

Course description

Code: 2Y038	Abbr: NoiseVib	Title: Noise and Vibrations	
MSc. degree programme in: Energetics Technology, Vehicles and Engines For specialisation in:			
Lecturer:	prof. Ing. Peter Zvolenský, CSc. and doc. Ing. Juraj Grenčík, PhD., Department of transport and handling machines		
Semester: Summer Recommended: 8	Number of hours: <i>Lectures - Seminars - Laboratory work</i> Per week: 2-2-0 Total per semester: 26-26-0		ECTS Credits: 6
Prerequisites: Mechanics			
Assessment: recognition of course work - 40% written and oral examinations - 60%			
Aims and objectives: The goal of the course is to learn and practise theory, methods and procedures for noise and vibrations reduction in technical practice.			
Course content: Noise and vibration sources in technical practice, effects of noise and vibrations on human, sound fields and sound propagation in space, theoretical models of noise sources, sound waves propagation in solid bodies, theory and methods of noise and vibration attenuation, sound absorption, structural noise reduction, noise generated by machines and equipment, modern methods of the experimental analysis of noise and vibrations, vibration diagnostics of machines and equipment, modelling of noise fields. Advanced methods and instrumentation for noise measurement and evaluation.			
Recommended texts: Hlavňa, V., Kukuča, P., Stuchlý, V., Zvolenský, P.: Dopravný prostriedok a životné prostredie, EDIS Žilina 1996 , Žiaran, S.: Ochrana človeka pred hlukom a kmitaním, STÚ Bratislava 2001 Bruel and Kjaer: Measuring Sound, Measuring Vibration, Environmental Noise Measurement			
Note:		Date of the last revision: 05.12.2022	