

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Ecology of Gas and Fluid Transmission		Code 1010631261010622995
Field of study Transport	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 6
Elective path/specialty Engineering of Pipeline Transport	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 %) 1 100%
Responsible for subject / lecturer: dr inż. Piotr Lijewski email: piotr.lijewski@put.poznan.pl tel. (61) 665 20 45 Faculty of Working Machines and Transportation ul. Piotrowo 3 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	the student has a basic knowledge of environmental threats
2	Skills	student is able to interpret the information obtained and the ability to self-inference and opinion
3	Social competencies	student is aware of the dangers of environmental pollution
Assumptions and objectives of the course: exam		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. The student is able to define environmental hazards resulting from transport - [K1A_W24] 2. The student knows the basic source of ecological dangers associated with transport - [K1A_W24] 3. The student knows the effects of environmental pollution caused by transport - [K1A_W21] 4. The student knows the ways to help reduce the negative impact of transport on the environment - [K1A_W24]		
Skills:		
1. The student is able to analyze the causes and effects of transport on the environment of the transmission - [K1A_U09] 2. Student is able to identify ways to reduce impact assessments of pipelines on the environment - [K1A_U09]		
Social competencies:		
1. is aware of expertise in order to develop professional - [K1A_K01] 2. Able to identify important social factors influencing ecological awareness - [K1A_K02]		
Assessment methods of study outcomes		
exam		
Course description		

Environmental hazards resulting from transport Climate change resulting from human activity Ecology concerning reduction stations and compressor stations and transmission infrastructure Threats and protection of the environment during exploration and exploitation Environmental problems associated with the construction of pipelines Ecology associated with the operation of pipelines		
Basic bibliography: 1. . J. Molenda, K. Steczko: Ochrona środowiska w gazownictwie i wykorzystaniu gazu. WNT, Warszawa 2000. 2. J. Merkisz: Ekologiczne problemy stosowania silników spalinowych, WPP, Poznań 1999. 3. Gronowicz J., Ochrona środowiska w transporcie lądowym. Wyd. ITE, Poznań ? Radom 2003.		
Additional bibliography:		
Result of average student's workload		
Activity	Time (working hours)	
1. Participation in the lecture	15	
2. Strengthening the lecture	5	
3. Consultation	3	
4. Preparing to pass	3	
Student's workload		
Source of workload	hours	ECTS
Total workload	26	1
Contact hours	23	1
Practical activities	3	0