Course: Mathematics 1   credits: 4

Course code	ELVP18AMATH1	**Modes of delivery**	Lecture
Name	Mathematics 1	**Assessments**	Mathematics 1 - Assignment
Study year	2020-2021		
ECTS credits	4		
Language	English		
Coordinator	J.M. Wilson		

Learning outcomes

- The student:
- simplifies mathematical expressions containing powers and roots.
- solves various equations such as linear equations, quadratic equations and systems of linear equations in two or three variables.
- carries out trigonometric calculations using the basic rules and formulae for angles/triangles.
- carries out logarithmic calculations using the basic rules and formulae for logarithms.
- rewrites, solves and/or analyses mathematical functions, such as first and second degree polynomials, roots, powers, absolute value and exponential functions, by means of sketches and finding intersection points.
- analyses mathematical functions by using various standard techniques, including the application of simple transformations (such as scaling, translation and reflection) and renders the functional representation and graphical sketches by finding horizontal, vertical and oblique asymptotes (if any) of curves using standard methods (e.g. limits).
- carries out calculation of complex numbers using the basic rules and formulae of complex numbers and vectors.

Content

Analysis of Engineering problems is one of the most important functions of an engineer. Mathematics is arguably the most important and most commonly used tool in order to analyse problems. In this course, some of the basic mathematical tools are developed that are often required in engineering.

Included in programme(s)

Electrical Engineering Major Sensor Technology

School(s)

Institute of Engineering

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