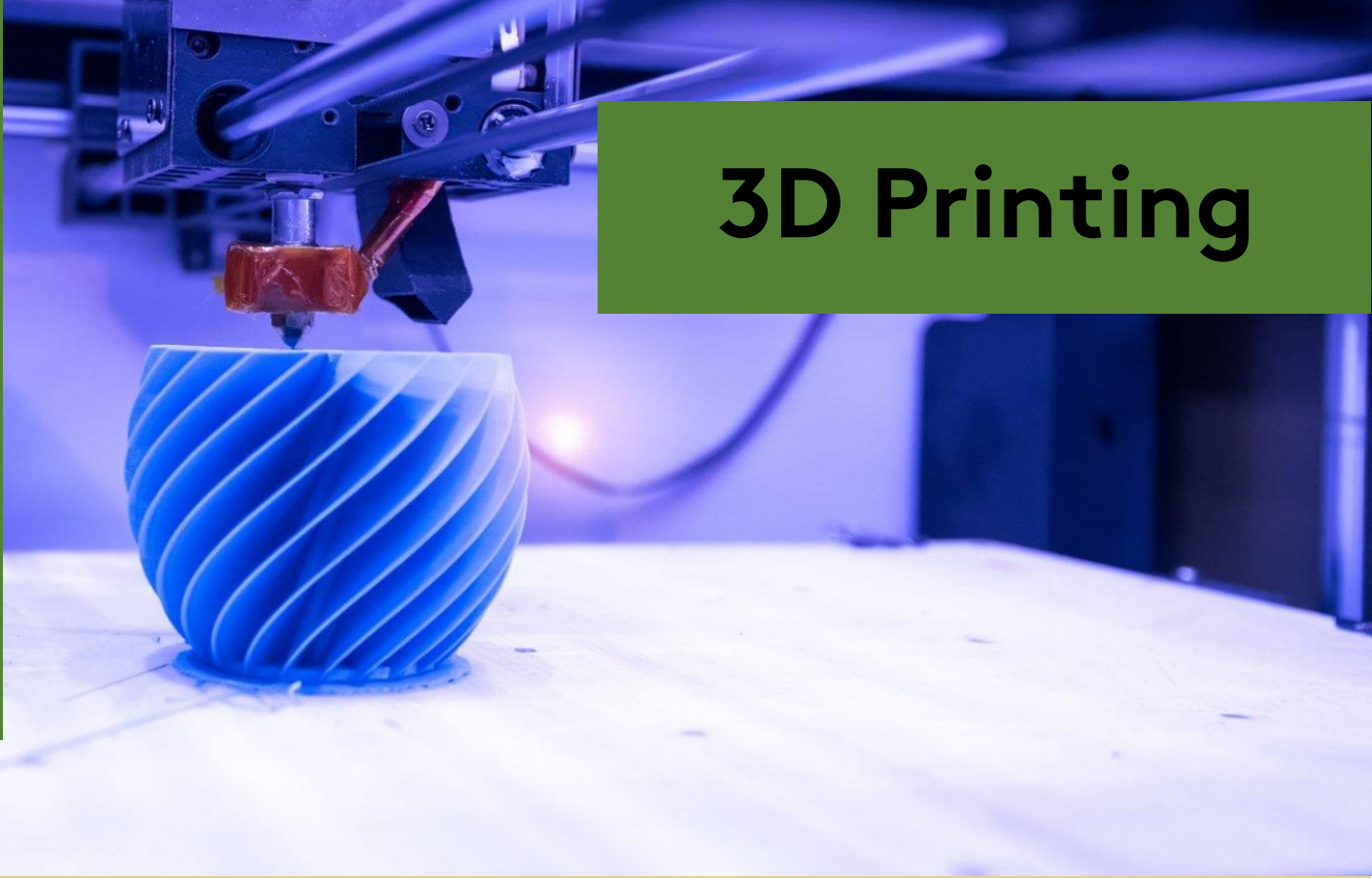


# Getting Started With

SDU RIO Maker Space

## 3D Printing



### Preperations

In this course you will learn about 3D printing in a practical way. This means you must make a 3D print to pass the course.

It is required that you go through the resources in this document before showing up to the course, so that you have a grasp of what 3D printing is.

# 3D Printing Basics

## What Is It?

3D printing is a process by which parts are manufactured via stacking of layers upon layers of material.

Today 3D printing is commonly associated with maker culture, hobbyist, desktop printers using low-cost materials such as the plastics PLA and ABS.

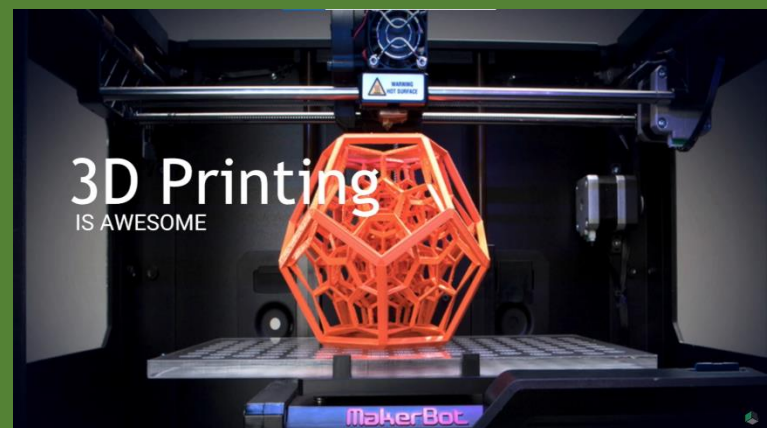
This 3D printing course covers the use of FDM (fused deposition modelling) printers. In this process a material is fed to the printer that is then heated to its melting point and is then deposited in layers to create the final object.

If you want to know more about 3D printing basics visit <https://www.hubs.com/guides/3d-printing/> - this is not required to take the course.

## Beginners Guide

Open all hyperlinks in this document using CTRL/CMD + left mouse click to open them in a new tab.

Watch [the following video](#) covering the basics of 3D printing and the steps from computer model to print.



**Click on the image  
to watch!**

# Ultimaker Cura Slicer

In our MakerSpace we have 5 Ultimaker 3D printers. To use them you will need software that can convert your STL model into printer instruction for the 3D printers. A multitude of software capable of this task exists but we use Ultimaker's own software Cura, which is a free 3D print slicing program and enables easy setup of our Ultimaker 3D printers.

## Download Cura

Get the Cura installer for your operating system via the link [here](#) or by clicking the image below.



## Install Cura

When going through the installation of Cura you will be asked what 3D-printer you have. MakerSpace has the printers shown on the top right. We advise you to name the printers in Cura so that you know which 3D-printer in the booking system corresponds to which printer profile in Cura.

## Add Following Printers

**Printer 1:** Ultimaker s5

**Printer 2:** Ultimaker s3

**Printer 3:** Ultimaker 3

**Printer 4:** Ultimaker s3

**Printer 5:** Ultimaker s5

## Getting Started With Cura Video

Watch [the video below](#) where you learn how to download and install the software, how to add new printers, get a feel of how to navigate in the programme and a walkthrough of the various settings.



# Get a 3D Printable Model

You are required to start and finish a print to have completed the course. You should therefore have a model in the form of a STL file ready for the course.

## Get a STL-model

Find something you want to print at the course on

<https://www.thingiverse.com/>

You will have to wait for your print, so choose something that is quick if you do not want to wait or pick up your print later. Your print cannot exceed 2 hours, so choose a small thing or scale it down in Cura.



If you have modelled something on your own you can export it as a STL file, which can be used as well.

## Ultimaker Printers

If you would like to be more prepared for the course you can read ["Ultimaker Schooling - 3D Printing"](#) to learn about the 3D-printers we have in MakerSpace, which covers topics about settings on the printers as well as some general advice. This is not mandatory to take the course.

## Book a Printer

We have booked them for you for the course, but you must book them yourself in the future. When you want to use the printers, you must book them for the duration of your print.

You can book the printers by visiting ["Book 3D-Printer"](#) or using one of the QR codes placed on the 3D-printers in MakerSpace.

## Booking Rule

We have a rule that says, if a printer is booked but is still not running after 30min of the started booking, the printer is seen as free again and can be used freely.

# *Happy Making!!!*