

Acoustics and Audio Technology

Basic information

Sivuaine suomeksi: Akustiikka ja audioteknologia

Biämne på svenska: Akustik och ljudteknik

Code: ELEC3033

Extent: 20-25 credits

Language: English

Professor in charge: Ville Pulkki (ELEC)

Target group: All students with sufficient prerequisite knowledge.

Application procedure: No separate application procedure.

Prerequisites: Recommended ELEC-C5230 Digitaalisen signaalinkäsittelyn perusteet or equivalent knowledge.

Content and structure of the minor

The minor in Acoustics & Audio Technology offers fundamental knowledge about acoustical phenomena, human hearing and audio technologies, and also facilitates the students to apply the knowledge in practice.

The fields of electroacoustics, room and building acoustics, noise, musical acoustics, and audio signal processing are focus-points of the studies. Technical Psychoacoustics that deals with human hearing mechanisms is central to the studies, as a cornerstone in the development of acoustical and audio technologies for human listeners. Put together, these fields constitute Communication Acoustics, where a human listener is always at the end of the acoustic communication channel. Currently, Digital Signal Processing is also an important tool in the Acoustics and Audio Engineering, and hence the teaching emphasizes both the understanding of its general principles and the fundamental audio processing algorithms.

The minor consists of one compulsory course and 3-4 optional courses:

Code	Name	Credits	Teaching period (s)
Mandatory courses		5	
ELEC-E5600	Communication Acoustics	5	I
Optional courses		15-20	
Choose 3-4 courses			
CS-E5500	Acoustical Measurements P	5	I
ELEC-E5630	Acoustics and Audio Technology Seminar P (varying content)	5	I V - V
ELEC-E5610	Acoustics and the Physics of Sound	5	II

ELEC-E5620	Audio Signal Processing P	5	III - IV
CS-E5530	Virtual Acoustics	5	III - IV
