NAME OF THE COURSE	Mobile Applications Programming				
Code	PMID35	Year of study	GU-1 GU-2 UGU-3		
Course teacher	izv. prof.dr. sc. Saša Mladenović	Credits (ECTS)	5,0		
Associate teachers	dr. sc. Goran Zaharija	Type of instruction (number of hours)	L	S	E	F
			30		30	
Status of the course		Percentage of application of e-learning	25%		

COURSE DESCRIPTION	
Course objectives	The goal of the course is to introduce main concepts related to the design and development of the applications for mobile phone platforms. Describe several main environments and development platforms for mobile development. Students will during the course develop their own simple mobile application using appropriate tools and development environments.
Course enrolment requirements and entry competences required for the course	Basic knowledge of programming concepts with the focus on OOP paradigm. Basic knowledge of HTML, CSS and JavaScript
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	After finishing the course, students will be able to: Describe the difference between classic and mobile applications. Define the basic structure of mobile application. Recognize the main challenges in mobile application development (screen sizes, memory constraints, CPU) and how to address them. Design and develop their own simple application. Describe the complete process of mobile application development - design, development, testing and deployment.
Course content broken down in detail by weekly class schedule (syllabus)	1. Mobile application development basics (2+2). 2. Overview of mobile platforms (iOS, Android, Mobile 8) (2+2). 3. Developing Cross-platform mobile applications(2+2). 4. Introduction to the development environment (2+2). 5. Building a simple mobile application (2+2). 6. User Interface design (2+2). 7. Life-cycle of different application parts (2+2). 8. Handling data in mobile applications (2+2). 9. Resource management and permissions (2+2) 10. Event handling (touchscreen, gestures, device orientation) (1/2) (2+2). 11. Event handling (touchscreen, gestures, device orientation) (2/2) (2+2). 12. Project discussion and design. (2+2). 13. Project - development (2+2). 14. Project - testing (2+2). 15. Project - final presentation (2+2).
Format of instruction	☒ lectures ☐ seminars and workshops ☐ exercises ☐ on line in entirety ☐ partial e-learning ☐ field work ☒ independent assignments ☐ multimedia ☒ laboratory ☐ work with mentor ☐ homework assignments
Student responsibilities	Lecture and laboratory attendance, active participation in course activities, homework and project realization, final exam.

	Name	Ects	Name	Ects	Name	Ects
Screening student work *(name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)*	Class attendance	1	Research		Experimental work	
	Oral exam	1	Report		Homework assignments	0,5
	Seminar essay		Essay			
	Tests		Practical training	1		
	Written exam	0,5	Project	1		

Grading and evaluating student work in class and at the final exam	Class attendance (10%) Final project (45%) Oral exam (45%)

	Title	Number of copies in the library	Availability via other media
Required literature (available in the library and via other media)	Lee, Schneider, and Schell, Mobile Applications: Architecture, Design, and Development, Prentice Hall, 2004.	0	
	Brian Fling, Mobile Design and Development, O'Reilly Media, 2009	0	

Optional literature (at the time of submission of study programme proposal)	Course materials available online
Quality assurance methods that ensure the acquisition of exit competences	Student discussion, anonymous student evaluation questionnaire, student success rate, self-assessment
Other (as the proposer wishes to add)	