

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Mathematics		Code 1011101321010340063
Field of study Logistics - Full-time studies - First-cycle studies	Profile of study (general academic, practical) (brak)	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) full-time	
No. of hours Lecture: 15 Classes: 30 Laboratory: - Project/seminars: -		No. of credits 4
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art		ECTS distribution (number and %)
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		
Elements of the integral calculus of the function of one variable.		
Numeric series.		

<p>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. Folyńska, Z. Ratajczak, Z. Szafranski, Matematyka dla studentów uczelni technicznych, WPP Poznań 2000 3. M. Gewert, Z. Skoczylas, Analiza matematyczna 1, Definicja, twierdzenia, wzory 4. M. Gewert, Z. Skoczylas, Analiza matematyczna 1, Przykłady i zadania 5. T. Jurlewicz, Z. Skoczylas, ALgebra liniowa 1, Definicja, twierdzenia, wzory 6. 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, PWN Warszawa 1999 2. W. Krywicki, L. Włodarski, Analiza matematyczna w zadaniach, t. I-II, PWN Warszawa 1999 3. W. Stankiewicz, Zadania z matematyki dla wyższych uczelni technicznych, t. I-II 4. M. Lassak, Matematyka dla studentów technicznych 		
<p>Result of average student's workload</p>		
<p>Activity</p>		<p>Time (working hours)</p>
1. Lectures		15
2. Classes		30
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	100	4
Contact hours	62	2
Practical activities	30	1