

COURSE OUTLINE

(1) GENERAL

SCHOOL	SCHOOL OF ENGINEERING		
ACADEMIC UNIT	Department of Informatics and Computer Engineering		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	ICE-8307	SEMESTER	8th
COURSE TITLE	Mobile Technology and Programming		
INDEPENDENT TEACHING ACTIVITIES if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits		WEEKLY TEACHING HOURS	CREDITS
Lectures		2	
Practice Exercises		1	
Laboratories		1	
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		4	5
COURSE TYPE general background, special background, specialised general knowledge, skills development	Special Background		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	https://eclass.uniwa.gr/courses/ICE238/		

(2) LEARNING OUTCOMES

<p>Learning outcomes The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described. Consult Appendix A</p> <ul style="list-style-type: none"> • Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area • Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B • Guidelines for writing Learning Outcomes 		
<p>Upon successful completion of the course the student will be able to:</p> <ul style="list-style-type: none"> • Explains the fundamentals of open source Android. • Recognizes and explains the technical characteristics and capabilities of Android mobile devices. • Explains the operation and process of developing applications on the Android Studio and Eclipse platforms. • Designs and implements apps for Android mobile devices. • Evaluates systems running an Android operating system. 		
<p>General Competences Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Search for, analysis and synthesis of data and information, with the use of the</td> <td style="width: 50%;">Project planning and management Respect for difference and multiculturalism</td> </tr> </table>	Search for, analysis and synthesis of data and information, with the use of the	Project planning and management Respect for difference and multiculturalism
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necessary technology	Respect for the natural environment
Adapting to new situations	Showing social, professional and ethical responsibility and sensitivity to gender issues
Decision-making	Criticism and self-criticism
Working independently	Production of free, creative and inductive thinking
Team work
Working in an international environment	Others...
Working in an interdisciplinary environment
Production of new research ideas	

- Working independently
- Team work
- Working in an international environment
- Working in an interdisciplinary environment
- Production of new research ideas
- Production of free, creative and inductive thinking

(3) SYLLABUS

- Introductory concepts to the Android open source platform.
- Using Android Studio for application development.
- Applications and Activities.
- Application structure analysis.
- User Interface (UI) and UI Design.
- Prepositions, types of prepositions, use of prepositions, emission of prepositions, broadcast receivers.
- Services.
- Threads and Operators.
- Data storage, storage modes.
- Communication and Networking Services.
- Positioning services.
- Bluetooth connection.
- Camera management.
- Sensors of Mobile devices (Sensors of Mobiles).

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face to face	
Face-to-face, Distance learning, etc.		
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	<ul style="list-style-type: none"> • Teaching using ICT • Use of specialized hardware and software • Electronic Communication for assignment or submission of Assignments through the e-learning platform of the University. 	
Use of ICT in teaching, laboratory education, communication with students		
TEACHING METHODS	Activity	Semester workload
<p>The manner and methods of teaching are described in detail.</p> <p>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</p> <p>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</p>	Lectures	26
	Tutorials	13
	Laboratory practise	13
	Projects	21
	Independent Study	52
	Course total	125
STUDENT PERFORMANCE EVALUATION	<ul style="list-style-type: none"> • The assessment of students is carried out in Greek, through a final written examination, twice each academic year. • The written exam is of graded difficulty and includes short answer questions and problem-solving questions. • The grade is posted electronically and finalized after the students see their writing to solve questions. • Indicative answers to the exam topics are posted on the course website. 	
Description of the evaluation procedure		
Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other		
Specifically-defined evaluation criteria are given, and if and where they are accessible to students.		

(5) ATTACHED BIBLIOGRAPHY

<p>- Suggested bibliography:</p> <ol style="list-style-type: none"> 1. I. Έλληνας, N. Έλληνας, "Εισαγωγή στον Προγραμματισμό Android", Τζιόλας, 2014. 2. Laura Thomson, Shane Conder, "Ανάπτυξη Εφαρμογών με το Android 2η Έκδοση", X. ΓΚΙΟΥΡΔΑ & ΣΙΑ ΕΕ, 2012. 3. I. Έλληνας, "Διδακτικές Σημειώσεις και Εφαρμογές". 4. Mark L. Murphy, "The Busy Coder's Guide to Android development", CommonsWare, 2018. 5. Reto Meier, "Professional Android", Wrox, 2018. 6. John Horton, "Android Programming for Beginners", Pakt Publishing, 2015. <p>- Relevant Web resources</p> <p>https://developers.google.com/training/</p> <p>https://developer.android.com/index.html</p> <p>https://android-arsenal.com/</p>
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