Subject code	Credits
INF6013	6

Course title in Lithuanian

MOBILIŲ APLIKACIJŲ INFRASTRUKTŪRA

Course title in English

MOBILE APPLICATION INFRASTRUCTURE

Short course annotation in Lithuanian (up to 500 characters)

Kurse pateikiamos žinios apie mobiliąsias paslaugas ir aplikacijas, jų infrastruktūrą ir projektinius sprendimus. Studentai išmoksta projektuoti ir realizuoti integruotas mobiliąsias aplikacijas, panaudojant trumpuosius pranešimus, mobilų pozicionavimą, adaptyvaus dizaino principus. Supažindinama su vertės vartotojui įvertinimo, saugumo užtikrinimo, vartotojo sąsajos projektavimo pricipais. Ugdomi gebėjimai realizuoti įkraunamas aplikacijas Java, Android, iOS mobilioms platformoms, taip pat sprendimus ir paslaugas, naudojančius atvirus tinklo paslaugų standartus.

Short course annotation in English (up to 500 characters)

The course provides knowledge of mobile application infrastructure as well as that of mobile service and application development technologies. Students learn how to design and implement integrated mobile applications using mobile messaging, mobile positioning, responsive design technologies, how to measure user value, how to ensure application security, how to address user interface issues. Skills in designing downloadable applications for Java, iOS and Android mobile devices are acquired, as well as skills in designing mobile services and solutions, using open web service standards and technologies.

Prerequisites for entering the course

Undergraduate courses: Computer networks; Object-oriented programming

Course aim

The aim of the course is to give the knowledge of mobile application infrastructure and develop skills in designing mobile applications integrating different technologies and approaches.

Content

No	Content (topics)
1.	Customer value in designing mobile applications
2.	Introduction to mobile communication technologies relevant for application development.
3.	Applications based on mobile messaging. Mobile messaging as e-commerce driver. Scenarios for the implementation of value-added messaging.
4.	Mobile internet trends. Network connectivity issues in mobile applications. Mobile internet services and their integration into internet portals.
5.	Mobile web services - architecture and design. Mobile Web 2.0 applications. Internet of services.
6.	Design specifics of responsive vs adaptive Web design.
7.	Java Micro Edition (J2ME) for applications running on mobile and embedded devices - mobile phones, set-top, digital media device, M2M devices. Design specifics.
8.	Native mobile applications for Android, iOS, Windows Phone operating environments. Design specifics. Cross compiler approach for designing native applications for several platforms
9.	Integrating location information into mobile applications and services.
10.	Human computer interface for mobile applications and services – design principles. User experience design (UXD).
11.	Mobile application security. Mobile e-signature solutions. M-identifications.
12.	Project management specifics for mobile application development.
13.	Mobile applications in company ICT infrastructure.
14.	Smart devices and M2M applications. Internet of Things (IoT).

Distribution of workload for students (contact and independent work hours)

Lectures	**45 hours**
Laboratory work	**15 hours**
Individual student work	**100 hours**
Total:	**160**

Structure of cumulative score and value of its constituent parts

Final written exam (50%), mid-term written exam (15%), and assessment of practical assignments (35%)

Recommended reference materials

No.	Publication year	Authors of publication and title	Publishing house	Number of copies in		
				University library	*Self-study rooms*	*Other libraries*
Basic materials						
1.	2008	P.Golding. Next Generation Wireless Applications. Creating mobile applications in a web 2.0 and mobile 2.0 world.	John Wiley & Sons	0	1	
2.	2004	G. Le Bodic. Mobile messaging, technologies and services	John Wiley & Sons	1	1	
3.	2004	S.Dixit, T.Wu. Content Networking in the Mobile Internet	John Wiley & Sons	0	1	
4.	2010	H.Dwivedi, C.Clark, D.Thiel. Mobile Application Security	McGrawHill	1	0	
Supplementary materials						
1.	2011	A.Hoog. Android Forensics	Syngress			
2.	2007	F.Hirch, J.Kemp, J.Ilkka. Mobile Web Services. Architecture and Implementation.	Wiley			
3.	2006	A.Jaokar, T.Fish. Mobile Web 2.0	Futuretext Ltd.			

Course programme designed by

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