

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Health and safety at work		Code 1010321211011126010
Field of study Electrical Engineering	Profile of study (general academic, practical) (brak)	Year /Semester 1 / 1
Elective path/specialty -	Subject offered in: polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 1 Classes: - Laboratory: - Project/seminars: -		No. of credits 1
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art technical sciences		ECTS distribution (number and %) 100 100%
Responsible for subject / lecturer: dr inż. Małgorzata Sławińska email: malgorzata.slawinska@put.poznan.pl tel. 61 665 34 38 Wydział Inżynierii Zarządzania ul. Strzelecka 11 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	The student knows how to define and describe basic concepts and principles from the scope of the labor organization and organizing and functioning of elements of the security system.
2	Skills	The student is able to plan and to evaluate the functioning of security systems. The student is able to interpret results of his observation.
3	Social competencies	The student is conscious of the significance of the safety assurance. The student has an awareness of the need of the forming of security systems of subjects.
Assumptions and objectives of the course: -Presentation of regulations, directives and byelaws concerning the health and safety at work. Presentation of essential issues of the methodology of the design orientated to the man as the operator and as the service engineer of machines and other technical devices.		
Study outcomes and reference to the educational results for a field of study		
Knowledge: 1. The student has systematic knowledge with a theoretical background on the construction and principles of functioning of transformers and the electrical machinery, has a knowledge about the use of technical systems - [K_W13] 2. The student knows typical engineering technologies from the area of the course of Electrotechnics and he is oriented in newest tendencies of development from the scientific area of Electrotechnics - [K_W18] 3. The student has basic knowledge that is necessary for understanding economic, social, legal and other, apart from technical, conditions of engineer activity; he knows principles of ergonomics, OSH and typical risks occurring in the electric industry. - [K_W19]		
Skills: 1. The student can analyze the operation of simple electric systems and devices with use of suitable methods and tools - [K_U11] 2. The student can apply principles of health and safety at work - [K_U21] 3. The student can assess the usability of basic methods and tools for solving simple engineer practical tasks, typical for the area of Electrotechnics, as well as he can select and apply proper methods and tools - [K_U22]		
Social competencies: 1. The student is aware of the importance and he understands various aspects and effects that an electrician's activity have on the environment and what kind of responsibility his decisions bring - [K_K02]		

Assessment methods of study outcomes		
<p>-Forming evaluation: Grade evaluation on basis of following components: participation in solving case studies (given in following 4 lectures) and active participation in classes. Recapitulating evaluation: At the end of the semester the student must prepare a term paper ? it must be ready until the 15th of January.</p>		
Course description		
<p>-Principles of the system approach to the problem of security and security management. The safety culture as a context of the security system. Principles of the theory of system design. Models of the systems? safety. Risks in the work and education environment. Mechanisms of occurrence of damages caused by technical objects. Economic and social aspects for providing the technical security</p>		
Basic bibliography:		
<p>1. Projektowanie ergonomiczne; Edwin Tytyk, Wyd. Naukowe PWN, Warszawa-Poznań, 2001. 2. Poradnik BHP. Tom I: Praktyka, prawo, narzędzia, Kołodziejczyk E. (red.), Wyd. Forum, sp. z o.o., Warszawa, 2005.</p>		
Additional bibliography:		
<p>1. Makroergonomia; Leszek Pacholski, Aleksandra Jasiak, Wyd. Politechniki Poznańskiej, Poznań, 2011. 2. Podstawy ergonomii i fizjologii pracy; Jerzy Olszewski, Wyd. Akademii Ekonomicznej, Poznań, 1997. 3. Niezawodność człowieka w interakcji z procesem przemysłowym; Małgorzata Sławińska, Wyd. Politechniki Poznańskiej, Poznań, 2012.</p>		
Result of average student's workload		
Activity	Time (working hours)	
1. Participation in lectures	15	
2. Consultations	5	
3. Preparation for the final evaluation	10	
4. Term paper	15	
Student's workload		
Source of workload	hours	ECTS
Total workload	45	1
Contact hours	10	0
Practical activities	15	0