

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Mathematics		Code 1011104321010340063
Field of study Logistics - Part-time studies - First-cycle	Profile of study (general academic, practical) general academic	Year /Semester 1 / 2
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time,part-time) part-time	
No. of hours Lecture: 12 Classes: 12 Laboratory: - Project/seminars: -		No. of credits 4
Status of the course in the study program (Basic, major, other) other		(university-wide, from another field) university-wide
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 4 100% 4 100%
Responsible for subject / lecturer: dr Grzegorz Grzegorzcyk email: grzegorz.grzegorzcyk@put.poznan.pl tel. 61 665 26 87 Wydział Elektryczny ul. Piotrowo 3A 60-965 Poznań		Responsible for subject / lecturer: Zenon Zbąszyniak email: zenon.zbaszyniak@put.poznan.pl tel. 61 665 27 12 Wydział Elektryczny ul. Piotrowo 3a, 60-965 Poznań
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Basic knowledge from first semester.
2	Skills	The ability to think logically. Ability to describe simple problems in mathematical language.
3	Social competencies	Working in a group.
Assumptions and objectives of the course: Acquiring and consolidating of basic mathematical concepts using examples and skills in mathematical tools.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Has knowledge of selected branches of higher mathematics - [K1A_W01]		
2. Application of mathematics to solve selected technical problems - [K1A_W01]		
Skills:		
1. Able to use the basic knowledge of mathematics as a tool in logistics - [K1A_U09]		
2. Able to perform studies using mathematical tools - [K1A_U09]		
Social competencies:		
1. He understands the need to deepen their mathematical knowledge - [T1A_KO1]		
2. Is conscious of the need for learning throughout life - [T1A_KO1]		
Assessment methods of study outcomes		
Lectures: forming evaluation - activity cards, summary evaluation - written and oral exam		
Exercises: formative assessment - written tests, summary evaluation - written exam		
Course description		

<p>Elements of the integral calculus of the function of one variable. Numeric series. Ordinary differential equations. Functions of several variables.</p> <p>Teaching methods: Lecture - informative and conversational lecture Exercises - a method of training</p>		
<p>Basic bibliography:</p> <ol style="list-style-type: none"> 1. Folyńska, Z. Ratajczak, Z. Szafranski, Matematyka dla studentów uczelni technicznych, WPP Poznań 2000 2. M. Gewert, Z. Skoczylas, Analiza matematyczna 1, Definicja, twierdzenia, wzory 3. M. Gewert, Z. Skoczylas, Analiza matematyczna 1, Przykłady i zadania 4. T. Jurlewicz, Z. Skoczylas, ALgebra liniowa 1, Definicja, twierdzenia, wzory 5. T. Jurlewicz, Z. Skoczylas, ALgebra liniowa 1, Przykłady i zadania 		
<p>Additional bibliography:</p> <ol style="list-style-type: none"> 1. W. Krywicki, L. Włodarski, Analiza matematyczna w zadaniach, t. I-II, PWN Warszawa 1999 2. W. Stankiewicz, Zadania z matematyki dla wyższych uczelni technicznych, t. I-II 3. M. Lassak, Matematyka dla studentów technicznych 		
<p>Result of average student's workload</p>		
<p>Activity</p>		<p>Time (working hours)</p>
1. Lectures		12
2. Classes		12
3. Consultation		15
4. Preparing to classes		15
5. Preparing to pass the lectures		23
6. Exam		2
<p>Student's workload</p>		
<p>Source of workload</p>	<p>hours</p>	<p>ECTS</p>
Total workload	79	4
Contact hours	41	2
Practical activities	12	1