# Mahatma Gandhi University
# Kottayam

| Programme | |
|---|---|
| **Course Name** | User Interface and User Experience for App Development |
| **Type of Course** | DSC B |
| **Course Code** | MG3DSCMOS201 |
| **Course Level** | **200-299** |
| **Course Summary & Justification** | This course on User Interface and User Experience for App Development equips students with comprehensive understanding of UI/UX principles, enabling them to design aesthetic and user-friendly interfaces. This course also ensures practical application, fostering critical thinking and problem-solving skills essential for effective app development. |

| Semester | 3 | | Credits | | 4 | **Total Hours** |
|---|---|---|---|---|---|---|
| **Course Details** | **Learning Approach** | **Lecture** | **Tutorial** | **Practical** | **Others** | |
| | | 3 | | 1 | | 75 |
| **Pre-requisites** | | | | | | |

## COURSE OUTCOMES (CO)

| CO No: | Expected Course Outcome | Learning Domains * | PO No: |
|---|---|---|---|
| 1 | Understand the principles of UI/ UX design | U | 2,3 |
| 2 | Apply the basics of UI design in app development | A | 2,4 |
| 3 | Implement advanced UI design features effectively | A | 2,5 |
| 4 | Analyze and adhere to UI design rules for optimal user experience | A | 1,8 |

*Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)*

## COURSE CONTENT
### Content for Classroom transaction (Units)

| Module | Units | Course description | Hours | CO No. |
|---|---|---|---|---|
| 1 | 1.1 | Introduction to UI (User Interface) and UX (User Experience) | 3 | 1 |
| | 1.2 | Designing User interface components: Widgets, Icons, and Transitions | 4 | 1 |
| | 1.3 | Android App Layouts Graphics and Responsive Design – Responsive user interface design – case studies | 4 | 1 |
| | 1.4 | Designing User interface components: Widgets, | 4 | 1 |

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|---|---|---|---|---|
| | | Typography, Icons, and Transitions | | |
| 2 | 2.1 | Mobile Design Guidelines, UI-patterns and Antipatterns – Android and IOS design patterns | 3 | 2 |
| | 2.2 | UI Anti patterns – Android design patters for home screen, Search, Sorting and filtering, data entry, forms, navigation, and tablet patterns | 4 | 2 |
| | 2.3 | The Full Design: prototyping, visuals, design, animation. Mobile Wireframing: Representing inputs, gestures and motion | 4 | 2 |
| | 2.4 | Justinmind \| mockplus - Lean Principles for UX, UX Considerations | 4 | 2 |
| 3 | 3.1 | Combine Layout Grids and Constraints, Prototype interactions, Prototype interaction navigation to page | 2 | 3 |
| | 3.2 | Auto layout properties, Auto layout options, Footer, SVG color and overlay edits, Auto layout menu footer | 3 | 3 |
| | 3.3 | Layers toolbar, hide and lock, Prototype viewer, Frames and page, Difference between frames and groups | 3 | 3 |
| | 3.4 | Navigation bar, Button design, Fonts and Figma colors | 3 | 3 |
| | 3.5 | UI Design Rules, Mobile Prototyping: Methods of prototyping, Using Device to prototype columns and rows | 2 | 3 |
| | 3.6 | How to get started – the basics, Frames, Grid Shapes, Import images, Labeling and grouping, Text and text size | 2 | 3 |
| 4 | | **Select any 12 Exercises:**<br><br>▪ Create a User Interface design for Chatting Application.<br><br>▪ Create a clone WhatsApp user interface design containing 5 minimum pages. (login page, password, registration, forget password, profile page, edit profile page, OTP verification, chat page)<br><br>▪ Create an entertainment App Interface design with minimum 5 pages (login page, registration page, forget password, homepage, profile page, edit profile)<br><br>▪ Create an online shopping App user Interface design which includes cart page, order placement page, homepage, searching page.<br><br>▪ Create a mobile app with an interactive UI that allows users to search for food, browse categories, and explore featured restaurants on the home screen?<br><br>▪ Create a mobile app with an interactive UI that displays a product detail page including images, price, description, size/color options, and an add-to-cart button?<br><br>▪ Create a mobile app with an interactive UI that shows a workout dashboard featuring daily activity, progress tracking, and scheduled workouts? | 30 | 4 |

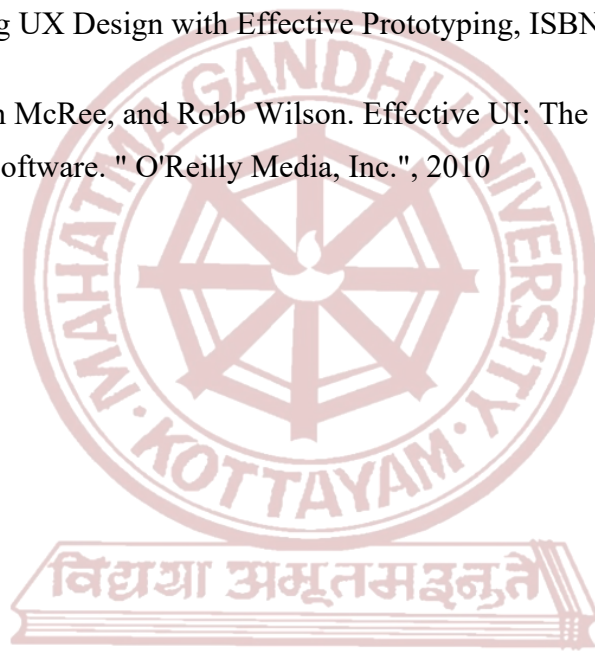|   |   |   |   |
|---|---|---|---|
|   | ▪ Create a mobile app with an interactive UI that shows account balances, recent transactions, and quick access to key features like transfers or payments? |   |   |
|   | ▪ Create a mobile app with an interactive UI that lets users view doctor profiles, select time slots, and book virtual consultations? |   |   |
|   | ▪ Create a mobile app with an interactive UI that allows users to search for flights, apply filters, view results, and proceed to booking? |   |   |
|   | ▪ Create a mobile app with an interactive UI that lets users manage daily tasks with checkboxes, priority tags, and task creation options? |   |   |
|   | ▪ Create a mobile app with an interactive UI that shows enrolled courses, progress bars, and navigation to upcoming lessons? |   |   |
|   | ▪ Create a mobile app with an interactive UI that includes a 'Now Playing' screen with album art, song controls, and queue options? |   |   |
|   | ▪ Create a mobile app with an interactive UI that displays job listings with company info, job details, and an 'Apply Now' button? |   |   |
|   | ▪ Create a mobile app with an interactive UI that shows event details, ticket types, venue info, and booking functionality? |   |   |
| 5 | **Teacher specific content** |   |   |

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| **Teaching and Learning Approach** | **Classroom Procedure (Mode of transaction)**<br>Leverage a blended learning approach with a mix of lectures, interactive discussions, and hands-on lab sessions |
| **Assessment Types** | **MODE OF ASSESSMENT (Internal Evaluation)**<br>**A. Continuous Comprehensive Assessment (CCA)**<br> **1. Theory: - 25 Marks**<br> Internal Tests/Seminar Presentation and viva<br> **2. Practical: 15 Marks**<br> Components for assessment (suggestions): Any combination of tests, quizzes, Assignments, Performance, Case Study. |
| | **B. End Semester Examination**<br><br>**1. Written Test (50 marks)-** 1 Hour 30 Minutes (Duration of Examination)<br> a. MCQ - 10 Marks (Answer all - 10x1=10 Marks)<br> b. Short answer questions (4 out of 6 questions)-4x5=20 marks<br> c. Essay questions (2 out of 4 questions) - 2x10=20 marks<br><br>**2. Practical Exam (35 marks**) – 2 Hour (Duration of Examination)<br> a. Viva<br> b. Lab report<br> c. Test/Demonstration |

**References**

1. Jeff Gothelf and Josh Seiden, Lean UX: Applying Lean Principles to Improve User Experience, Shroff/O'Reilly

2. Austin Govella, Hacking Product Design: Help Any Team Build a Better Experience, 2018, ISBN-13:978-1491975039

3. Hartson, Rex, and Pardha S. Pyla. The UX Book: Process and guidelines for ensuring a quality user experience. Elsevier, 2012.

**Suggested Readings**

1. Aditi Sharma, Figma for UI/UX Design, ISBN-13: 978-9348107794 ISBN-10: 9348107798, 2025

2. Apurvo Gosh, Mastering UX Design with Effective Prototyping, ISBN-13 978-9355515346, BPB Publication, 2023

3. Anderson, Jonathan, John McRee, and Robb Wilson. Effective UI: The art of building

great user experience in software. " O'Reilly Media, Inc.", 2010

MGU-UGP (HONOURS)

Syllabus