First semester

Semester project
Foundations of SMC
(Grundlæggende behandling af lyd og musik)
Workload: 15 ECTS, consisting of project work
Semester: 1st semester

Prerequisites: Bsc in Computer Science, Engineering, Medialogy or equivalent

Objectives:
Investigate sound and music computing from a formal perspective, with a focus on the following: 1) constructing an application related to sound processing or 2) costructing and application related to new interfaces for musical expression, 3) a combination of 1) and 2).
Additionally, students are required to work according to a scientific method and to report results in scientific forms, such as papers and posters.

Students who complete the module will gain knowledge, skills and competences as follows:

Knowledge:

- Must be able to understand the core elements in sound processing, either considering sound as input modality (machine listening, such as segmentation and feature extraction, modeling and prediction, coding and classification, etc.) or output modality (sonic interaction design, new interfaces for musical expression).
- Must be able to understand principles of real-time sound processing.

Skills:

- Must be able to **apply** a sound engine, to design and implement a system which uses sound as input or output modality

Competencies

- Must be able to **synthesize** relevant theory, techniques and tools to produce new knowledge and/or solutions
- Must be able to **synthesize** and discuss research-based knowledge in the area of sound and music computing, in the formats of a scientific paper and a poster, and in the format of a 15 minute conference presentation

Type of instruction:
Academically supervised student-governed problem oriented project work

Exam format:
In accordance with the current Framework Provisions and directions on examination from the Study Board for Media Technology.
Oral examination with an internal censor based on a scientific paper written in English.

Evaluation criteria: The criteria for the evaluation are specified in the Framework Provisions.