MATHEMATICS

Title of Study Programme and Code	Type (compulsory/optional)	Cycle	Year of study when the component is delivered (if applicable)
Environment Protection Engineering, 6531EX042	Compulsory	1st	1st

Semester/trimester when the component is delivered	Number of ECTS credits allocated	Language of instruction	Mode of delivery (face-to-face/e-learning/…)
2nd	8	LT, EN, RUS	Face-to-face

Learning outcomes		Study methods	Assessment methods
After completion of the study subject, a student should be able:		Interpretation of concepts; Analysis of the problem solution; Solution of the individual tasks; Simulation; Group work.	Defense of the individual homework; Defense of the group work; „MS Excel for the solution of the mathematical tasks"; Tests T1 and T2; Defense of the individual homework; Exam.
LO 1	To apply theory of functions, linear equations, linear inequalities, functions derivatives and integrals, vectors describing and modeling simple technological processes.		
LO 2	To systematize data.		
LO 3	To choose the right statistical model for the research problem, to calculate the required characteristics of the model.		

Prerequisites (these courses must be sucessfully completed prior to taking this particular course)
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Course content

1. Set theory. Operations on sets.
2. Functions. Limits of functions.
3. Function derivative.
4. Integral.
5. Matrices and determinants.
6. Systems of linear equations.
7. Linear inequalities and linear programming.
8. Probability t heory.
9. Mathematical statistics.

Recommended or required reading and other learning resources/tools

1. V. Bartkutė-Norkūnienė (2014) Applied Mathematics. Distance learning course: (https://moodle.utenos-kolegija.lt/course/view.php?id=242)
2. Finite Mathematics , Eighth Edition, by Margaret L.Lial, Raymond N. Greenwell, and Nathan P. Ritchey. Published by Addison Wesley .Copyright © 2005 by Pearson Education, Inc. (http://myweb.usf.edu/~grenke/algebra/interest.pdf