



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Professional training 6 weeks [S1IFar2>PZ]

### Course

Field of study

Pharmaceutical Engineering

Year/Semester

3/6

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

### Number of hours

Lecture

0

Laboratory classes

0

Other

240

Tutorials

0

Projects/seminars

0

### Number of credit points

6,00

### Coordinators

dr hab. Justyna Werner

justyna.werner@put.poznan.pl

### Lecturers

### Prerequisites

The student has structured, theoretically founded knowledge covering key issues in the field of engineering and technology used in the pharmaceutical industry. Is able to obtain information from the indicated sources, correctly interprets them and draws conclusions.

### Course objective

Familiarization with technological processes in the pharmaceutical industry. Preparation for work in the pharmaceutical and related industries, design offices, and research institutes.

### Course-related learning outcomes

Knowledge:

1. Knows the principles of construction, operation and selection of devices, reactors and apparatus used in chemical technology [K\_W12]
2. Has knowledge in the field of chemical technology and engineering, machine science and apparatus of the chemical industry [K\_W13]
3. Knows the basic methods, techniques, tools and materials used to solve simple tasks in the field of chemical technology and engineering [K\_W15]

#### Skills:

1. Is able to conduct a critical analysis of the functioning method and assess existing solutions in chemical and process engineering, in particular devices, apparatus, systems and processes - [K\_U12]
2. Based on general knowledge, explains the basic phenomena associated with relevant processes in chemical and process engineering - [K\_U16]

#### Social competences:

1. Is able to properly set priorities for the implementation of the task [K\_K04]
2. He correctly recognizes the problems and makes the right choices related to the exercise of the profession, in accordance with the principles of professional ethics [K\_K05]
3. Is aware of the social role of a technical university graduate, and in particular understands the need for formulation and transfer to the public, in particular through the mass media, information and opinions on the achievements of science and other aspects of engineering activities; makes efforts to convey such information and opinions in a commonly understandable way [K\_K07]

### 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

The workplace as a place of future professional activity. Understanding the technologies used in the production plant (pharmaceutical and related). 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.

### Course topics

none

### 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	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)	180	6,00