STUDY MODULE D	ESCRIPTION FORM	
		Code 1010631221010634451
Field of study  Transport	Profile of study (general academic, practical) (brak)	Year /Semester
Elective path/specialty  Engineering of Pipeline Transport	Subject offered in: Polish	Course (compulsory, elective)  obligatory
Cycle of study:	Form of study (full-time,part-time)	
Second-cycle studies	full-time	
No. of hours  Lecture: - Classes: - Laboratory: -	Project/seminars:	No. of credits
Status of the course in the study program (Basic, major, other)	(university-wide, from another	rield)
(brak)	(brak)	
Education areas and fields of science and art		ECTS distribution (number and %)
technical sciences		6 100%

#### Responsible for subject / lecturer:

prof. dr hab. inż. Michał Ciałkowski email: michal.cialkowski@put.poznan.pl tel. 616652205

Faculty of Working Machines and Transportation

ul. Piotrowo 3 60-965 Poznań

## Prerequisites in terms of knowledge, skills and social competencies:

1	Knowledge	Basic knowledge of the ecology of transport. Fundamentals of computer-aided design	
2	Skills	Can apply the scientific method to solve problems, implement experiments and reasoning	
3	Social competencies	Knows the limits of their own knowledge and skills, able to clearly formulate questions, understands the need for further education	

## Assumptions and objectives of the course:

Exercise self-execution of projects mainly in the field of ecology and economics of transport, analysis and evaluation.

# Study outcomes and reference to the educational results for a field of study

## Knowledge:

- 1. He knows the principle of measurement systems and test equipment [K1A\_W16]
- 2. He has in-depth knowledge of the ecology of transportation, necessary to solve problems in a selected area of specialization [K1A\_W21]
- 3. Has knowledge of current developments in terms of transport environment [K1A-W24]

#### Skills

- 1. He can decide on how to improve the knowledge and skills in the chosen specialty [K1A\_U01]
- 2. Able to communicate effectively both with specialists and niespecjalistami on issues relevant to the area being studied [K1A\_U02]
- $3. \ Can \ apply \ the \ scientific \ method \ to \ solve \ problems, implement \ research \ and \ reasoning \ \ \ [K1A\_U17]$

## Social competencies:

- 1. Is aware of and understands the importance and impact of non-technical aspects of engineering, including its impact on the environment and the associated responsibility for decisions [K1A\_K02]
- 2. Able to set priorities for implementation specified by you or other tasks [K1A\_K05]
- 3. He can think and act in a creative and enterprising [K1A\_K07]

#### Assessment methods of study outcomes

# Poznan University of Technology Faculty of Working Machines and Transportation

Final test				
Course descri	otion			
Technical design element or component airframe, developed on the b includes: functional and strength calculations, the description of desig drawing.				
Basic bibliography:				
Additional bibliography:				
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Result of average student's workload				
Activity	Time (working hours)			
1. There are prepared interim work	122			
2. Consultation		17		
Student's work	load			
Source of workload	hours	ECTS		
Total workload	139	6		
Contact hours	17	1		
Practical activities	122	5		