

## COURSE MODULE DESCRIPTION

### Sound in interaction

4,5 credits

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**Responsible teacher/-s:** Ricardo Atienza

**Participating teachers:** Robin McGinley

**Visiting lecturers:** Monica Sand, Andrew Brown

**Week:** 5-7 2019

#### General:

The aim of this course is to explore interactive and real-time processes within the field of sound and in connection with other sensorial dimensions. Essentially organized as a workshop, the participants will develop their skills in this field via the realization of a collective sensitive environment to be exhibited at the end of the course.

The course will give access to the Sound Lab as a working station, as providing the necessary knowledge for handling its equipment.

#### Learning outcomes

The programme of the course will be based on the following aspects:

- *Sonic "cultures" and tools* (week 1, introduction),

Exploring and discussing relevant interactive pieces in the fields of Art, Design and Research.

Learning to describe sound: an overview of the main sonic concepts, methods, and strategies.

Essentials about sound generation, recording, editing, composing and processing. Overview of the main editing and generative sound tools (software / hardware); special attention will be given to the free software domain,

- *Working with real-time and interactive processes*,

Sonic flow generation and manipulation, evolving from close to open generative processes.

Formation in graphical programming environments for sound; this course will focus on the open and free software domain: Pure-Data, lanniX, etc. (cross-OS platforms)

Introduction to data and image/video interactive structures in Pure-Data.

- *Practice-based learning: a workshop structure*,

Working with the concepts, methods and tools explored, through the realization of a collective sound project to be exhibited/performed at the end of the course. Each student will be invited to develop its own tools to interact within a collective and open sonic (sensorial) environment.

#### Course structure and teaching methods:

The course will be structured around a combination of workshops, explorative sessions and lectures. The outline of the course will be the following:

Week 1: Introduction to the field of sound.

- Describing sonic matter. Sound/audio parameters, concepts, language.
- Sound generation and edition: sound recording, synthesis methods and techniques.
- Introduction to Sound Art / Design / Research.
- Space and Sound: simulating, representing and evoking through sound.
- Body, Motion and Sound: pulse, scale and itinerary. Embodied sound, the reference system.

- Time and Sound: the circle, the line, the point. About variation in sonic discourse.

This first week will run in parallel to the Research Week at Konstfack, with a specific node on sound: *Listening - imagining, encountering and inventing the aural*. The participant students will be invited to become an active part of this sonic node through their participation in the lectures, workshops and events organised.

### Weeks 2 and 3:

Exploring/acquiring real-time working processes and tools.

- Sound as a flow, sound in interaction,
- Learning from our physical environment: symbolic/iconic or corporeal (enactive) exchanges.
- Mediated interactions: technology as an exchange tool.
- *Pure-Data*: "learning-by-using" introduction to the software,
- *IanniX*: same logic as for *Pure-Data*.
- Communication in between both software.
- Introduction to microcontrollers, sensors and hardware extensions: Raspberry-Pi, Arduino, etc.
- Introduction to low-tech forms of sound production: piezoelectric components, etc.
- Other forms of interaction in sound.

Producing together a sensorial interactive environment by using the different conceptual and technical tools provided.

### **Examination**

The evaluation will be based on each person's contribution to a collective sonic/interactive environment.

The criteria for the evaluation will be the following:

- Appropriation of the tools provided,
- Contribution to the development of the workshop,
- Contribution to the development of the common project,
- Quality of the result as a collective production.

### **Course literature and other teaching aids:**

A list with basic literature in the field for those wanting to start their exploration in advance,

**Augoyard, Jean-François / Torgue, Henry** (éds.) (2006) : *Sonic Experience. A Guide to Everyday Sounds*. McGill-Queen's University Press, Montreal, 216 p.

**Cage, John** (1961): *Silence: Lectures and Writings*, Wesleyan University Press Paperback

**Cardiff, Janet** (2005) : *The Walk Book*, Edited by Thyssen\_Bornemisza Art Contemporary

**Hellstrom, Björn** (2003) : *Noise design : architectural modelling and aesthetics of urban acoustic space*. Bo Ejeby Forlag, Goteborg

**Khan, Douglas** (1999): *Noise, Water, Meat: A History of Sound in the Arts*. MIT Press

**Labelle, Brandon** (2010): *Acoustic Territories. Sound Culture and Everyday Life*. Continuum

**Labelle, Brandon** (2006): *Background Noise. Perspectives on Sound Art*. Continuum

**Murray Schafer, Raymond** (1977) : *The tuning of the world*. McClelland and Steward, Toronto

**Schaeffer, Pierre** (1966) : *Traité des objets musicaux*. Ed. Seuil, Paris

**Truax, Barry** (éd.) (1978) : *Handbook for Acoustic Ecology*. ARC Publications, Vancouver

**Truax, Barry** (1983) : *Acoustic Communication*. Ed. Ablex Publishing Co., New Jersey

### **Schedule**

Weeks 5 to 7, 60 hours in 20 half-day (9.00 to 12.00) or full-day sessions (9.00-12.00 and 13.00-16.00)

### **Document drawn up by:**

Ricardo Atienza Badel, 2018/11/09