

Creating online course materials for a teaching platform in the field of acoustics

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Introduction

With the goal of educational materials being available and accessible for everyone, adequate online course materials need to be prepared. The recent coronavirus pandemic highlights the importance to provide specific content for distance learning. For the field of acoustics, the ACOUCOU online platform was created in order to develop and offer free courses and materials using innovative teaching methods applying new technologies such as interactive visualizations, videos and gamification elements. The materials are intended either directly for students and professionals who want to extend their knowledge in one of the many sub-disciplines or for teachers who can use the offered materials as blended-learning elements complementing traditional course material. In a recently started project called *Acoustics Knowledge Alliance* (ASKnow), which is funded by the Erasmus+ program of the European Union, an international consortium prepares and evaluates contents for five new courses on various topics of acoustics. The consortium of this project consists of four universities, four companies and many associate partners. After internal testing and reviewing of all materials, the courses will be added to the ACOUCOU platform. This work presents the concept of the platform and the courses which will be prepared in the ASKknow project.

Online teaching platform

On the ACOUSTic COURseware platform (ACOUCOU, <http://acoucou.org>) professionals, educators or students can find free educational material related to acoustics [1]. Created by accomplished practitioners and scientists, it is intended primarily for engineers to extend their acoustics-related knowledge. In its courses, innovative and multidisciplinary approaches of teaching and e-learning are combined to visualize and explain acoustic phenomena. Currently, it already contains two courses, *Acoustics for Industry* (ACI, <http://aci.acoucou.org>) and *Acoustic Course for Engineers* (ACE, <http://ace.acoucou.org>). Additionally, educational materials for architectural acoustics (ArAc) can be downloaded. These materials will be extended by five more courses on acoustics in the ASKknow project, which will be presented in the following section.

ASKknow project

This project started in early 2020 and involves partners from four European universities (University of Le Mans, KU Leuven, RWTH Aachen University and University of Zagreb) and four companies (KFB Acoustics, HEAD Acoustics, Kahle Acoustics and Jazzy Innova-

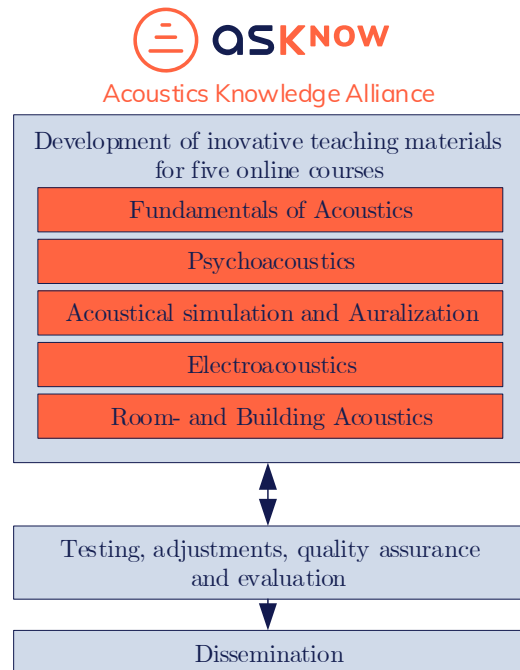


Figure 1: Overview of the ASKknow project.

tions). With the exception of Jazzy Innovations, who are responsible for the design and implementation of the web-based course elements, all partners are experienced in either teaching acoustics or are active as consultants and practitioners in the field of acoustics.

Figure 1 presents the contents of the project including the five courses which were chosen to cover a wide range of acoustics-related topics. In all courses, at least four partners are involved in an interactive process to prepare, test and evaluate the course materials, which will then publicly disseminated around the end of the three year project phase. Until then, the courses will be reviewed internally by the project partners and externally by various associate partners of the project. Access to the platform will be free and the course materials will be published under the CC BY-NC-ND 4.0 license.

More information about the courses and the current progress of the project can be found on the project website <http://asknow.acoucou.org>.

References

- [1] K. Jaruszewska et al., ACOUCOU Platform to Acquire Professional Skills and Knowledge in the Field of Acoustics. In *Proceedings of the 23rd International Congress on Acoustics: 9-13 September 2019 in Aachen, Germany*.