FDM3515 Sound-driven design 7.5 credits

Ljud-driven design

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for FDM3515 valid from Spring 2025

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

The upper secondary course English B/6 or equivalent.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After passing the course, the student should be able to:

- describe the fundamental theoretical and conceptual bases of sound-driven design

- describe how sound-driven design has developed historically
- describe the application space for sound-driven design including product design, mobility, sustainability, health, media production, etc.
- describe the relationship between listening, sound making and interactivity in sound-driven design
- analyse and describe opportunities and limitations to develop sound-driven design projects
- use sound-driven design to address a variety of use-cases (including in the context of sustainability)
- use application programming interfaces and sound design software for sound-driven design
- analyse the possibilities of sound-driven design to support personalisation
- analyse ethical challenges and risks with sound-driven design: for instance, the negotiation of sound preferences in shared spaces
- analyze applications of sound-driven design from critical, inclusive, and ethical perspectives to determine situations and contexts wherein deployment of sound/alarms/noise ought to be limited or altogether avoided (e.g. intensive care in hospitals) or where it may be the only possible channel of communication
- analyse and discuss possibilities of sound-driven design in relation to sustainability
- assess and discuss questions around equal opportunities, diversity and equal conditions related to sound-driven design

in order to be able to develop and use sound-driven design for media technology and human computer interaction from human, ethical and sustainable perspectives.
The course aims to serve both researchers with little or no prior experience in sound, who would like to include sonic and listening dimensions in their work, and sound researchers who would like to view their work in the wider context of sound-driven design.

Course contents

The bases of sound-driven design (historical, theoretical, conceptual and practical).

The bases of listening in interaction, and sound production in both analogue and digital domains.

Common applications of sound-driven design (including trends).

Application of programming interfaces and sound design software for sound-driven design.

Sound-driven design applications on a continuum from functional to creative.

Education and sound-driven design (challenges, possibilities and risks).

Ethical perspectives on use of sound-driven design (for example listening and ethics of care, sound and agency).

Gender equality, diversity and equally conditions perspectives and problems in sound-driven design (for example the articulation of dominance and power through sound).

Future development of sound-driven design.

Examination

- LIT1 - Literature assignment, 2.5 credits, grading scale: P, F
- PRO1 - Project work, 5.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.