POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

COURSE DESCRIPTION CARD - SYLLABUS

Course name
Introduction to chemical and process engineering

Course

Field of study	Year/Semester
Chemical and process engineering	1/1
Area of study (specialization)	Profile of study
	general academic
Level of study	Course offered in
First-cycle studies	Polish
Form of study	Requirements
full-time	compulsory

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
15		
Tutorials	Projects/seminars	

Number of credit points

1

Lecturers

Responsible for the course/lecturer:	Responsible for the course/lecturer:
dr hab. inż. Jacek Różański	dr hab. inż. Grzegorz Musielak, prof. PP
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Wydział Technologii Chemicznej	Wydział Technologii Chemicznej
ul. Berdychowo 4, 61-131 Poznań	ul. Berdychowo 4, 61-131 Poznań

Prerequisites

Students starting this subject should have basic knowledge in mathematics, physics, chemistry (core curriculum for secondary schools).

Course objective

To familiarize students with the genesis and history of chemical and process engineering, basic concepts, standards of education and the profile of alumnus of "Chemical and process engineering" studies. Providing basic knowledge in the range of determined by the course description and to familiarize students with the basics of the theory of similarity and the principles of describing the most important flow phenomena.

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Course-related learning outcomes

Knowledge

1. A student knows the history of chemical and process engineering in Poland and in the world and the basic concepts appearing in the subject description (definitions of processes and unit operations)- [K_W16]

Skills

1. A student is able to use auxiliary materials independently or in team. - [K_U17] [K_U05]

Social competences

1. A student knows the limits of his knowledge and understands the need for lifelong learning and raising his personal competences. - [K_K01]

2. A student is aware of the importance and understanding non-technical aspects and results of the engineer's job. - [K_K02]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Knowledge and skills acquired as part of the lecture are verified on 2 final tests, consisting of about 15 test questions and 1-4 open questions for the same number of points.

Programme content

Genesis and history of chemical and process engineering in the world and in Poland. Chemical and process engineering as technical science, using the basics of physics, chemistry, mathematics, mechanics and automation, including the principles of economics, deals with systems and processes in which matter is transformed due to its condition, composition and real properties. The importance of chemical and process engineering for the chemical, pharmaceutical, food and other process industries, as well as thermal and nuclear power engineering, biotechnology, medicine and environmental protection. Description and interpretation of flow phenomena characteristic for chemical and process engineering.

Teaching methods

1. Lecture: multimedia presentation, illustrated with examples on the board.

Bibliography

Basic

1. Strumiłło Cz. (edytor), Inżynieria chemiczna i procesowa w Polsce, Wydawca: Polska Akademia Nauk, Oddział w Łodzi, Łódź 2007.

Additional

1. Koch R., Kozioł A., Dyfuzyjno-cieplny rozdział substancji, WNT, Warszawa 1994.

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Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,0
Classes requiring direct contact with the teacher	20	0,8
Student's own work (literature studies, preparation for tests) [1]	5	0,2

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[1] delete or add other activities as appropriate