Level: bachelor

Course title: Protection against noise

Status: elective

ECTS: 6

Requirements: Mechanics, Thermodynamics, Electromagnetism

Learning objectives

To introduce students to the basic characteristics, adverse effects and protective measures against noise.

Learning outcomes

After completion of the course, students should have developed:

- General skills: reading professional literature, acquire the basic knowledge to measure basic physical quantities of the noise, ability to compare measured quantities with existing normative acts and propose safeguards.
- Specific skills: Students are trained to make a selection of procedures to solve the problem of noise on the basis of the measured noise parameters and depending on the type of noise source.

Syllabus

Theoretical instruction

The origin of sound propagation. Objective and subjective characteristics of sound waves. Frequency spectra. Structure and function of hearing. Physiological quantities of sound. Fletcher-Munson curves. Instrument for measuring sound levels. Standardization of the harmful effects of noise. Standardization of noise in relation to the protection of hearing, speech intelligibility and psychological effects. Assessing the risk of occupational damage. The spatial acoustics. Sound absorption. Sound isolation. Communal (municipal) noise. Administrative and organizational, educational and medical measures for protection against noise pollution.

Practical instruction

The exercises that follow the content of lectures: Measurement of noise by sonometer. The processing of measured data. Including students in the monitoring of traffic noise.

Weekly teaching load				Other:
Lectures: 3	Exercises: 1	Other forms of teaching:1	Student research:	