

# 3D Printing



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## 3D Printing

This course provides delegates with an opportunity to design, optimise and then manufacture physical components using the 3D Printing process. You will work first with design projects before moving on to generating a number of 3D components. This course is offered one to one, in which you will first design a number of component before learning how to fabricate these designs using the 3D Printer. 3D Printing is a completely new group of techniques used to quickly fabricate a scale model of a physical part or assembly using three-dimensional Computer Aided Design data. Construction of components will be carried out using our state-of the art 3D printers. Have you recently bought a 3D printer and can't get it working the way that you want to? Having problems with the model curling or not sticking to the build platform? Then this is the perfect course for you.

This course provides delegates with the latest methods of design, validation and fabrication which you will learn on the day. 3D printing or additive manufacturing is a process of making three dimensional solid objects from a digital file. 3D printing is achieved using additive processes, where an object is created by laying down successive layers of material. This course provides delegates with an opportunity to conceive, design and implement a product, using the combination of Computer Aided Design and 3D Printing methods. You will learn how to set up and control the 3D printing process to make a product. If you have a specific idea that you would like to develop during the day then we can focus on this as well. This one to one course ensures you receive focused demonstrations, individual attention and sufficient hands on time using a 3D Printer.

#### **Course content**

- Printer set up
- Levelling the build platform
- Loading & changing filament
- Print a sample model
- Download an open source model
- Slice the model in Makerware
- Design a basic part in 3D CAD
- Prepare your model for print
- Convert the model to STL/OBJ format
- Verify if your model is manifold

- 3D Printing software
- Open and position your model
- Speed vs Resolution
- Automatic support structures
- Maintaining your 3D printer
- Identify & solve common print issues
- Replace the cover tape on your platform
- Re-levelling the build plate
- Replacing the print nozzle

#### Who is this course for?

This intensive course is perfect for inventors, entrepreneurs, makers, designers, architects, artists and creative people who would like to gain hands on experience of 3D printing. It is also for those who are thinking of getting a 3D Printer but who would like to learn the features and tools before buying one.

### Computer Training Wales