## Zachodniopomorski Uniwersytet Technologiczny w Szczecinie

## Faculty of Chemical Technology and Engineering

Field of :										
·	study	Chem	nical Engineerin	ıg						
Mode of	f study	statio	stationary Level first cycle							
Graduate's qualification		inżyni	ier	WTilCh						
Area(s) of study		-	techniczne							
Educational profile			ral academic							
Module		gener	urucuucinic							
Course u	upit	Cham	nical Reactor	Engineering						
	um			Engineering						
Code		ChEn_	_1A_S_C11		- \ 🔳					
Field of specialisation			the of Chamie							
Administering faculty			ction Processe	al Engineering an s						
ECTS		5,0		ECTS (forms) 5,0						
Form of course credit		credits		Language english						
Elective	S			Elective group						
Form of	instruction	Code	Semester	Hours	ECTS	Weight	Credit			
lecture		w	4	30	2,5	0,40	credits			
laborato	ory course	L	4	15	1,0	0,30	credits			
project o	•	Р	4	30	1,5	0,30	credits			
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Leading	teacher			na (Paulina.Pianko	· · ·	(i Kraycatof				
Other teachers		(Krzys	Konopacki Maciej (Maciej.Konopacki@zut.edu.pl), Lubkowski Krzysztof (Krzysztof.Lubkowski@zut.edu.pl), Murasiewicz Halina (Halina.Murasiewicz@zut.edu.pl), Pianko-Oprych Paulina (Paulina.Pianko@zut.edu.pl), Rakoczy Rafał							
Prerequi	isites	•								
W-1	Mathematics									
• • - <b>T</b>	Machematics									
	Physics									
W-2										
W-2 W-3	Physics									
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Teachin	ng metho	ds / tools											
M-1		Preparation of a multimedia for of lecture presentation											
М-2		Project method.											
М-3	Demo	Demonstration of the chosen type of reactor.											
Evaluati	ion meth	ods (F - progressive, P - final)											
S-1	Р												
S-2	F	Project report - part 1.											
S-3	F	Project report - part 2.											
S-4	F	Active participation in laboratory classes.											
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				
Knowled	dge		ł		I			1	4				
ChEn_1A_C11_W01 Student is able to define fundamentals of chemical reactions. Student can analyze models of reactors and is able to explain the used chemical reactors construction and select an appropriate type of reactor for specific needs.			ChEn_1A_W04 ChEn_1A_W06 ChEn_1A_W10 ChEn_1A_W11 ChEn_1A_W14	P6S_WG_TA11	P65_WG_IA11	C-1	T-W-1	M-1	S-1				
Skills													
ChEn_1A_C11_U01 Student can propose and calculte chemical reaction kinetics. Student is able to perform calculations for chosen types of reactors: Batch Reactor, Continuous Stirred Tank Reactor, Plug Flow Reactor.			ChEn_1A_U01 ChEn_1A_U03 ChEn_1A_U05 ChEn_1A_U07 ChEn_1A_U08 ChEn_1A_U16	P6S_UO P6S_UU P6S_UW_TA11 P6S_UW_TA14	P6S_UW_IA11 P6S_UW_IA14	C-1	T-P-1 T-P-2	M-2	5-2 5-3				
Other so	ocial / pe	rsonal competences											
reactor de responsibi	an present a sign. Stude	and defence the role of chosen chemical nt can demonstrate ability to take aborate with others when working in a	ChEn_1A_K01 ChEn_1A_K03 ChEn_1A_K04 ChEn_1A_K05	P6S_KK P6S_KO P6S_KR		C-1	T-L-1 T-L-2	M-3	S-4				
Require	ed reading												
1. Fogler	r, H. S., Ele	ements of Chemical Reaction Enginee	ring, Prentice-Ha	II PTR, 2006, 9	78013047394	13, Upp	er Saddle Rive	r					
2. Leven	spiel O., C	hemical Reaction Engineering, Wiley,	,, New York, 1999	, 9780471254	249								
3. Steinfe	eld, J. I., J.	S. Francisco, and W. L. Hase., Chemi	cal Kinetics and D	Dynamics, Prei	ntice Hall, 199	9, 9780	)137371235						
Supplen	mentary r	eading											
1. E. B. N	Nauman, C	hemical Reactor Design, Optimization	n, and Scale-up, J	ohn Wiley and	Sons, USA, 2	800							
2. L.M. R	Rose, Chem	nical Reactor Design in Practice, Else	vier Scientific Pub	lishing Compa	any, New York	, 1981							