

<b>Study program: Information Technology</b>			
<b>Course title: MOBILE APPLICATION PROGRAMMING</b>			
<b>Teacher(s): Olga M. Ristić, Željko Lj. Jovanović</b>			
<b>Course status: elective</b>			
<b>Number of ECTS credits: 6</b>			
<b>Prerequisite courses: none</b>			
<b>Course objectives</b> Familiarization of students with the Android development environment for creating mobile applications. Application of acquired knowledge from object-oriented programming in the development of applications for mobile devices.			
<b>Learning outcomes</b> The student will be trained to independently develop applications for mobile devices and to keep up with the changes happening in the development of new mobile application development environments.			
<b>Content of the course</b> <i>Theoretical teaching</i> Android operating system and setting up the development environment. Components for developing Android applications. Developing GUI (Graphical User Interface) on mobile devices. Android Activity - the main component for developing mobile applications. Android Intent (explicit and implicit Intents). Android Fragment (user interface of Android applications). Android threads and connecting Android applications to the Internet. Android Web View. Saving data on mobile Android devices (SQLite database). Android applications based on Content Providers and Broadcast Receivers. Android Service applications in the background. Testing Android applications. <i>Practical teaching</i> The knowledge acquired during lectures is applied for developing mobile applications in computer classrooms on a corresponding emulator. Testing the applications on mobile devices and fixing any potential errors.			
<b>Literature</b> [1] Alex Forrester: Kotlin za Android aplikacije, prevod 2. izdanja, PACKT PUBLISHING, 2023., 700 s, ISBN broj: 9788673105918 [2] Миодраг Живковић: Развој мобилних апликација-Андорид Јава програмирање, Универзитет Сингидунум, Caligraph, Београд, 2020, ИСБН: 978-86-7912-719-8. <a href="https://singipedia.singidunum.ac.rs/izdanje/43199-razvoj-mobilnih-aplikacija">https://singipedia.singidunum.ac.rs/izdanje/43199-razvoj-mobilnih-aplikacija</a> [3] Ian F. Darwin: Android kuvar, Mikroknjiga, Београд, 2013, ISBN 978-86-7555-383-0. [4] Rick Boyer, Kyle Mew: Android Application Development Cookbook, Pack Publishing, 2016, ISBN 978-1-78588-619-5. [5] Adam Leon Smith, Rex Black, James Davenport, Joanna Olszewska, Jeremias Röβler, Jonathon Wright, Artificial Intelligence and Software Testing, BCS, The Chartered Institute for IT, 2022, ISBN: 9781780175782 [6] Peter Späth, Pro Android with Kotlin: Developing Modern Mobile Apps with Kotlin and Jetpack, Apress, 2022, ISBN: 9781484287453			
<b>Number of active teaching classes: 5</b>		<b>Theoretical teaching: 2</b>	<b>Practical teaching: 3</b>
<b>Teaching methods</b> Combining traditional teaching with e-learning using the provided literature. Interactive teaching with multimedia content in a space (computer classroom) equipped with a video beam and online access to the Internet.			
<b>Evaluation of knowledge (maximum number of points 100)</b>			
<b>Pre-exam obligations</b>	<b>Points</b>	<b>Final exam</b>	<b>Points</b>
Activities during teaching process	10	Final exam (written):	/
Practical teaching	/	Final exam (oral):	30
Colloquium	30		
Practical teaching	30		