

<i>Name of the subject:</i> <b>Mechanics II (Strength of Materials)</b>	<i>NEPTUN-code:</i> BGBMN2ENND	Credits:4 ECTS: 6
<i>Subject leader:</i> dr. T. Goda	<i>Title:</i> assoc. prof.	
<i>Course description:</i>		
<p>The aim of this subject is to introduce the principles of strength of materials and their practical application. To reach this the subject deals with the themes as follows: fundamentals of strength of materials, introduction to the theory of elasticity, general state of stress, stress tensor, principal stresses and principal directions, representation of stress states by Mohr's circles of stresses, normal and shear strains, strain tensor, principal strains and principal axes, stress-strain relation of linear elastic materials (Hooke's law), strain energy, tension and compression, shearing and bending, deformation of a bended beam and its stress state and strain energy, torsion, elastic and plastic buckling, combined static load, dimensioning on strength, distortion energy theory, maximum shear stress theory, energy theorems of structural mechanics.</p>		