



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Professional training

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### Course

Field of study

Circular System Technologies

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

3/6

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

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### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

### Number of credit points

6

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### Lecturers

Responsible for the course/lecturer:

Justyna Werner, PhD

Responsible for the course/lecturer:

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### Prerequisites

The student has structured, theoretically founded knowledge covering key issues in the field of circular



system technologies. Is able to obtain information from the indicated sources, correctly interprets them and draws conclusions.

### Course objective

Familiarization with technological processes of a circular system, which are used in various industries. Preparation for work in the chemical, but also related industries, such as: energy, construction, mining, pharmaceutical industry, municipal economy, plastics processing and the processing industry, design offices and scientific institution.

### Course-related learning outcomes

#### Knowledge

1. Has a basic knowledge of life cycle of products, devices and installations used in closed-loop technologies – [K\_W12]
2. Has basic knowledge of environment - friendly, modern industrial technologies ("zero-emission" technologies, decarbonisation) – [K\_W14]
3. Has knowledge in the field of technologies based on renewable materials (so-called green materials) – [K\_W15]
4. Knows basic principles of occupational health and safety as well as ergonomics – [K\_W28]

#### Skills

1. Knows how to collaborate with other persons in the context of closed-loop technologies as well as in interdisciplinary contexts – [K\_U09]
2. Knows how to assess usefulness and select tools and methods to solve problems in the field of closed-loop technologies – [K\_U12]

#### Social competences

1. Takes care of safety of his own work and that of others, applies appropriate procedures and rules in emergencies – [K\_K04]
2. Objectively assesses the level of his own knowledge and skills, understands the importance of improving both professional and personal competences in line with changing social conditions and progress in science – [K\_K05]
3. Thinks and acts in an entrepreneurial manner – [K\_K06]

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The credit on the basis of the certificate of internship, report on the internship and completed survey.

### Programme content

Circular System Technologies - workplaces



The workplace as a place of future professional activity. Understanding the circular system technologies used in the plant. Detailed familiarization with the technology chosen by the plant. The methods used to control process efficiency and product quality. Business practice and information acquired during education. Independent task in the position indicated by the workplace. The plant's activities in the field of environmental protection.

### Teaching methods

Practical classes in the workplace

### Bibliography

Basic

Information materials provided by the company

Additional

Documents, instructions in force in the workplace - the place of the internship

### Breakdown of average student's workload

	Hours	ECTS
Total workload	180	6,0
Classes requiring direct contact with the teacher	180	6,0
Student's own work <sup>1</sup>	0	0,0

<sup>1</sup> delete or add other activities as appropriate