## Zachodniopomorski Uniwersytet Technologiczny w Szczecinie

Faculty of Chemical Technology and Engineering

Field of s Mode of	atudu							
Mode of	study	Chem	nical Engineerir	ig				
Mode of study		statio	stationary Level first cycle			\ A / T · I		
Graduate's qualification		inżyn	ier	ł		WTil	Ch	
Area(s) of study		nauki	techniczne					
Educational profile		genei	ral academic					
Module	-							
Course u	unit	Svste	ems Engineer	ina				
Code		-	1A_S_C15					
	specialisation							
Field of specialisation Administering faculty			ute of Chemic ction Processe	al Engineering ar s	╡╲■	C		
ECTS		5,0		ECTS (forms)	5,0			
Form of course credit		examination		Language	english	1		
Electives				Elective group		-		
Form of	instruction	Code	Semester	Hours	ECTS	Weight	Credit	
lecture		W	5	15	2,0	0,50	examination	
	ry course		5	45	3,0	0,50	credits	
	-	-				0,50	cicuits	
Leading teacher Other teachers			Story Grzegorz (Grzegorz.Story@zut.edu.pl) Sobolewski Piotr (psobolewski@zut.edu.pl), Story Grzegorz (Grzegorz.Story					
		5000	iewski Piotr (ps	obolewski@zut.ed	u.pi), Story Grzegorz	(Grzegorz.Story	@zut.edu.pl)	
Prerequi		<u> </u>						
W-1	Basic knowledge o		ematics.					
Module/d	course unit objectiv	'es						
		· · ·		<u> </u>				
C-1	design strategy. S simulation softwar	tudent l e.	earns the princip	les of selecting proce	em designing, including esses and parameters o	f their work, desig	gn heuristics and	
C-1 C-2	design strategy. S simulation softwar Preparing the stud met for the impler	tudent l e. lent to e nentatio	earns the princip elaboration of the on of a project, in	les of selecting proce		f their work, desig	on heuristics and	
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Evaluati	on meth	ods (F - progressive, P - final)										
S-1	Р	Written final exam based on the lecture contents										
S-2	F	Project report										
S-3	F	Active participation in laboratory classes.										
	Desig	ned 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	Evaluatio methods			
Knowled	lge		1	1	I		1		1			
ChEn_1A_C15_W01 Student has a structured, theoretical and practical knowledge about the processes system designing, including elements of the process design and design strategy. Student has knowledge about selecting processes and parameters of their work, design heuristics and simulation software.			ChEn_1A_W07 ChEn_1A_W08 ChEn_1A_W12 ChEn_1A_W14 ChEn_1A_W20	P65_WG_TA11	P65_WG_IA11	C-1	T-W-1 T-W-3 T-W-2 T-W-4	M-1	S-1			
Skills												
ChEn_1A_C15_U01 Student possesses an ability to assess the conditions that have to be met for the implementation of a project, involving the construction or modernization of the installation. Student possesses an ability to design the process.			ChEn_1A_U01 ChEn_1A_U03 ChEn_1A_U05 ChEn_1A_U07 ChEn_1A_U08 ChEn_1A_U09 ChEn_1A_U09	P6S_UO P6S_UU P6S_UW_TA11 P6S_UW_TA12 P6S_UW_TA14	P6S_UW_IA11 P6S_UW_IA12 P6S_UW_IA14	C-2	T-L-1 T-W-3 T-W-1 T-W-4 T-W-2	M-2	S-2 S-3			
Other so	ocial / pe	rsonal competences		•					<u>.</u>			
ChEn_1A_C15_K01 Student understands the need to train and improve his/her professional and personal competences. Student is able to teamwork and to properly define the priorities for the mplementation of the task - a process project.			ChEn_1A_K01 ChEn_1A_K03 ChEn_1A_K04 ChEn_1A_K05	P6S_KK P6S_KO P6S_KR		C-2	T-L-1	M-2	S-2 S-3			
Required	d reading	g										
•	-	I.Bondareva; M.G.Berengarten, Basic (	Chemical Engine	ering with Pra	ctical Applicat	tions, Mi	ir Publishers, M	loscow,	1988,			
2. M.D. H	immelbla	u, Basic Principles and Calculations in	Chemical, Prenti	ice Hall PTR, N	lew Jersey, 19	96, 6						
Suppler	nentary i	reading										
1. R. Smit	th, Chemi	ical Process Design and Integration, Jo	hn Wiley & Sons	, Ltd, 2005								
	oidor: LD	Seader: D.R. Lewin, Process Design P	Principlos John M	lilov & Song I	nc New York	1000						

2. W.D. Seider; J.D. Seader; D.R. Lewin, Process Design Principles, John Wiley & Sons, Inc, New York, 1999