



## Course module description

### General module information

Title: Music Perception and Cognition

Type: Course module

Language of instruction: English

Location of the lecture: Campus Copenhagen

ECTS points: 5 ECTS

Period: 1 September 2022 — 31 January 2023

### Placement

1st semester, M.Sc. in Sound and Music Computing

### Module coordinator

[Sofia Dahl](#) (coordinator), [Judi Stærk Poulsen](#) (secretary)

### Academic content and relationships to other modules/semesters

The formal study plan description of the module can be found here:

<https://moduler.aau.dk/course/2022-2023/MSNSMCM1204?lang=da-DK>

Music comes in many forms and flavors and holds an important place in all cultures around the world. Musical information is created, communicated, and processed in a wide variety of contexts and activities such as listening, dancing, performing, composing and improvising. Musical information may encode musical sound, perceived musical structure, the affective or semantic content of music, musical gestures or musical interactions. The ability to design and build effective and efficient computing systems for processing musical information requires an understanding on how such information is created, represented, communicated and processed by humans.

This course introduces experimental, theoretical, computational and neuroscientific work that has contributed to our understanding of how musical information is created, represented, communicated and processed, both in the brain and the body, when humans perform musical tasks.

### Objectives and learning goals

After this course the successful student should be able to:

- ... Discuss scientific literature on music cognition and use theories and models proposed.
- ... Formulate a testable hypothesis for how we perceive or interact with music, outline and (partly) implement an experimental design that can test it.
- ... Explain the main types of musical structure, and discuss how they are perceived and communicated.
- ... Explain the role of auditory streaming in music with examples.
- ... Explain and model expressive performances (e.g., through manipulation of timing and dynamics)
- ... Explain current theories for how music represents and communicates emotion.
- ... Discuss and give examples of how music and movement is related (embodied music cognition).
- ... Evaluate current experimental, theoretical, and computational research in music perception and cognition.

### Extent and expected workload

The learning goals will be achieved through a combination of activities with the following estimated workload:

Individual reading and preparation (including video lectures); lectures and exercises (including participation in discussions, demonstrations, and experiments) 3 ECTS

Mini-project and report 2 ECTS.

### Pre-requisites for participation

See the module description (find the link above) for any further detail on pre-requisites.



### **Examination**

Modality and duration: Individual oral exam based on submitted project. The duration will be 15 minutes followed by 5 minutes deliberation

Assessment: In accordance with the 7-point grading scale.

Pre-approved aids: Mini project report and slides for presentation of same

Prerequisites for participation: Timely hand-in of project documentation.

In the beginning of the exam the student will do an approximately 5 minutes presentation of the developed project, after which the examiner will ask follow-up questions within the topic of the project and curriculum topics related to it. The grade will be based on a joint evaluation of the quality of the project and the oral examination.

Information concerning the mini-project:

- The purpose of the mini-project is to help the student achieve the learning objectives by going in depth with theories and methods within music perception and cognition.
- The topic of the mini-project can be chosen from a pre-defined list or, after approval from the teacher, the student's own ideas.
- The workload should correspond to 2 ECTS per person. Depending on the topic, and if approved by teacher, students can work in small groups and submit joint documentation for the project.

The project must be documented with text, links to audiovisual material, images and used code, and the documentation should be submitted in Digital Exam before the deadline.