STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
Gas fuels transportation	**1010634361010635151**

Field of study	Profile of study (general academic, practical)	Year /Semester
Transport	**general academic**	**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): **part-time**	
No. of hours: Lecture: **9** Classes: **9** Laboratory: **-** Project/seminars: **-**		No. of credits: **1**
Status of the course in the study program (Basic, major, other): **other**	(university-wide, from another field): **university-wide**	
Education areas and fields of science and art: **technical sciences** **Technical sciences**		ECTS distribution (number and %): **1 100%** **1 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge about thermodynamics, fluid mechanics and heat exchange processes. Knowledge about construction of energetic machines fired by gaseous fuels.
2	**Skills**	Student have skills required to prepare and presents the results of solutions of engineering problems using specialist terminology
3	**Social competencies**	Student knows restrictions of the own knowledge and skills; is able to cooperate in team network

Assumptions and objectives of the course:

To acquaint students with knowledge about aspects related to transport and storage processs of gaseous fuels. To acquaint students with practical knowledge about construction of energetic machines and devices used in transport processes of gaseous fuels.

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

Knowledge:

1. has extended knowledge about phisiscs necessery for plannung and solving of technical problems particullary for proper modelling process of real processes existing in gas transportation. - [T1A_W02]

2. Has extended knowledge about developments and trends in transport engineering and knows the most important achievements in transport engineering science. - [T1A_W05]

Skills:

1. Is able to presents problems from transport engineering field and has necessary skills to use one of available tools for solving of them. - [T1A_U11]

2. Is able to solve problems related to transport engineering and to design elements of machines used in transport fields - [T1A_U13]

Social competencies:

1. Is aware of and understands the importance and impact of non-technical aspects of transport engineering activities and its impact on the environment Is able to obtain information from the literature, internet, databases and other sources. - [K1_K04]

Assessment methods of study outcomes

Lecture: the written examination

The evaluation of student knowledge will be held based on an answers on 5 questions from the material presented during the lectures.

Classes: evaluation reports made exercises and final test from knowledge about transport processes.

Course description

conventional and unconventional resources of natural gases, pre-treatment processes of gaseous fuels, transportation and storage process of natural gas,gas reduction station, construction of main devices used on gas station, energetic machines used in gas tranport processes

Basic bibliography:

Additional bibliography:

Result of average student's workload

Activity	Time (working hours)
1. Participation in the lecture	15
2. Fixing the lecture	7
3. Preparing to pass the lecture	7
4. Participation in the completion of the lecture	2
5. Preparation for the classes	7
6. Participation in the classes	15
7. Fixing the knowledge from classes	7
8. Preparing to pass classes	7
9. Participation in the completion of the classes	2

Student’s workload

Source of workload	hours	ECTS
Total workload	65	1
Contact hours	34	0
Practical activities	31	0