

Mobile App Development (Elective)

Course # COMP 4051

Credits 6

Prerequisites and/or Corequisites: Prerequisites are Object-Oriented Programming and Software Engineering.

Course Description

Mobile computing devices have become ubiquitous in our communities and influence individuals, organizations, and society from both a technical and social perspectives. The course Mobile App Development provides a broad overview of mobile app development technologies from the process of building a mobile app in Android Studio to real-life projects. Students learn the basics of the Kotlin programming language in the Android back-end part, how to use libraries to build apps with a proper look and several activities, and how to design the front-end part. Students are encouraged to design, implement, and evaluate small-scale software projects in teams of up to three people. This course was designed according to the Meta Android Developer Professional Certificate program taught by Meta staff.

Course Learning Outcomes

Upon the completion of the course, students will be able to:

- Describe the development of mobile apps on front-end and back-end parts in the context of full stack development
- Differentiate mobile apps technologies such as Google Android, Microsoft Xamarin, Apache Cordova, and Apple iOS
- Develop Kotlin Android apps in Android Studio and install them on virtual devices and/or physical smartphones
- Design the user interface of Kotlin Android apps employing standard elements such as Button, TextView, ImageView, etc.
- Develop back-end part of Kotlin Android apps using standard features of the Kotlin programming language
- Work in teams to solve real-life problems based on the selection of the most appropriate algorithm(s) and the code optimization

Course Assessments and Grading

Item	Weight
Problem-solving sessions	39 %
Quizzes	26 %
Midterm exam	15 %
Final exam	20 %