

<b>Name of the subject:</b> <b>Materials science for engineers</b>	<b>NEPTUN code:</b> <b>KEEVR5ABNE</b>	<b>Weekly hours:</b> 2 lec + 0 pr + 1 lab	<b>Credit: 4</b> <b>Req: Examination</b>
<b>Subject leader:</b> <b>Dr. László Balázs;</b> <b>György Meszlényi</b>	<b>associate professor;</b> <b>engineering teacher</b>	<b>Prerequisites:</b> -	
<b>Description of the subject:</b>			
<p>Learning objectives: Introduction to and basic knowledge of materials science. Relations among preparation methods, structure and properties of materials.</p> <p>Giving students practical materials science testing knowledge, applicable in the industrial practice. The material covered roughly corresponds to that contained in the course of the Hungarian language B.Sc. programme.</p> <p>Tasks:</p> <ul style="list-style-type: none"> <li>• Learning theoretical background of measurements</li> <li>• Measure the properties of given materials</li> <li>• Recording and evaluating the measurement data in the laboratory practice report.</li> </ul> <p>Topics to be covered: Spectrophotometry; measuring concentration; Polarization optics; Insulating materials: measuring dielectric parameters; Mechanical properties: tensile strength and hardness; Microscopy basics.</p>			
<b>Literature</b>			
<p><b>1. Fundamentals of Materials Science and Engineering</b> William D. Callister, Jr.; David G. Rethwisch; 910 pages; John Wiley &amp; Sons; 4 Edition (2013); ISBN: 978-1-118-32269-7</p> <p><b>2. Semiconductor Devices: Physics and Technology</b> Simon M. Sze, Ming-Kwei Lee; 592 pages; John Wiley &amp; Sons; 3 Edition (2012); ISBN-10: 0470537949; ISBN-13: 978-0470537947</p>			