

Science basics (40-60 cr.):

Title of the course: Mathematics I.	NEPTUN-code: NMXAN1EBNE	Weekly teaching hours: $l+cw+lb$ 3+3+0	Credit: 6 Exam type: e
Course leader: Aurél Galántai, Dr.	Position: professor	Required preliminary knowledge: -	
Curriculum:			
<p>The main goal of the course is to introduce the set theory marks and to describe the algebraic and geometric properties of the real number line, complex numerical plane and the three-dimensional space. Additionally, with the help of the concepts of sequences, real functions and convergence to construct univariate differential and integral computing in a way which makes the students capable of solving any technical / mathematical / physical problems that arise in subsequent studies.</p> <p>+ using Matlab's numerical / symbolic mathematics software suite in the education.</p>			
Professional competencies:			
<p>Knowledge of general and specific mathematical, natural and social scientific principles, rules, relations, and procedures as required to pursue activities in the special field of environment protection.</p> <p>In possession of state-of-the-art IT skills, being able to use professional databases and certain design, modelling, and simulation software depending on their specialty.</p> <p>Able to participate creatively in engineering work based on their multidisciplinary skills, as well as to adapt to continuously changing circumstances.</p> <p>Open to professional cooperation with specialists related to their profession but involved in other areas.</p>			
Literature:			
1. Thomas – Weir – Hass: Thomas' Calculus, 13e, Pearson, 2013.			
2. Anton – Bivens – Davis: Calculus, 10e, Wiley, 2012.			
3. Anton – Rorres: Elementary Linear Algebra, 11e, Wiley, 2013.			