

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Property security techniques</b>		Code <b>1010322331010326103</b>
Field of study <b>Electrical Engineering</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>2 / 3</b>
Elective path/specialty <b>Electrical and Computer Systems in</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>Second-cycle studies</b>	Form of study (full-time, part-time) <b>full-time</b>	
No. of hours Lecture: - Classes: - Laboratory: - Project/seminars: <b>15</b>		No. of credits <b>1</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>1 100%</b>
<b>Responsible for subject / lecturer:</b>  dr inż. Grzegorz Trzmiel email: Grzegorz.Trzmiel@put.poznan.pl tel. 616652693 Wydział Elektryczny ul. Piotrowo 3A 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Basic knowledge of electrical engineering, electronics and information technology, including installation.
2	<b>Skills</b>	The ability to understand and interpret knowledge transmitted in the classroom. The ability to effectively self-education in a field related to the chosen field of study.
3	<b>Social competencies</b>	The awareness of the need to broaden their competence, their willingness to cooperate within the team.
<b>Assumptions and objectives of the course:</b> Advanced knowledge of theoretical and practical problems associated with the construction components, subassemblies and systems of modern security of property and people.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. has an extended knowledge in the construction and design of complex microprocessor systems in particular for measurement and control - [K_W08++]		
2. has knowledge of the capabilities and limitations of the methods used in computer assisted design in electrical engineering - [K_W18++]		
<b>Skills:</b>		
1. can apply knowledge of security systems, security cooperation with other systems - [K_U11++]		
2. can formulate and solve problems related to modeling and design elements, electrical equipment and systems, and design of their manufacturing process - [K_U15+++]		
<b>Social competencies:</b>		
1. able to think and act in an entrepreneurial manner in the area of systems analysis and systems in buildings - [K_K01+++]		
<b>Assessment methods of study outcomes</b>		

<p>Class Project:</p> <ul style="list-style-type: none"> <li>- Test and rewarding knowledge necessary for the accomplishment of the problems in the area of project tasks,</li> <li>- Continuous assessment for each course - rewarding the increase in the ability to use principles and methods have met.</li> <li>- Assess the knowledge and skills related to the implementation of the project tasks.</li> </ul> <p>Get extra points for activity in the classroom, and in particular for:</p> <ul style="list-style-type: none"> <li>- Proposing to discuss additional aspects of the subject,</li> <li>- The effectiveness of applying knowledge when solving a given problem,</li> <li>- Comments relating to the improvement of teaching materials,</li> <li>- Developed aesthetic care tasks - as part of self-study.</li> </ul>		
<b>Course description</b>		
<p>Project: The history of electronic systems for property protection. Legal status. Designing alarm and property protection. Realization examples.</p>		
<p><b>Basic bibliography:</b></p> <ol style="list-style-type: none"> <li>1. Stanisławek R., Integracja systemów bezpieczeństwa w obiekcie, Systemy Alarmowe, 2002</li> <li>2. Markiewicz H., Instalacje elektryczne, Wydawnictwo Naukowo-Techniczne, Warszawa, 2006</li> <li>3. Petykiewicz P., Nowoczesna instalacja elektryczna w inteligentnym budynku, COSiW SEP, Warszawa, 2001.</li> <li>4. Aktualny wykaz norm i opracowań.</li> </ol>		
<p><b>Additional bibliography:</b></p> <ol style="list-style-type: none"> <li>1. Nawrocki W., Sensory i systemy pomiarowe, Wydawnictwo Politechniki Poznańskiej, Poznań, 2006</li> <li>2. www.satel.pl</li> <li>3. http://alarmserwis.pl</li> <li>4. Diploma theses.</li> <li>5. Internet.</li> </ol>		
<b>Result of average student's workload</b>		
<b>Activity</b>	<b>Time (working hours)</b>	
1. participation in class of project	15	
2. consultations	6	
3. preparing to pass	6	
4. pass	2	
5. the preparation of the project	10	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	39	1
Contact hours	23	1
Practical activities	31	1