The title of the course	Mathematics II
Faculty	Faculty of Management and Transport
The level of studies	Bachelor Studies or Engineering Studies
Semester	Winter or summer
The form of classes and number of hours	15 h
Classes conducted for Polish students. Erasmus students can join them	No
Language of instruction	English
The number of ECTS	2 ECTS Lectures and Exercises with the teacher 15h Student's own work: • Homeworks 25 h • Preparation for the test 10 h TOTAL: 50 h
Teacher	Jarosław Jabłonka, PhD
The aims of the course (maximum 500 characters)	Learning and mastering the basic concepts of integral calculus of functions of one variable. Demonstrating the application of a definite integral. Discussion of elements of differential and integral calculus of functions of two variables. Acquainting with the basics of ordinary differential equations. Showing the applications of mathematical methods in solving technical and economic problems.
The content of the course: main topics and key ideas	Integrals of one and two variables Differential calculus functions of two variables. Introduction to ordinary differential equations. Applications of mathematics in economics and technology.
Didactics methods	Lecture Method Content-Focused Methods Problem Solving Methods Creative Thinking
Course requirements	Mathematics I
Literature (basic and supplementary)	Hirst K. E. , Calculus of One Variable, Springer-Verlag London Limited, 2006 Ghorpade S. R., Limaye B. V., A Course in Calculus and Real Analysis, Springer Science+Business Media LLC, 2006 Pao K., Soon F., Student's Guide to Basic Multivariable Calculus, pringer Science+Business Media New York 1993

	Keskin A. Ü., Ordinary Differential Equations for Engineers Problems with MATLAB Solutions, Springer Nature Switzerland AG, 2019 Agarwal R. P., O'Regan D. , An Introduction to Ordinary Differential Equations, Springer Science+Business Media LLC, 2008
The effects of the education - **knowledge** - **skills** - **social competences**	Knowledge: A Student knows the basic concepts of differential and integral calculus of functions of one variable and two variables.. Skills: A Student calculates: • indefinite and definite integrals of functions of one variable, • the partial derivatives and extremes of functions of two variables, • integrals of functions of two variables, • simple ordinary differential equation Social competences: A Student can organize his/her work, respecting ethical and professional standards.