Zachodniopomorski Uniwersytet Technologiczny w Szczecinie

Faculty of Chemical Technology and Engineering

Field of study	Chemical Engineering		
Mode of study	stationary	*Level*	first cycle
Graduate's qualification	inżynier		
Area(s) of study	nauki techniczne		
Educational profile	general academic		
Module			
Course unit	**Chemical Technology Projects Laboratory**		
Code	ChEn_1A_S_D01b		
Field of specialisation			
Administering faculty	Katedra Fizykochemii Nanomateriałów		
ECTS	9,0	*ECTS (forms)*	9,0
Form of course credit	credits	*Language*	english
Electives	11	*Elective group*	

Form of instruction	*Code*	*Semester*	*Hours*	*ECTS*	*Weight*	*Credit*
laboratory course	L	7	180	9,0	1,00	credits

Leading teacher	Mijowska Ewa (Ewa.Borowiak-Palen@zut.edu.pl)
Other teachers	Michalkiewicz Beata (Beata.Michalkiewicz@zut.edu.pl), Mijowska Ewa (Ewa.Borowiak-Palen@zut.edu.pl), Morawski Antoni (Antoni.Morawski@zut.edu.pl), Moszyński Dariusz (Dariusz.Moszynski@zut.edu.pl), Mozia Sylwia (Sylwia.Mozia@zut.edu.pl), Narkiewicz Urszula (Urszula.Narkiewicz@zut.edu.pl), Pelka Rafal (Rafal.Pelka@zut.edu.pl), Pełech Iwona (Iwona.Pelech@zut.edu.pl), Przepiórski Jacek (Jacek.Przepiorski@zut.edu.pl), Sreńscek-Nazzal Joanna (Joanna.Srenscek@zut.edu.pl), Tryba Beata (Beata.Tryba@zut.edu.pl), Wróbel Rafał (Rafal.Wrobel@zut.edu.pl), Zielinska Beata (Beata.Zielinska@zut.edu.pl)

Prerequisites

W-1	Podstawy technologii chemicznej I i II
W-2	Technologia chemiczna - procesy przemysłu syntezy chemicznej
W-3	Przemysłowe laboratorium technologiczne

Module/course unit objectives

C-1	Forming the ability to review and select available publications related to the subject of the engineering thesis and their elaboration in the form of an oral presentation
C-2	Forming the ability to conduct and control the chemical engineering process
C-3	Preparation for the development of research results and their reliable interpretation

Course content divided into various forms of instruction		*Number of hours*
T-L-1	Discussion of the subject of engineering thesis in the area of chemical engineering	15
T-L-2	Getting to know the methods of controlling the process being the subject of the thesis and checking the correctness of their implementation	40
T-L-3	Getting to know the test stand and checking its operation	30
T-L-4	Conducting preliminary tests	95

Student workload - forms of activity		*Number of hours*
A-L-1	Participation in laboratory classes	160
A-L-2	studing of literature	15
A-L-3	Performing research and developing the obtained results	95

Teaching methods / tools

M-1	Continuous work with a student in the laboratory
M-2	Substantive discussions regarding the correctness of the tests carried out and the interpretation of results

Evaluation methods (F - progressive, P - final)

S-1	F	Periodic evaluation of the course of the implementation of the assumed research as part of the engineering diploma thesis
S-2	F	Assessment of independence and activity in conducting research
S-3	P	Written report on the implementation of the assumed research and discussion of results

Designed learning outcomes	Reference to the learning outcomes designed for the fields of study	Reference to the learning outcomes defined for the particular areas of education	Reference to learning outcomes leading to the degree of "inżynier"	Course objectives	Course content	Teaching methods	Evaluation methods
Knowledge							
ChEn_1A_D01b_W01 Has knowledge in the field of chemical engineering and technology and uses it to control the process of chemical technology and engineering, and interpretation of results	ChEn_1A_W07 ChEn_1A_W08	P6S_WG_TA11		C-1 C-2 C-3	T-L-1 T-L-3 T-L-2 T-L-4	M-1 M-2	S-1 S-2 S-3
Skills							
ChEn_1A_D01b_U01 Has the ability to prepare oral presentations on the basis of collected literature on the subject of engineering thesis and deepening his knowledge in the process of self-education	ChEn_1A_U01 ChEn_1A_U02 ChEn_1A_U03 ChEn_1A_U04 ChEn_1A_U05 ChEn_1A_U07 ChEn_1A_U08 ChEn_1A_U14 ChEn_1A_U16 ChEn_1A_U17	P6S_UK P6S_UO P6S_UU P6S_UW_TA11 P6S_UW_TA13 P6S_UW_TA14	P6S_UW_IA11 P6S_UW_IA13 P6S_UW_IA14	C-1	T-L-1	M-2	S-3
ChEn_1A_D01b_U02 Is able to build a research stand, use analytical methods to control operations and unit processes related to the thesis of engineering thesis, develop and interpret the obtained results	ChEn_1A_U01 ChEn_1A_U02 ChEn_1A_U03 ChEn_1A_U04 ChEn_1A_U05 ChEn_1A_U07 ChEn_1A_U08 ChEn_1A_U14 ChEn_1A_U16 ChEn_1A_U17	P6S_UK P6S_UO P6S_UU P6S_UW_TA11 P6S_UW_TA13 P6S_UW_TA14	P6S_UW_IA11 P6S_UW_IA13 P6S_UW_IA14	C-2 C-3	T-L-2 T-L-4 T-L-3	M-1 M-2	S-1 S-2 S-3
Other social / personal competences							
ChEn_1A_D01b_K01 Is aware of the impact of reliable implementation of own tasks on the final result of the group's work, is able to determine the order of importance of activities, pass on their knowledge to others and take discussions	ChEn_1A_K01 ChEn_1A_K03 ChEn_1A_K04 ChEn_1A_K05 ChEn_1A_K07	P6S_KK P6S_KO P6S_KR		C-1 C-2 C-3	T-L-1	M-1 M-2	S-2

Required reading

1. Literature related to the subject of the work - publications, monographs, textbooks, patents, 2018