UNIVERSITY OF GENOA
DEPARTMENT OF INFORMATICS, BIOENGINEERING, ROBOTICS AND SYSTEMS ENGINEERING
MASTER'S PROGRAM IN BIOENGINEERING

# Thesis Project Form

**Title (tentative):** Development and implementation of a methodology that allows printing cellular patterns on MEA-HD

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## Description

**Motivation and application domain**

Neuronal culture maintainance
3D printer programming
Basic laboratory skill

**General objectives and main activities**

The aim of this thesis is to be able to develop a method to print cell patterns on MEA-HD using a 3D bioprinter. The student will have to learn to cultivate neurons derived from stem cells and to program the Allevi 1 printer in such a way as to guarantee vitality to the printed cells, so that they can exhibit spontaneous electrical activity recordable by MEA-HD.

**Training Objectives (technical/analytical tools, experimental methodologies)**

Neuronal culture maintainance
3D printer programming
Basic laboratory skill

**Place(s) where the thesis work will be carried out:** Gaslini Hospital

## Additional information

**Maximum number of students:** 1