

Faculty of Architecture**Department:** Architecture and Urbanism**Professional area:** Architecture, Civil Engineering and Geodesy**Major:** Architecture**Educational-and-qualification Degree:** Master**COURSE DESCRIPTION**

1. **Course unit title:** Introduction to the Architectural Acoustics
2. **Course unit code:** ARC 2014
3. **Type of course unit:** elective
4. **Level of course unit:** Master
5. **Year of study:** fourth
6. **Semester when the course unit is delivered:** eighth
7. **Number of ECTS credits allocated:** 3
8. **Name of lecturer:** Assoc. Prof. Rositsa Petkova, PhD
9. **Learning outcomes of the course unit:** The aims and objectives of the subject Introduction to the Architectural Acoustics are to prepare students for studying other subjects which require knowledge in this field; Studying the environment where sound is diffused, studying the quality of sound defines the place of the subject as elective in the general course of training.
10. **Mode of delivery:** face-to-face
11. **Prerequisites and co-requisites:** Students should have knowledge in the basic physics phenomena and laws. They need to be acquainted with the properties of the building materials; to have taken the courses in public and residential buildings. Elementary knowledge of electric engineering is necessary. Students have to be familiar with urban planning design.
12. **Course contents:** Studying the environment where sound is diffused, studying the quality of sound defines the place of the subject as a necessary one in the general course of training. Acoustics is necessary when deciding on designing the hall shape in public buildings, such as conference halls, exhibition halls, lecture halls, concert halls, sports halls, general purpose halls, cinema halls, drama and opera theatres, etc. The acoustic design is done in all phases of architectural and building design including remodeling. It is of great importance to know the geometric acoustics, sound absorbing properties of the materials, sound absorbing structures, sound insulation, noise and vibration diffusion.
13. **Recommended or required reading:**
 - Зарков, Н., Акустика на зали и борба с шума, С., “Техника”, 1971.
 - Под редакцията на Оболенский, Н., Архитектурная физика, Москва, Стройиздат, 2001 г.
 - Георгиев, Е. Музикална акустика, Музика, С., 1986.
 - Маляков, Сл., Обща звукотехника-учебник за БДК, Музика, С., 1976.
 - Маляков, Сл., Електроакустически преобразователи-учебник за БДК, “Музика”, С., 1977
 - Дудрова, Б. и колектив, Строителна физика за архитекти, С., Техника, 1988.
 - Вълчев, Ив. Електроакустика – Техника., С., 1975.
 - Осипов, Г., и др., Градостроительные меры борьбы с шумом, Москва, Стройиздат, 1975.
 - Ковригин, С., Крышов, С., Архитектурно-строительная акустика, М., Высшая школа, 1986.

• Николов Н., Градоустройствена акустика, С., СУ, 2006.

14. **Planned learning activities and teaching methods:** lectures, seminars, contact hours

15. **Assessment methods and criteria:** The grade from the semester exam is formed as follows: written examination - 70%; oral examination – 20 % continuous assessment - 10%.

16. **Language of instruction:** Bulgarian

17. **Work placement(s):** none