1. Course title: SECURITY OF NETWORK USER'S ENVIRONMENT

2. Course code: SeNUE

3. Validity of course description: 2017/2018

4. Level of studies: 1st 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:

<table>
<thead>
<tr>
<th>Nr</th>
<th>Learning outcomes description</th>
<th>Method of assessment</th>
<th>Teaching methods</th>
<th>Learning outcomes reference code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Student knows the principles of configuration of the network environment of the computer system and basic methods for monitoring network communication</td>
<td>CL, SP</td>
<td>WM, L</td>
<td>K1A_W14, K1A_U21,</td>
</tr>
<tr>
<td>2</td>
<td>Student knows the basic methods of user authentication in a network environment</td>
<td>CL, SP</td>
<td>WM, L</td>
<td>K1A_W14, K1A_W12</td>
</tr>
<tr>
<td>3</td>
<td>Student has a basic knowledge of methods of spreading network threats and principles of preventing them</td>
<td>CL, SP</td>
<td>WM, L</td>
<td>K1A_W14</td>
</tr>
<tr>
<td>4</td>
<td>Student knows and understand methods of assessment proper configuration of devices and user permissions for information protection</td>
<td>CL, SP</td>
<td>WM, L</td>
<td>K1A_W14, K1A_U21</td>
</tr>
<tr>
<td>5</td>
<td>Student knows the principles of creation and is able to assess the compliance of user behavior with the security policy</td>
<td>CL, SP</td>
<td>WM, L</td>
<td>K1A_W14, K1A_U21</td>
</tr>
</tbody>
</table>

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

**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

**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**

<table>
<thead>
<tr>
<th>Lp.</th>
<th>Teaching mode</th>
<th>Contact hours / Student workload hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lecture</td>
<td>15/15</td>
</tr>
<tr>
<td>2</td>
<td>Classes</td>
<td>- / -</td>
</tr>
<tr>
<td>3</td>
<td>Laboratory</td>
<td>15/15</td>
</tr>
<tr>
<td>4</td>
<td>Project</td>
<td>- / -</td>
</tr>
<tr>
<td>5</td>
<td>BA/ MA Seminar</td>
<td>- / -</td>
</tr>
<tr>
<td>6</td>
<td>Other</td>
<td>- / -</td>
</tr>
<tr>
<td></td>
<td>Total number of hours</td>
<td>30/30</td>
</tr>
</tbody>
</table>

**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:

…………………………………………………
(date, Instructor’s signature)

…………………………………………………
(date, the Director of the Faculty Unit signature)