STUDY MODULE DESCRIPTION FORM

Name of the module/subject		Code
Mathematics		**1011101321010340063**

Field of study	Profile of study (general academic, practical)	Year /Semester
Logistics - Full-time studies - First-cycle studies	**general academic**	**1 / 2**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
-	**Polish**	**obligatory**

Cycle of study:	Form of study (full-time,part-time)
First-cycle studies	**full-time**

No. of hours				No. of credits
Lecture: **15**	Classes: **30**	Laboratory: **-**	Project/seminars: **-**	**4**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
other	**university-wide**

Education areas and fields of science and art	ECTS distribution (number and %)
technical sciences	**4 100%**
Technical sciences	**4 100%**

Responsible for subject / lecturer:

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Responsible for subject / lecturer:

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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 selested 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.
Ordinary differential equations.
Functions of several variables.

Teaching methods:
Lecture - informative and conversational lecture
Exercises - a method of training

Basic bibliography:

1. Foltyńska, Z. Ratajczak, Z. Szafrański, 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

Additional bibliography:

1. W. Krysicki, 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

Result of average student's workload

Activity	Time (working hours)
1. Lectures	15
2. Classes	30
3. Consultation	15
4. Preparing to classes	15
5. Preparing to pass the lectures	23
6. Exam	2

Student's workload

Source of workload	hours	ECTS
Total workload	100	4
Contact hours	62	2
Practical activities	30	1