Syllabus

1. Program information

1.1. Institution	ACADEMY OF ECONOMIC STUDIES
1.2. Faculty	Economic Cybernetics, Statistics and Informatics
1.3. Departments	(Departament) INFORMATICA SI CIBERNETICA ECONOMICA
1.4. Field of study	Economic Informatics
1.5. Cycle studies	Master Studies
1.6. Education type	Full-time
1.7. Study program	IT&C Security
1.8. Language study	
1.9. Academic year	2017-2018

2. Course information

2.1. Name	**Mobile Applications Security**							
2.2. Code	**17.0241IF2.1-0003**							
2.3. Year of studies	2	2.4. Semester	1	2.5. Assessment type	**Exam**	2.6. Course type	O	2.7. Number of ECTS	4
2.8. Instructors								

3. Total estimated time

3.1. Number of weeks	14.00		
3.2. Number of hours per week	3.00	of which	
		C(C)	2.00
		S(S)	1.00
3.3. Total hours from curriculum	42.00	of which	
		C(C)	28.00
		S(S)	14.00
3.4. Total hours of study per semester (ECTS*25)	100.00		
3.5. Total hours of individual study	58.00		

Time distribution for individual study

Study the textbook, course support, bibliography and notes	
Further reading in the library, on the online platforms and field	
Preparing seminars, labs, homework, portfolios and essays	
Tutoring	
Examinations	
Other activities	

4. Prerequisites

4.1. About curriculum	Secure Applications Programming
4.2. About skills	Java and C/C++ Programming

5. Requirements

C(C)	Course lectures take place in rooms with multimedia teaching equipment.
S(S)	Laboratories are held in rooms that have PCs with Internet access. The development environment used is Microsoft Visual Studio 2010 or 2012, Ubuntu within virtual machines with GCC, Java plus necessary tools.

6. Skills covered

	C2	Using modern computer technology for risk management in life cycle stages of software systems
	C4	Scientific research and designing of IT security solutions for the entire range and complexity of software architectures

7. Course objectives

7.1. General objective	Understanding the concepts used in GSM, WiFi and WiMAX networks; Developing mobile applications.
7.2. Specific objectives	Transfer tehnologic pentru: -Tehnologii pentru comunicatii radio - WAP, IEEE 802.11 -Dezvoltarea aplicatiilor JME & Android -Implementarea strategiilor de securitate in retele wireless, aplicatii mobile si GSM

8. Course contents

8.1. C(C)		Teaching methods	Advices
1	Necessity and importance of mobile networks		
2	Radio singnals propagation		
3	Wireless networks concepts		
4	Wireless networks standards		
5	Performance parameters, performance evaluation and wireless design		
6	Wireless networks security		
7	Wireless networks implementation and managemant / WAN and MAN wireless networks		
8	Mobile networks and mobile telephony networks		
9	Development and implementation of mobile applications for smart cards and smart phones		
10	Sun WTK HelloWorld Quick Start		
11	Configurations and Profiles		
12	MSA – Mobile Service Architecture and JTWI – Java Technology for Wireless Industry		
13	Netbeans 6.5 Mobile Tools for JME GUI – Forms and Dialogs		
14	Mobile Networking in Java Micro Edition		
15	JME – Java Micro Edition XML Parsing and Web Services – JSR 172		
16	Mobile I18N – JSR 238		
17	Messaging & Mobile Content Handler – JSR 211		
18	AMMS – Advanced MultiMedia Supplements - JSR 234		
19	MIDP 2 Security Framework and Digitally Sign Application		
20	Designing and implementing secure architectures that interact with mobile applications		

Bibliography

- J. Vollbrecht, D. Rago, & R Moskowitz, Wireless LAN Access Control and Authentication white paper
- N. Borisov, I. Goldberg, and D. Wagner, Security of the WEP algorithm, http://www.isaac.cs.berkeley.edu/isaac/wep-faq.html
- Overview Wireless LAN Security The Growth of Wireless LANs, http://www.cisco.com/warp/public/cc/pd/witc/ao350ap/prodlit/a350w_ov.htm
- Securing ad-hoc networks, IEEE Network Magazine 13(6), , 1999
- W. Stallings, Criptography and Network Security, Pretince Hall PTR, 2003
- C. Toma, Security in Software Distributed Platforms, 2008

8.2. S(S)		Teaching methods	Advices
1	Necessity and importance of mobile networks		
2	Radio singnals propagation		
3	Wireless networks concepts		
4	Wireless networks standards		
5	Performance parameters, performance evaluation and wireless design		
6	Wireless networks security		
7	Wireless networks implementation and managemant / WAN and MAN wireless networks		
8	Mobile networks and mobile telephony networks		
9	Development and implementation of mobile applications for smart cards and smart phones		
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- Overview Wireless LAN Security The Growth of Wireless LANs, http://www.cisco.com/warp/public/cc/pd/witc/ao350ap/prodlit/a350w_ov.htm

9. Course contents corroboration with the demands of epistemic community representatives, professional associations and representative employers

Taking into account the best practices from IT&C field applied by big companies such as: Intel, Oracle, Microsoft, IBM, HP and professional consortiums such as: Apache, Red Hat, ISO/IEC.

10. Assessment

Activity	Assessment criteria	Assessment methods	Percentage in the final grade
10.1. S(S)		Applied activities, practical or project certificates/laboratory/tests, tests during the module, auditing tests	40.00
10.2. Final assessment		Final examination	60.00

10.3. Grading scale	Knowledge required: issues for configuring WiFi depeloment of mobile applications in JME si Android.
10.4. Minimum performance standard	The point granted by default is included in the weights assigned to the types of assessments.

Completion date,   Instructors,
07/10/2016

Approval date of department   Director of department,