

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Mathematics</b>		Code <b>1011104311010340063</b>
Field of study <b>Logistics - Part-time studies - First-cycle</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>1 / 1</b>
Elective path/specialty <b>-</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time, part-time) <b>part-time</b>	
No. of hours Lecture: <b>10</b> Classes: <b>10</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>		No. of credits <b>4</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</b>
Education areas and fields of science and art		ECTS distribution (number and %)
<b>Responsible for subject / lecturer:</b> Grzegorz Grzegorzcyk email: grzegorz.grzegorzcyk@put.poznan.pl tel. 61 665 26 87 Wydział Elektryczny ul. Piotrowo 3a, 60-965 Poznań		<b>Responsible for subject / lecturer:</b> Zenon Zbąszyniak email: zenon.zbaszyniak@put.poznan.pl tel. 61 665 27 12 Wydział Elektryczny ul. Piotrowo 3a, 60-965 Poznań
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Basic knowledge mathematics with range of secondary school.
2	<b>Skills</b>	The ability to think logically. Ability to describe simple problems in mathematical language.
3	<b>Social competencies</b>	Working in a group.
<b>Assumptions and objectives of the course:</b> Acquiring and consolidating of basic mathematical concepts on examples and skills in mathematical apparatus.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. Has knowledge of selected aspects of higher mathematics - [T1A_WO1]		
2. Application of mathematics to solve technical problems - [T1A_WO1]		
<b>Skills:</b>		
1. Can use basic knowledge of mathematics as a tool in management - [T1A_UO9]		
2. Can perform studies using mathematical apparatus - [T1A_UO9]		
<b>Social competencies:</b>		
1. Understand and apply formal mathematical apparatus in management - [T1A_KO4]		
<b>Assessment methods of study outcomes</b>		
Lectures: forming evaluation - activity cards, summary evaluation - written and oral exam		
Exercises: formative assessment - written tests, summary evaluation - written exam		
<b>Course description</b>		
Elements of linear algebra. Strings and string limit. Functions of one variable.		

<p>Continuity and limit of the function of one variable.          Elements of the differential calculus of functions of one variable.</p> <p>Teaching methods:          Lecture - informative and conversational lecture          Exercises - a method of training</p>		
<p><b>Basic bibliography:</b></p> <ol style="list-style-type: none"> <li>1. I. Folyńska, Z. Ratajczak, Z. Szafranski, Matematyka dla studentów uczelni technicznych, t. I-III</li> <li>2. M. Gewert, Z. Skoczylas, Analiza matematyczna 1, Definicja, twierdzenia, wzory</li> <li>3. M. Gewert, Z. Skoczylas, Analiza matematyczna 1, Przykłady i zadania</li> <li>4. T. Jurlewicz, Z. Skoczylas, ALgebra liniowa 1, Definicja, twierdzenia, wzory</li> <li>5. T. Jurlewicz, Z. Skoczylas, ALgebra liniowa 1, Przykłady i zadania</li> </ol>		
<p><b>Additional bibliography:</b></p> <ol style="list-style-type: none"> <li>1. W. Krywicki, L. Włodarski, Analiza matematyczna w zadaniach, t. I-II</li> <li>2. W. Stankiewicz, Zadania z matematyki dla wyższych uczelni technicznych, t. I-II</li> <li>3. M. Lassak, Matematyka dla studentów technicznych,</li> </ol>		
<p><b>Result of average student's workload</b></p>		
<p><b>Activity</b></p>		<p><b>Time (working hours)</b></p>
1. Lectures		10
2. Classes		10
3. Consultation		5
4. Preparing to classes		20
5. Preparing to pass the lectures		20
6. Preparing to pass the classes		20
7. Literature studying		20
<p><b>Student's workload</b></p>		
<p><b>Source of workload</b></p>	<p><b>hours</b></p>	<p><b>ECTS</b></p>
Total workload	105	4
Contact hours	25	2
Practical activities	10	1