

<b>Course title: Engineering Acoustics</b>	<b>Neptun code: GEGET408-a</b>
<b>Course coordinator: Károly JÁLICS, associate professor, PhD</b>	
type and number of lesson: <b>28 (14 x 2/week)</b>	
method of accountability: <b>colloquium</b>	
curriculum location of the subject: <b>autumn</b>	
pre-study conditions:	
<b>The task and purpose of the subject:</b>	
Understanding of noise generation, propagation and control, perception of sound and vibration consideration of vibroacoustic aspects in the machine design	
<b>Course description:</b>	
Basic concepts of acoustics: airborne and structure-borne noise, sound and noise; Acoustic indicator functions: sound pressure, intensity, sound power, frequency, mechanical and acoustic impedance; sound propagation; Measurement and assessment of noise emission, effect of noise exposure for humans; Noise abatement and sound insulation, silencers; Noise generation and noise reduction of machines and machine elements: Internal combustion engines, electric motors, turbomachinery, gear transmissions, bearings, traction mechanisms, brakes; Acoustic measuring technique in practice; Numerical methods in the acoustics: FEM, BEM etc.	
<b>Required literature:</b>	
<ol style="list-style-type: none"> <li>1. Fahy, Frank: Foundation of Engineering Acoustics, 2003, 2003 Elsevier Ltd., ISBN 978-0-12-247665-5</li> <li>2. Möser, M.: Engineering acoustics, Springer Verlag, 2009, ISBN978-3-540-92722-8</li> <li>3. Own script distributed at the course</li> </ol>	
<b>Recommended literature:</b>	
<ol style="list-style-type: none"> <li>1. Vér, István L.; Beranek, Leo L.: Noise and Vibration Control Engineering, John Wiley &amp; Sons, 2006, ISBN 9780471449423</li> </ol>	