

1. Course title: SECURITY OF NETWORK USER'S ENVIRONMENT		2. Course code SeNUE		
3. Validity of course description: 2017/2018				
4. Level of studies: 1 st cycle of higher education				
5. Mode of studies: intramural studies				
6. Field of study: MACROFACULTY		(RAU)		
7. Profile of studies: general academic				
8. Programme: Control, Electronic, and Information Engineering				
9. Semester: 6				
10. Faculty teaching the course: Institute of Informatics				
11. Course instructor: Mirosław Skrzewski PhD				
12. Course classification: common				
13. Course status: elective				
14. Language of instruction: English				
15. Pre-requisite qualifications: introduction to computer networks, operating systems				
16. Course objectives: The aim of the course is presentation the issues of security of network user's environment in case of the usage of the desktop and mobile devices				
17. Description of learning outcomes:				
Nr	Learning outcomes description	Method of assessment	Teaching methods	Learning outcomes reference code
1.	Student knows the principles of configuration of the network environment of the computer system and basic methods for monitoring network communication	CL, SP	WM, L	K1A_W14, K1A_U21,
2.	Student knows the basic methods of user authentication in a network environment	CL, SP	WM, L	K1A_W14, K1A_W12
3.	Student has a basic knowledge of methods of spreading network threats and principles of preventing them	CL, SP	WM, L	K1A_W14
4.	Student knows and understand methods of assessment proper configuration of devices and user permissions for information protection	CL, SP	WM, L	K1A_W14, K1A_U21
5.	Student knows the principles of creation and is able to assess the compliance of user behavior with the security policy	CL, SP	WM, L	K1A_W14, K1A_U21
18. Teaching modes and hours				
Lecture / BA /MA Seminar / Class / Project / Laboratory				
Lecture - 15 h., Lab - 15 h				
19. Syllabus description:				
Lecture:				
Classical definitions of systems and data security. Sources of threats to user data. Protection against data loss - classic (backup, backup schemes), RAID systems, data mirroring, data replication, disaster recovery.				
Protections against unauthorized access, stealing of data. Control of data access, data encryption, registration of data operations, data loss prevention.				
Distribution of security tasks between classic and mobile systems, solutions to protect the confidentiality of data on mobile				

devices. Security policies of mobile devices. Methods for threats detection and monitoring of mobile devices communication. Methods of protection of sensitive data in BYOD devices, examples of solutions of IOS, Android, Blackberry and Microsoft systems.

Laboratory:

- Configuration and monitoring of network access system
- Monitoring the communications of mobile devices
- Methods of monitoring information security (data loss prevention)
- Systems for network threats detection (IDS, IPS)
- Solutions of threats monitoring for BYOD environment
- Mobile devices management solutions

20. Examination: no

21. Primary sources:

1. Fry C., Nystrom M., Monitoring i bezpieczeństwo sieci, Helion, 2010
2. William Stallings, Kryptografia i bezpieczeństwo sieci komputerowych. Koncepcje i metody bezpiecznej komunikacji, Helion 2012.
3. Stallings W., Data and Computer Communication, Prentice Hall, 2006

22. Secondary sources:

1. Liderman K.: Bezpieczeństwo Informacyjne, PWN 2012,
2. E. Schetina, K. Green, J. Carlton, Bezpieczeństwo w sieci, Helion

23. Total workload required to achieve learning outcomes

Lp.	Teaching mode :	Contact hours / Student workload hours
1	Lecture	15/15
2	Classes	- / -
3	Laboratory	15/15
4	Project	- / -
5	BA/ MA Seminar	- / -
6	Other	- / -
	Total number of hours	30/30

24. Total hours: 60

25. Number of ECTS credits: 2

26. Number of ECTS credits allocated for contact hours: 1

27. Number of ECTS credits allocated for in-practice hours (laboratory classes, projects): 1

26. Comments:

Approved:

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(date, Instructor's signature)

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(date, the Director of the Faculty Unit signature)