

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Environment protection in power engineering		Code 1010312321010325647
Field of study Power Engineering	Profile of study (general academic, practical) (brak)	Year /Semester 1 / 2
Elective path/specialty Nuclear Power Engineering	Subject offered in: polish	Course (compulsory, elective) obligatory
Cycle of study: Second-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 Technical sciences		ECTS distribution (number and %) 1 100% 1 100%
Responsible for subject / lecturer: Prof. dr hab. inż. Zbigniew Stein email: zbigniew.stein@put.poznan.pl tel. 616652589 Elektryczny ul. Piotrowo 3A, 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Basic knowledge of electricity generation and the construction of facilities for the production.
2	Skills	Organizing the production of electricity and the use of facilities subject to the requirements of environmental protection.
3	Social competencies	The sensitivity of the measures to protect the environment.
Assumptions and objectives of the course: Understanding the principles of organizing the production of electricity and the use of facilities subject to the requirements of environmental protection.		
Study outcomes and reference to the educational results for a field of study		
Knowledge: 1. choose production technologies economically viable and environmentally friendly - [K_W14+, K_W19+++] 2. use or annihilation propose and organize waste gas purification - [K_W14+, K_W19++]		
Skills: 1. use knowledge of environmental investigations to determine the production limit pollution - [K_U08+, K_U14+] 2. organize and interpret measurements of environmental pollution - [K_U08+, K_U14+]		
Social competencies: 1. has a sensitivity to measures to protect of the environment - [K_K02+]		
Assessment methods of study outcomes		
Lecture: - continuous evaluation in the classroom (rewarding activity and perception), - passing the test.		
Course description		

Laws and regulations on environmental protection. Automating the measurement of environmental pollutants and their registration. Analyzing the results of measurements of pollution and improvements in decision-making concerning electricity generation technologies that reduce pollution.		
Basic bibliography:		
1. Ustawy, rozporządzenia i normy.		
2. Kucowski J., Laudyn D., Przekwas M.: "Energetyka a ochrona środowiska", WNT, Warszawa 1994.		
Additional bibliography:		
1. Janiczek R.: "Eksploatacja elektrowni parowych", WNT, Warszawa 1980.		
Result of average student's workload		
Activity	Time (working hours)	
1. participation in class lectures	13	
2. participate in the consultations on of the lecture	5	
3. prepare for the completion of the lecture	10	
4. involved in successful completion	2	
Student's workload		
Source of workload	hours	ECTS
Total workload	30	1
Contact hours	20	1
Practical activities	0	0