

UNIVERSITY OF ECONOMICS - VARNA
MASTER DEGREE CENTER
DEPARTMENT OF INFORMATICS

Adopted by the FC (record №8 / 05.03.2020)

Adopted by the DC (record №7 / 28.02.2020)

ACCEPTED BY:

Dean:

(Prof. Vladimir Sulov, PhD)

SYLLABUS

SUBJECT: “MOBILE APPLICATION DEVELOPMENT”;

DEGREE PROGRAMME: “Computer Science”; MASTER’S DEGREE

YEAR OF STUDY: 5 for same field graduates; 6 for other field graduates;

SEMESTER: 10 for same field graduates, 12 for other field graduates;

TOTAL STUDENT WORKLOAD: 210 hours; incl. curricular 60 hours

CREDITS: 7

DISTRIBUTION OF STUDENT WORKLOAD ACCORDING TO THE CURRICULUM

<i>TYPE OF STUDY HOURS</i>	WORKLOAD, hours	TEACHING HOURS PER WEEK, hours
CURRICULAR:		
incl.		
• LECTURES	30	2
• SEMINARS / LAB. EXERCISES	30	2
EXTRACURRICULAR	150	-

Prepared by:

1.
(Assoc. Prof. Ivan Kuyumdzhiev, PhD)

2.
(Chief Assist. Prof. Bonimir Penchev, PhD)

Head of department

of Informatics:
(Prof. Julian Vasilev, PhD)

I. ANNOTATION

The course aims to develop theoretical knowledge and practical skills for mobile application development. Topics include the basic types of mobile operating systems, types of mobile applications and development tools.

Students have the opportunity to learn the specifics of the latest platforms for mobile applications development and to gain the necessary knowledge to make an informed choice of an appropriate methodology in the project development. The necessary prerequisites for better understanding of the topics are: basic knowledge in the fields of programming, web programming and database fundamentals.

After successful completion of the course, the students can work as developers of mobile applications.

II. THEMATIC CONTENT

№	TITLE OF UNIT AND SUBTOPICS	NUMBER OF HOURS		
		L	S	L.E.
Theme 1. Introduction to mobile applications		6		
1.1	Mobile operating systems - nature, types and characteristics.	2		
1.2	Types of mobile applications – native, hybrid, web.	1		
1.3	Programming languages for mobile application development.	2		
1.4	Development environments for mobile applications.	1		
Theme 2. Development of native mobile applications		12	15	
2.1	Basic elements – activities, fragments, services.	3	3	
2.2	User interface – layout, navigation, views, dialogs, notifications.	3	6	
2.3	Data storage – basics, databases, files.	3	3	
2.4	Testing and implementation	3	3	
Theme 3. Development of hybrid mobile applications		12	15	
3.1	User interface	4	5	
3.2	Using database for hybrid mobile application	4	5	
3.3	Testing and implementation	4	5	
Total:		30	30	

III. FORMS OF CONTROL:

№	TYPE AND FORM OF CONTROL	Number	extracurricular, hours
1.	Midterm control		
1.1.	Theory test	1	30
1.2.	Practice test	1	30
1.3.	Course project	1	30
Total midterm control:		3	90
2.	Final term control		
2.1.	Examination (test)	1	60
Total final term control:		1	60
Total for all types of control:		4	150

IV. LITERATURE

REQUIRED (BASIC) LITERATURE:

1. Annuzzi, J., Lauren, D., Shane, C. Introduction to Android Application Development: Android Essentials (Developer's Library), 5th Edition, Addison-Wesley Professional, 2015.
2. Delessio C., Darcey, L., Conder, Sh. Android Application Development in 24 Hours, Sams Teach Yourself, Sams Publishing, 2015.
3. Militaru, C. A Step By Step Guide to Cross Platform Hybrid (HTML5) Apps for Android, BlackBerry, Firefox OS, iOS, and Windows Phone, 2013.

RECOMMENDED (ADDITIONAL) LITERATURE:

1. Burd, B. Android Application Development All-in-One For Dummies, 2015.
2. Camden, R. Apache Cordova in Action, Manning Publications, 2015.
3. Gerber, A., Craig Cl. Learn Android Studio: Build Android Apps Quickly and Effectively, Apress, 2015.
4. Hermes, D. Xamarin Mobile Application Development: Cross-Platform C# and Xamarin.Forms Fundamentals, Apress, 2015.
5. McClure, W. et al. Professional Android Programming with Mono for Android and .NET / C#, Wrox, 2012.
6. McWherter, J., Gowell, Sc. Professional Mobile Application Development, Wrox, 2012.
7. Phillips, B. et al. Android Programming: The Big Nerd Ranch Guide (2nd Edition), Big Nerd Ranch Guides, 2015.
8. Wargo, J. PhoneGap Essentials: Building Cross-Platform Mobile Apps, Addison-Wesley Professional, 2015.