

Study program	Level of studies		First cycle	
	Study program name		Physics and Informatics Education	
Course name	MOBILE APPLICATION DEVELOPMENT			
Course ID	Semester	Course status	ECTS credits	L+E
IT280	VI	ELECTIVE	5	2+2
Lecturer				
Aims and intended learning outcomes	<p>This course will introduce students to the development of applications for mobile devices. It will present the limitations mobile app designers face, such as hardware power and user expectations. Students will learn how to overcome limitations using techniques in implementation, software design and user interface design. Essential concepts of modern mobile application development, such as software and data architecture, will be analysed.</p> <p>After completing the module, students will:</p> <ul style="list-style-type: none"> - Know the technology and trends that affect the development of mobile applications - Know the architecture of mobile applications - Understand the requirements for creating practical mobile applications - Be able to design user interfaces for mobile devices - Be able to use advanced techniques of object-oriented programming - Take into account hardware limitations when developing mobile applications 			
Course content				
<ul style="list-style-type: none"> - Support of different mobile devices - Activity lifecycle - Dynamic UI with fragments - Data storage - Interaction with other applications - Permission management - Multimedia in mobile applications - Graphics and animations - Networking and web applications - Locations and maps 				
Student workload (hours)		Grading		
Lectures and Exercises	60	Assessment method	Points	
Exam preparation	65	Laboratory assignment	30	
		Midterm exam	30	
Total	125	Final exam	40	
		Total	100	
Literature				
<p>[1] B. Phillips, B. Hardy, Android Programming, The Big Nerd Ranch Guide, 2nd Edition, 2015. [2] P. Deitel, H. M. Deitel, A. Wald, Android 6 for Programmers, An App-Driven Approach, 3rd Edition, 2015. [3] J. Murach, Murach's Android Programming, 2nd Edition, 2015.</p>				
Remarks				