



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Industrial Gas Technologies [N2EPiO1-TGiEO>PTG]

Course

Field of study

Industrial and Renewable Energy Systems

Year/Semester

2/3

Area of study (specialization)

Gas Technology and Renewable Energy

Profile of study

general academic

Level of study

second-cycle

Course offered in

Polish

Form of study

part-time

Requirements

compulsory

Number of hours

Lecture

9

Laboratory classes

0

Other

0

Tutorials

9

Projects/seminars

0

Number of credit points

2,00

Coordinators

dr inż. Paweł Czyżewski

pawel.czyzewski@put.poznan.pl

Lecturers

Prerequisites

Knowledge: Basic knowledge of fluid mechanics, thermodynamics and knowledge of the construction of industrial installations. Skills: Skills needed to solve engineering problems using scientific methods. The student is able to collect and process data collected from databases, literature and the Internet. Social competence: A student is aware of the continuous development of industrial installations, and in consequently understands the need and knows the possibilities of further education.

Course objective

none

Course-related learning outcomes

none

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

none

Programme content

Use of industrial gases in refinery installations, gas technologies of the fertiliser industry, purification and dehydration technologies
fertiliser industry, gas purification and drying technologies, use of gaseous fuels for the production of chemical compounds, production of higher hydrocarbons from fuels, measurement methods
production of chemical compounds, production of higher hydrocarbons from fuels, measurement methods used in industrial gas technologies, methods of neutralising selected gaseous chemical compounds,

Course topics

The current topics of the classes concern the decarbonisation processes of the chemical and petrochemical industries. They concern the following areas of the energy transition economy:

- replacing fossil fuels with hydrogen carriers,
- introduction of decarbonised energy carriers into the transport industry,
- integration of new synthetic gas technologies into the electricity system

Teaching methods

1. lecture with multimedia presentation and short discussion as a summary of each lecture.
2. exercises - solving analytical tasks,

Bibliography

none

Breakdown of average student's workload

	Hours	ECTS
Total workload	0	0,00
Classes requiring direct contact with the teacher	0	0,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	0	0,00