

# Syllabus

## 1. Program information

1.1. Institution	ACADEMY OF ECONOMIC STUDIES
1.2. Faculty	Economic Cybernetics, Statistics and Informatics
1.3. Departments	(Department) 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	English
1.9. Academic year	2016-2017

## 2. Course information

2.1. Name	<b>Security Standards and Protocols</b>								
2.2. Code	<b>16.0241IF1.1-0003</b>								
2.3. Year of studies	<b>1</b>	2.4. Semester	<b>1</b>	2.5. Assessment type	<b>Exam</b>	2.6. Course type	<b>O</b>	2.7. Number of ECTS	<b>5</b>
2.8. Instructors									

## 3. Total estimated time

3.1. Number of weeks	14.00		
3.2. Number of hours per week	2.00	of which	
		C(C)	1.00
		S(S)	1.00
3.3. Total hours from curriculum	28.00	of which	
		C(C)	14.00
		S(S)	14.00
3.4. Total hours of study per semester (ECTS*25)	125.00		
3.5. Total hours of individual study	97.00		
<i>Time distribution for individual study</i>			
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	Cryptography Basis, Electronic Signature
4.2. About skills	The course assumes no prior competences

### 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

	C5	Application of modern concepts and paradigms of IT security to the new context defined for the knowledge society
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### 7. Course objectives

7.1. General objective	Knowledge transfer about secure standards and protocols and implementations of some well known protocols inside computer networks.
7.2. Specific objectives	Intelegerea si implementarea protocoalelor standard de securitate in retea: -HTTPs -Kerberos -IPSec

### 8. Course contents

8.1. S(S)		Teaching methods	Advices
1	1. Analysis and implementation of the security protocols at different TCP/IP layers: -physical layer: CHAP, PPTP, L2TP, WEP-WLAN; -network layer: IPSec; -transport layer: SSL/TLS; -application layer: SSH, S-HTTP, SFTP, PEM, S/MIME, MOSS, PGP.		
2	2. Protocols used by secure operating systems: Kerberos;		
3	3. Other protocols: DNSSEC, GSSAPI.		

***Bibliography***

- Patriciu V., Bica I., Pietrosanu M, Vaduva C, Voicu N., Securitatea comertului electronic, All, 2001
- Patriciu V., Pietrosanu M., Bica I., Cristea C., Securitatea informatică în UNIX și INTERNET, Tehnică, 1998
- Patriciu V., Criptografia si securitatea retelelor de calculatoare, Tehnică, 1994
- Stalling William, Cryptography and Network Security, Prentice Hall, 1999
- IBM Red Book, TCP/IP Networks, IBM Publishing House, 2005

8.2. C(C)		Teaching methods	Advices
1	1. Analysis and implementation of the security protocols at different TCP/IP layers: -physical layer: CHAP, PPTP, L2TP, WEP-WLAN; -network layer: IPSec; -transport layer: SSL/TLS; -application layer: SSH, S-HTTP, SFTP, PEM, S/MIME, MOSS, PGP.		
2	2. Protocols used by secure operating systems: Kerberos;		
3	3. Other protocols: DNSSEC, GSSAPI.		

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- IBM Red Book, TCP/IP Networks, IBM Publishing House, 2005

**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)			40.00
10.2. Final assessment			60.00
10.3. Grading scale	Whole notes 1-10		
10.4. Minimum performance standard	Knowledge required: configuration and implementation of HTTPs and IPSec. The point granted by default is included in the weights assigned to the types of assessments.		

Completion date,  
07/10/2016

Instructors,

Approval date of department

Director of department,