



### General module information

Title: Music Perception and Cognition

Type: course module

Language of instruction: English

ECTS points: 5 ECTS

Period: 1 September 2015 — 31 January 2016

### Placement

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

*Given both in Copenhagen and Aalborg*

### Module coordinator

Copenhagen: Sofia Dahl (coordinator), Judy Poulsen (secretary)

Aalborg: Gissel Velarde (teaching assistant), Anne-Marie Rasmussen (secretary)

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

The formal study plan description of the module can be found here (page 8):

[http://www.sict.aau.dk/digitalAssets/101/101078\\_94332\\_kandidat-lyd--og-musik.pdf](http://www.sict.aau.dk/digitalAssets/101/101078_94332_kandidat-lyd--og-musik.pdf)

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, discuss how they are perceived.
- ...explain the role of auditory streaming in music with examples.
- ...model expressive performances (e.g. through manipulation of timing and dynamics).
- ...explain current theories for how music represent and communicates emotion.
- ...discuss and give examples of how music and movement is related (embodied music cognition).

### Extent and expected work load

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

Individual reading and preparation, lectures and exercises 3 ECTS

Individual miniproject and report 2 ECTS



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### **Pre-requisites for participation**

Admittance into the Sound and Music Computing master. A Bachelor's degree in computer science, engineering, Medialogy or equivalent.

The prerequisites for participation are listed in the study plan:

[http://www.sict.aau.dk/digitalAssets/101/101049\\_10209\\_medialogi--aalborg--esbjerg-og-k--benhavn--2010.pdf](http://www.sict.aau.dk/digitalAssets/101/101049_10209_medialogi--aalborg--esbjerg-og-k--benhavn--2010.pdf)

### **Examination**

The learning goals will be assessed through an oral exam with internal censor. The oral exam will be based on the individual miniproject and the theory covered in the course. Assessment is performed in accordance with the 7-point grading scale.

### **Course module description**