

SYLLABUS

Acoustics for sound production 7.5 credits L0011A

Akustik för ljudproduktion

Course syllabus admitted: Autumn 2023 Sp 1 - Present

**DECISION DATE
2021-02-17**

Acoustics for sound production 7.5 credits L0011A

Akustik för ljudproduktion

First cycle, L0011A

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Teknisk akustik	Other Subjects within Technology

Main field of study

Audio Technology

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language and S0016F Audio Technology 1

Selection

The selection is based on 1-165 credits.

Course Aim

After completing the course participants should be able to:

- Describe fundamental acoustic, electroacoustic, and psychoacoustic phenomena of importance for recording and reproduction of sound.
- Perform and analyse fundamental measurements of acoustic properties of rooms and loudspeakers.
- Chose, specify and calculate the effects of acoustic treatments used in studios, control rooms and listening rooms.

Contents

This course covers:

- Fundamental physics of sound
- The function of hearing, the physiology of hearing, hearing damages, psychoacoustics and perception of sound
- Room acoustics
- Sound insulations and sound reduction
- Fundamentals of acoustic measurement technology
- Acoustic design of listening rooms, studios and control rooms
- Acoustics of sound reproduction
- Basic concert hall acoustics

Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

This course includes:

- Lectures, demonstrations, and problem solving exercises
- Laboratory work
- Project work

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. The course is assessed through:

- Written exam
- Mandatory laboratory exercises with written reports
- Oral presentation and written report of project work

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Course offered by

Department of Civil, Environmental and Natural Resources Engineering

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Written exam	G U 3 4 5	6	Mandatory	A07	
0004	Laboratory work and project work	U G#	1.5	Mandatory	S17	

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Assistant Director of Undergraduate Studies Eva Gunneriusson, Department of Civil, Environmental and Natural Resources Engineering 2021-02-17

Syllabus established

The syllabus has been confirmed by the Department of Human Work Sciences 2007-02-28