

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Data security</b>		Code <b>1010334561010334967</b>
Field of study <b>Information Engineering</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>3 / 6</b>
Elective path/specialty <b>-</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time,part-time) <b>part-time</b>	
No. of hours Lecture: <b>20</b> Classes: <b>-</b> Laboratory: <b>16</b> Project/seminars: <b>-</b>		No. of credits <b>5</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</b>
Education areas and fields of science and art <b>technical sciences</b>		ECTS distribution (number and %) <b>5 100%</b>
<b>Responsible for subject / lecturer:</b>  dr inż. Anna Grocholewska-Czuryło email: anna.grocholewska-czurylo@put.poznan.pl tel. +48 61 665 37 57 Wydział Elektryczny ul. Piotrowo 3A 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Student has an ordered knowledge of basic algorithms and their analysis, design techniques, algorithms abstract data structures and their implementation, computationally difficult problems.
2	<b>Skills</b>	Student can obtain information from literature, databases, and other sources; can integrate the information obtained, their interpretation, and also draw conclusions and formulate and justify opinions.
3	<b>Social competencies</b>	Student can construct algorithms using basic algorithmic techniques and analyse their complexity.
<b>Assumptions and objectives of the course:</b> Presentation of theoretical and practical problems dealing with data security.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. Student has organized knowledge with theoretical foundations of data protection and IT system security. - [[K_W13]]		
<b>Skills:</b>		
1. Student is able to apply the appropriate methods of data protection and ensure the security of the IT system. - [[K_U17]]		
<b>Social competencies:</b>		
1. Student is aware of the importance of behavior in a professional manner, compliance with the rules of professional ethics and respect for the diversity of ideas and cultures. - [[K_K03]]		

<b>Assessment methods of study outcomes</b>
Based on lecture and laboratory participation.
<b>Course description</b>
Threats to the data security. Methods of data protection: UPSs, system access security, logs, RAIDs, antivirus protection, steganography; cryptographic methods of data protection: ciphers, cryptographic techniques, data integrity, authentication, non-repudiation, cryptographic key management. Firewalls. Virtual Private Networks. Intrusion Detection Systems. Management of IT security.

<b>Basic bibliography:</b>		
<b>Additional bibliography:</b>		
<b>Result of average student's workload</b>		
<b>Activity</b>	<b>Time (working hours)</b>	
1. Lecture	20	
2. Laboratory	16	
3. Preparation of laboratory reports	20	
4. Preparation to tests and laboratory	20	
5. Preparation to the examination	10	
6. Participation in consultations and examination	4	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	90	5
Contact hours	40	3
Practical activities	40	3