credit	3	Subject Category	DC	Year	1 st	Semester	I

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

Learning Outcome:

- Students will be able to understand the difference between types of platforms. 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 Bloopers 2.0 – Jeff Johnson

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Subject Code	MDX-106	Subject Title	Design Thinking & Innovation						
DTI	30 0	Credit	3	Subject Category	DC	Year	1 st	Semester	I

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
- Learning 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

Learning Outcome:

Students will be able to apply design thinking process, detailed application of each D.

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

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Subject Code	MDX-107	Subject Title	Introduction to Design Research						
PCS	2 2 0	Credit	3	Subject Category	DC	Year	1st	Semester	I

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

Learning Outcome:

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

Reference Books:

- Effective communication - Rodrix, M.V - Makarathi, 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.

Course Structure & Syllabus of M. Des- User Experience Design Applicable for Batch: 2020-2022

Subject Code	MDX-108	Subject Title	Presentation and Communication Skills						
PCS	200	Credit	2	Subject Category	DC	Year	1st	Semester	I

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
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Technical Communication: Principles and Practice - Raman, Meenakshi and Sharma – Oxford

Course Structure & Syllabus of M. Des- User Experience Design Applicable for Batch: 2020-2022 SEMESTER 2

Subject Code	MDX-109	Subject Title	Omnipresence Design						
OD	2 0 0	Credit	2	Subject Category	DC	Year	1st	Semester	II

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

Learning outcome:

- Students will understand the concept of omnipresence design and also learn how UX is most important 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 – Brushanignton
- Hundred things every designer needs to know about people – Susan WeinsChenk

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Subject Code	MDX-110	Subject Title	Digital Experience Strategy						
DES	2 2 0	Credit	3	Subject Category	DC	Year	1 st	Semester	II

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

Learning 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

Course Structure & Syllabus of M. Des- User Experience Design Applicable for Batch: 2020-2022

Subject Code	MDX-111	Subject Title	Service Design and Enterprise UX						
SDE	3 0 2	Credit	4	Subject Category	DC	Year	1st	Semester	II

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 Enterprise 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

Learning Outcome:

- 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
- Measuring the User Experience – Thomas Tullis and William Albert.

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Subject Code	MDX-112	Subject Title	Customer Experience in Fintech						
CEF	2 0 2	Credit	3	Subject Category	DC	Year	1st	Semester	II

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 a 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.

Learning 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

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Subject Code	MDX-113	Subject Title	Human Factors and Healthcare						
HFH	3 0 2	Credit	4	Subject Category	DC	Year	1 st	Semester	II

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

Learning 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

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Subject Code	MDX-114	Subject Title	UX Design for Emerging technology						
UXET	3 0 2	Credit	4	Subject Category	DC	Year	1 st	Semester	II

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.

Learning Outcome:

- Students will be 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	MDX-115	Subject Title	Seminar 1						
SMR1	0 0 4	Credit	2	Subject Category	DC	Year	1st	Semester	II

Course Objective:

To discuss the Problem definition, need identification and literature studies for thesis 1

Units:

Discussion with mentor about the thesis topic and related aspects.

Addressing the concern of students regarding thesis.

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SEMESTER 3**

Subject Code	MDX-201	Subject Title	Design Project - 1 (Complex problem)						
DP1	2016	Credit	10	Subject Category	DC	Year	2 nd	Semester	III

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.

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Subject Code	MDX-202	Subject Title	Summer Internship						
SI	0 0 0	Credit	2	Subject Category	DC	Year	2 nd	Semester	III

Course Objective:

The internship will be of the 6 months. In which student will get the experience of working in industry on live project and learn the industry etiquette.

Unit:

In the six months tenure of internship, students will get the exposure to work in industry on live projects, with a team.

This will provide better understanding of:

The knowledge learnt in the course and its application.

Enhancing team building and leadership quality.

Management of time and appropriate allocation of it.

Course Structure & Syllabus of M. Des- User Experience Design Applicable for Batch: 2020-2022

Subject Code	MDX-203	Subject Title	Dissertation Project						
T1	006	Credit	3	Subject Category	DC	Year	2 nd	Semester	III

Course Objective:

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

Thesis1 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.

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Subject Code	MDX 241	Subject Title	UX FOR IOT						
LTP	0-0-6	Credit	3	Subject Category	DE	Year	2 nd	Semester	III

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.

LEARNING 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: 2020-2022

Subject Code	MDX 242	Subject Title	UX for AR						
LTP	0-0-6	Credit	3	Subject Category	DE	Year	2 nd	Semester	III

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.

LEARNING 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: 2020-2022

Subject Code	MDX 243	Subject Title	UX for Wearable						
LTP	0-0-6	Credit	3	Subject Category	DE	Year	2 nd	Semester	III

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 constraints

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.

LEARNING 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: 2020-2022

Subject Code	MDX 244	Subject Title	UX FOR Logistics						
LTP	0-0-6	Credit	3	Subject Category	DE	Year	2 nd	Semester	III

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.

LEARNING 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: 2020-2022

Subject Code	MDX 245	Subject Title	G2C in Healthcare						
LTP	0-0-6	Credit	3	Subject Category	DE	Year	2 nd	Semester	IV

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 an 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.

LEARNING 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: 2020-2022

Subject Code	MDX 246	Subject Title	G2C in Banking						
LTP	0-0-6	Credit	3	Subject Category	DE	Year	2 nd	Semester	IV

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 a 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

LEARNING 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: 2020-2022

Subject Code	MDX 247	Subject Title	G2C in Citizen services						
LTP	0-0-6	Credit	3	Subject Category	DE	Year	2 nd	Semester	IV

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). Strategise to bridge the identified gap through a digital design solution.

LEARNING 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: 2020-2022

Subject Code	MDX 248	Subject Title	G2C in Digital Agriculture						
LTP	0-0-6	Credit	3	Subject Category	DE	Year	2 nd	Semester	IV

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 attainment, 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

LEARNING OUTCOME:

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

Reference Books:

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

Course Structure & Syllabus of M. Des- User Experience Design Applicable for Batch: 2020-2022

SEMESTER 4

Subject Code	MDX-204	Subject Title	Seminar 2						
SMR2	0 0 4	Credit	2	Subject Category	DC	Year	2 nd	Semester	IV

Course Objective:

To discuss the Problem definition, need identification and literature studies for thesis 2

Units:

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

Course Structure & Syllabus of M. Des- User Experience Design Applicable for Batch: 2020-2022

Subject Code	MDX-205	Subject Title	Thesis Project						
T2	0 0 36	Credit	18	Subject Category	DC	Year	2 nd	Semester	IV

Course Objective:

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

Thesis2 Details:

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 along with the Thesis 1 in the End- semester evaluation.