

DESCRIPTION OF STUDY MODULE*

Study programme

Applied Informatics and Programming

Study module

MOBILE APPLICATION DEVELOPMENT

Credits in total

5

Learning outcomes

- Be exposed to technology and business trends impacting mobile applications.
- Applies knowledge of OOP for mobile application development.
- Be competent with the characterization and architecture of mobile applications.
- Be competent with understanding enterprise scale requirements of mobile applications.
- Be competent with designing and developing mobile applications using Android Studio.
- Be able to create a graphical user interface for data entry and data searching.
- Save, update, delete, and display records from a database.
- Test created a mobile application.

Aims of study module

The course objective is to teach students develop mobile application for Android OS using Eclipse and Android SDK.

Annotation of a study module

After completing this course, a student will acquire competence to develop and test a simple, dynamic user interface for Android applications and optimize it for different mobile devices. The student will learn how to create and test the mobile application that can save and display the entered user data. At the end of the course the students will present their projects - a dynamic user interface for Android applications with the database.

Topics of the subject

1. The Architecture of Android OS
2. Preparation to Android App Programming
3. Android Application Components.
4. First project
5. Content of an Android app.
6. IDE support.
7. Object – oriented design
8. External Services
9. Internal Services
10. UI Development in Android
11. Non-functional requirements and testing
12. Wrap up

Procedure for assessment of knowledge and competences

10-point grading scale and cumulative assessment method: Control tests 1 (CT1) - 10%, Control tests 2 (CT2) - 10%, project (P) – 30%, and examination (E) - 50% of the total grade, which is calculated by the method of weighted mean. Final grade of the course is calculated only when all of the assignments are successfully completed and midterms are passed:

$$G = CT1*0.10 + CT2*0.10 + P*0.3 + E*0.5$$

Main literature

1. Phillips, B. Stewart, C. Hardy, B., Marsicano, K. (2015). *Android Programming: The Big Nerd Ranch Guide*. 600 p.
2. Ramnath, R., Crawfis, R., Sivilotti, P. (2011). *Android SDK 3 for Dummies*. For Dummies, 401 p.
3. Manas, E. L., Grancini, D. (2016). *Android High Performance Programming*. Packt Publishing. 412 p.

* Short form