

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Environment protection in power engineering</b>		Code <b>1010315321010325647</b>
Field of study <b>Power Engineering</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>1 / 2</b>
Elective path/specialty <b>-</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>part-time</b>	
No. of hours Lecture: <b>8</b> Classes: <b>-</b> Laboratory: <b>-</b> Project/seminars: <b>-</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> <b>Technical sciences</b>		ECTS distribution (number and %) <b>1 100%</b> <b>1 100%</b>
<b>Responsible for subject / lecturer:</b>  Prof. dr hab. inż. Zbigniew Stein email: zbigniew.stein@put.poznan.pl tel. 616652589 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 electricity generation and the construction of facilities for the production.
2	<b>Skills</b>	Organizing the production of electricity and the use of facilities subject to the requirements of environmental protection.
3	<b>Social competencies</b>	The sensitivity of the measures to protect the environment.
<b>Assumptions and objectives of the course:</b> Understanding the principles of organizing the production of electricity and the use of facilities subject to the requirements of environmental protection.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b> 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++]		
<b>Skills:</b> 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+]		
<b>Social competencies:</b> 1. has a sensitivity to measures to protect of the environment - [K_K02+]		
<b>Assessment methods of study outcomes</b>		
Lecture: - continuous evaluation in the classroom (rewarding activity and perception), - passing the test.		
<b>Course description</b>		

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.		
<b>Basic bibliography:</b>		
1. Ustawy, rozporządzenia i normy.		
2. Kucowski J., Laudyn D., Przekwas M.: "Energetyka a ochrona środowiska", WNT, Warszawa 1994.		
<b>Additional bibliography:</b>		
1. Janiczek R.: "Eksploatacja elektrowni parowych", WNT, Warszawa 1980.		
<b>Result of average student's workload</b>		
<b>Activity</b>	<b>Time (working hours)</b>	
1. participation in class lectures	7	
2. participate in the consultations on of the lecture	5	
3. prepare for the completion of the lecture	10	
4. involved in successful completion	1	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	23	1
Contact hours	13	1
Practical activities	0	0