

## Tárgytematika / Course Description

### Noise and Vibration Control

AJNM\_KMTA001

Tárgyfelelős neve /

Teacher's name: Dr. Beke Péter

Félév / Semester: 2021/22/1

Beszámolási forma /

Assesment: Vizsga

Tárgy heti óraszám /

Teaching hours(week): 2/1/0

Tárgy féléves óraszám /

Teaching hours(sem.): 0/0/0

### OKTATÁS CÉLJA / AIM OF THE COURSE

The subject deals with the noise and vibration issues in the built environment. The goal of the subject is that the students should be able to understand the basics of the technical acoustics, can perform simple noise- and vibration measurements and understand and apply the main legal and technical problems connected to the planning of infrastructures.

### TANTÁRGY TARTALMA / DESCRIPTION

1. hét	Basics of technical acoustics. Noise- and vibration levels.
2. hét	Measuring noise and vibration. Noise level meters, measuring systems.
3. hét	Free field noise propagation.
4. hét	Noise propagation in rooms.
5. hét	Building and room acoustics.
6. hét	Noise level limiting values inside of buildings and in the environment.
7. hét	Mid-term test.
8. hét	Traffic noise: Noise from roads and its propagation. Possibilities for reduction.
9. hét	Traffic noise: Railway noise and its propagation. Possibilities for reduction.
10. hét	Noise from the point of view of town planning: noise maps, calculation methods, quiet areas, areas for noise reduction.
11. hét	Vibration effects and regulation on human being and on buildings.
12. hét	Vibration propagation in soil. Methods for investigation.
13. hét	Vibration caused by road and railway traffic. Possibilities for reduction.
14. hét	End-off term test.

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## **SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESSMENT'S METHOD**

Two tests during the semester. Oral and written exam.

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## **KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL**

- Lecture notes
- Randall F. Barron (2002): Industrial Noise Control and Acoustics. - CRC Press