

**DOM-E5153**

**INTRODUCTION TO WORKSHOPS AND STUDIO FACILITIES**

# GENERAL LEARNING OUTCOMES FOR DOM-E5153

On successful completion of this course, students will be able to:

- » Identify the possibilities offered by the various workshops, labs, and studio facilities in Aalto ARTS and Aalto Studios.
- » Recognize the safety and health issues associated with working in these facilities.
- » Use the workshops and studios throughout their studies.

# SPECIFIC LEARNING OUTCOMES FOR THIS IMPLEMENTATION

## AUTUMN 2020

- » Complete the orientations to as many workshops in Väre as possible
- » Understand the basics of CAD/CAM using Autodesk Fusion 360
- » Create a custom MIDI controller that combines the use of electronics and digital fabrication tools

# WHAT ABOUT THE OTHER COURSE IN FEBRUARY 2020?

» It will be in Aalto Studios (Otakaari 7)

» Set Design Workshop

» Costume Workshop

» Aalto Fab Lab

» You can take this course multiple times for all the different workshops/studios

# WHY DO I NEED TO KNOW THIS?

Are you interested in the following things?

- » Physical computing
- » Making
- » Craftspersonship

If you are, then this is a course that supports many other courses around these topics.

# WHAT ARE THESE OTHER COURSES?

- » Electronics for Artists, 6 ECTS (Period II)
- » Physical Interaction Design, 3-5 ECTS (Period II)
- » Digital Fabrication I, 6 ECTS (Period III)
- » Digital Fabrication II, 6 ECTS (Period IV)
- » Digital Fabrication III, 6 ECTS (Period V)
- » Digital Fabrication Studio, 3-9 ECTS (Period III-V)
- » Embodied Interaction, 6 ECTS (Period IV)
- » Interactive Art, 6-12 ECTS (2nd Year, Periods I-III)

**PHYSICAL COMPUTING  
AND DIGITAL  
FABRICATION**

**DOM-E5153 (3 ECTS)**

Introduction to Workshops and  
Studio Facilities

**DOM-E5154 (6 ECTS)**

Electronics for Artists

**DOM-E5155 (6 ECTS)**

Digital Fabrication I

**DOM-E5156 (6 ECTS)**

Digital Fabrication II

**DOM-E5157 (6 ECTS)**

Digital Fabrication III

**DOM-E5043 (3-5 ECTS)**

Physical Interaction Design  
*(See Sound in New Media)*

**DOM-E5158 (3-9 ECTS)**

Digital Fabrication Studio

# WHAT IS ELECTRONICS FOR ARTISTS?

Learning outcomes:

- » Identify and explain the roles of physical computing and hardware hacking in the field of new media art.
- » Interpret, implement and design electronic circuit schematics.
- » Design and produce electronic circuits, physical computing prototypes and interactive artworks.

AKA make cool stuff with **Arduinos**, sensors, motors, LEDs etc.

# WHAT IS PHYSICAL INTERACTION DESIGN

Sound in New Media course taught by the **SOPi** research group (Sound and Physical Interaction).

Uses the **Bela Board** and **Pure Data**.

- » Build custom musical instruments or controllers
- » Interactive sound installations



# WHAT ARE ALL THESE DIGITAL FABRICATION COURSES?

Courses spanning for the entire Spring semester following the [Fab Academy](#) course.

- » A course based on How to Make (almost) Anything from MIT
- » Normally you would pay 5000–6000€ to attend the courses
- » You get the content and education for free, but you are not officially part of the Fab Academy Program (you will not receive the diploma)
- » A very technical and do "make everything that is possible from scratch" approach
- » Focuses on open source tools





# IN ORDER TO BE A MAKER I SHOULD JUST TAKE THESE TECHNICAL COURSES?

Nope.

If you just focus on the technology and skills, your work might be polished and sleek, but will lack depth. Without any critical thinking, your work will be naive.

If you just focus on theory and being critical, your work will also lack depth. Being critical without knowing how to implement your ideas, or with only a superficial understanding of technology, your work will also be naive.

# WHAT ELSE SHOULD I LOOK INTO TO GET MORE DEPTH BEYOND THE TECHNICAL SKILLS?

- » Archaeology of Media Infrastructures
- » Media and the Environment
- » Systems of Representation: Culture Lab
- » Courses in the ViCCA minor

# I'M NOT SO INTO DIGITAL FABRICATION BUT I WOULD LIKE TO WORK WITH MY HANDS AND DIFFERENT MATERIALS...

- » Sculpture minor
- » Textiles - Material and Structure minor
- » CHEMARTS minor

# **INTRODUCTION TO WORKSHOPS AND STUDIO FACILITIES**

# VÄRE WORKSHOPS



*Aalto Arts Workshops*  
A tour around Otaniemi campus

A?

# VÄRE WORKSHOPS

irl tour ---> break

# HOW CAN I USE THE WORKSHOPS?

Many of them have MyCourses orientations

Sign up to all of the ones that allow you to enrol with self enrolment (without passwords)

During this course, go through as many of them as you can. We will use some of them specifically.

# WHERE TO START?

Printlab: DIY Printing

Printlab F009

Mechatronics (no MyCourses page)

Laser & Plastic

3D Print