

OILab (Open Innovation Lab)

Mobile App Development Course

Build Powerful Mobile Applications with OILab

The App Development Course at OILab (Open Innovation Lab) is designed for individuals who want to build modern mobile applications for Android, iOS, and cross-platform environments.

With smartphones becoming the center of digital life, skilled app developers are in high demand. This course teaches students how to design, build, and launch professional mobile applications using modern frameworks and technologies.

At OILab, we emphasize project-based learning, allowing students to create real applications from scratch. You will learn everything from UI design for apps, backend integration, APIs, database connectivity, and deployment to app stores.

By the end of the program, students will have built multiple real-world applications and gained the skills needed to work as Mobile App Developers, Full Stack App Developers, or Startup Founders.

Course Overview

Mobile applications are at the heart of today's digital world. Businesses, startups, and organizations rely on mobile apps to connect with users and provide seamless digital experiences.

In this comprehensive App Development Course, you will learn how to design, develop, and deploy modern mobile applications from scratch. The course covers everything from programming fundamentals to advanced app architecture, API integrations, cloud connectivity, and app deployment.

Whether you want to become a professional mobile app developer, start your own startup, or build apps for your business, this course will guide you through the entire development journey.

By the end of the program, you will have the skills and confidence to build real-world applications and publish them on the Google Play Store.

Course Curriculum

Module 1: Introduction to Mobile App Development

1. Understanding Mobile App Ecosystem
2. Types of Mobile Applications
3. Native vs Hybrid vs Cross-Platform Apps
4. Overview of Android & Cross-Platform Development
5. Setting up Development Environment
6. Installing Android Studio / Development Tools

Module 2: Programming Fundamentals

1. Introduction to Programming Concepts
2. Variables and Data Types
3. Conditional Statements
4. Loops and Iterations
5. Functions and Methods
6. Object Oriented Programming (OOP)

Module 3: UI/UX Design for Mobile Apps

1. Principles of Mobile UI Design
2. App Layouts and Components
3. Buttons, Forms and Inputs
4. Navigation Systems
5. Responsive Mobile Design
6. Creating Beautiful User Interfaces

Module 4: Building Your First Mobile App

1. Project Structure
2. Creating Screens and Navigation
3. Handling User Inputs
4. App Lifecycle
5. Debugging and Testing

Module 5: Working with APIs

1. Understanding REST APIs
2. Connecting Mobile Apps with Backend

3. Fetching Data from APIs
4. JSON Data Handling
5. Error Handling
6. Authentication APIs

Module 6: Database Integration

1. Introduction to Mobile Databases
2. Local Storage
3. SQLite / Firebase Basics
4. Saving and Retrieving Data
5. Managing Offline Data

Module 7: User Authentication

1. Login and Registration System
2. OTP Verification
3. Secure Authentication
4. Social Login Integration
5. User Profile Management

Module 8: Cloud Integration

1. Introduction to Cloud Services
2. Firebase Integration
3. Push Notifications
4. Real-time Database
5. Cloud Storage for Media Files

Module 9: Advanced App Features

1. Push Notifications
2. Location Services
3. Camera Integration
4. File Upload & Download
5. Background Services
6. Performance Optimization

Module 10: Testing & Debugging

1. App Testing Techniques

2. Debugging Tools
3. Error Tracking
4. Performance Testing
5. App Optimization

Module 11: App Deployment

1. Preparing App for Release
2. App Signing
3. Creating APK / AAB
4. Publishing on Google Play Store
5. App Store Guidelines

Module 12: Real-World Projects

Students will build real applications during the course:

1. E-Commerce Mobile App
2. Food Delivery App
3. Chat / Messaging App
4. Task Management App

These projects will help students gain practical experience and build a professional portfolio.

Skills You Will Gain

After completing this course, you will be able to:

- ✓ Build professional mobile applications
- ✓ Design modern mobile user interfaces
- ✓ Integrate APIs with mobile apps
- ✓ Implement authentication systems
- ✓ Work with cloud services and databases
- ✓ Deploy apps to the Google Play Store
- ✓ Build scalable real-world applications

Career Opportunities

After completing this course, you can work as:

1. Mobile App Developer
2. Android Developer
3. Cross-Platform Developer
4. Freelance App Developer
5. Startup App Developer

Certification

Students who successfully complete the course and final project will receive a Professional App Development Certification.