Zachodniopomorski Uniwersytet Technologiczny w Szczecinie

Faculty of Chemical Technology and Engineering

Field of study		Chem	ical Engineering								
Mode of study		stationary Level first cycle									
Graduate's qualification		inżyn	er	W I 1I	Ch						
Area(s) of study			nauki	techniczne							
Educationa	al profil	е	gener	al academic		_					
Module											
Course un	it		Math	ematics I							
Code			ChEn	1A_S_B01a							
Field of sp	ecialisa	tion									
Administering faculty		Studi	um Matematyki								
ECTS			6,0		ECTS (forms)	6,0					
Form of co	ourse cr	edit	examination		Language	english					
Electives					Elective group						
Form of in:	structio	n	Code	Semester	Hours	ECTS	Weiaht	Credit			
lecture			W	1	30	4.0	0.50	examination			
lecturina c	ourse		Α	1	30	2.0	0.50	credits			
			Ewert	-Krzemieniewsk	i Stanisław (Stani	slaw Ewert-Krzemieni	 ewski@zut edu				
Other teac	thers		Ewert	-Krzemieniewsk	i Stanisław (Stani	slaw.Ewert-Krzemieni	ewski@zut.edu	1.pl)			
Proroquisit			2001								
W-1	Studen	t knows the	basics	of high school ma	thematics.						
Modulo/co											
C-1	Consoli	dation of kn	-s owleda	e related to math	ematics						
C-2	Develo	ping student	s abili	ty to solve mathe	matical problems.						
C-3	Improv	ing student's	saware	eness of the need	for continuous educ	ation and professional c	levelopment.				
Course cor	ntent di	ivided into	variou	s forms of instri	uction	-	-	Number of hours			
T-W-1	CONTENT 1) Function and the inverse of a function. Existence. 2) Limits of sequences. 3) Exponential, logarithmic, hyperbolic trigonometric and cyclometric functions. 4) Curves on a plane. 5) Limits of functions. 6) Differential calculus in one variable and its applications. 7) Indefinite integral. 8) Techniques of integration. 9) Riemann integral and its application. 10) Improper integrals.										
T-A-1	Solving		30								
Student w	orkload	- forms of	activit	у				Number of hours			
A-W-1	-1 Participation in lectures										
A-W-2	Self-stu		86								
A-W-3	Written		4								
A-A-1	Particip		30								
A-A-2	Consult		4								
A-A-3	Self-stu	idy of the lite	erature					26			
Teaching r	nethod	s / tools									
M-1	Lecture										
M-2 Classes											
Evaluation methods (F - progressive, P - final)											
S-1	P	Lecture - wr	itten e	xam							
5-2	P –										
5-3	F	Classes - wr	itten te	sts							

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_B01_W01 LEARNING OUTCOMES On successful completion of the course students should be able to: 1. Demonstrate a practical foundation in calculus and its applications including making calculations at suitable level; 2. Demonstrate an understanding of the basic notions in calculus.	ChEn_1A_W01	P6S_WG_TA11	P65_WG_IA11	C-1	T-W-1	M-1	S-1 S-2					
Skills												
ChEn_1A_B01_U01 Student can use the acquired knowledge to solve mathematical problems.	ChEn_1A_U01 ChEn_1A_U05 ChEn_1A_U11	P6S_UU P6S_UW_TA11 P6S_UW_TA12	P6S_UW_IA12	C-2	T-A-1	M-2	S-3					
Other social / personal competences												
ChEn_1A_B01_K01 Student is aware of the need for continuous education and professional development in the field of mathematics.	ChEn_1A_K02	P6S_KO		C-3	T-A-1 T-W-1	M-1 M-2	S-1 S-2 S-3					
Required reading												
1. Glyn, James, Modern engineering mathematics, Prentice Hall, 2015												
2. Jordan, D.W., Smith, P., Mathematical techniques: an introduction for the engineering, physical, and mathematical sciences, Oxford University Press, 2008												
Supplementary reading												
1. Crofton, Tony, Engineering mathematics: a foundation for electronic, electrical, communications, and system engineers, Pearson												