

Learning MeshMixer

Getting to grips with MeshMixer will take a little time – and some commitment, but the quality of the final model will be more than worth the effort.

There are three ways to learn MeshMixer:

- Via Web Tutorials – YouTube
- As part of a Scan, Mix, Make workshop offered to programmes via their tutor
- Via the SPCs; to book in a Technical Staff member for one hour

Learning via web tutorials is particularly effective because they usually cover several different uses of MeshMixer and, in many cases, relating to interpreting and modifying a 3D model.



SCAN ME



SCAN ME



SCAN ME

MeshMixer Example 1.0

Scenario 1:

You have scanned a 3D object and need to ensure it is 3D-ready.

Solution:

MeshMixer has tools which can look for faults and issues which are known to be difficult for 3D printers to open.

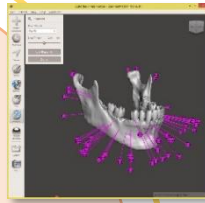
Using the Inspector functions, allows the MeshMixer user to tidy up things such as:

- Holes in the model
- Tears in the surface model
- Edges which do not meet

These appear as different coloured 'balloons' on (and sometimes 'in') the model.

MeshMixer can clean these problems up quite quickly, leaving a 3D print-ready model.

Technical Staff can help you with this solution



MeshMixer Example 2.0

Scenario 2:

You have a 3D model, made in ZBrush and you want to 3d print it using the SLA (Resin) printer. You know SLA printing can be expensive and want to save some money – and printing time.

Solution:

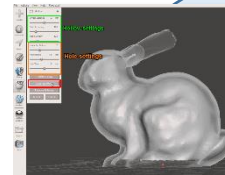
MeshMixer can make tremendous savings to model-makers with the use of the Hollow function.

Hollowing a model clears the internal cavity of the model and leaves a thin wall between 1.5 and 2mm thick.

You will also need to create 2 holes at a point that will be the 'lowest' printing point on your model.

MeshMixer can do this very quickly, saving between 30% and 60% on model costs and up to 50% on printing time.

Technical Staff can help you with this solution.



Exporting MeshMixer

Once you have a 3D mesh, ready for 3D printing or CNC Milling, you need to export your mesh.



There are two types of export for meshes that can be interpreted by our CNC Milling and 3D Printing software;

- Geometry-only, called STL (STereoLithography)
- Geometry + Texture, called OBJ (Object)

STL is by far the most common export filetype, in terms of the number of machine types it can be interpreted by.

Technical staff can help with the filetype process, since there are variations and settings for each file type which need careful handling.

Getting Help

The most effective way, in terms of time and project efficiency, is to book in a technical staff member to consult about your project.

This is done via our Student Project Coordinators (SPCs), Annaliese Paul and Demi Insall. They are key staff for students to know and work with. They can be contacted here: ·

- Email: spc@uwe.ac.uk
- Mobile: 07989449169
- Location: 0C48

The hours are Monday – Friday, 10am to 4pm.

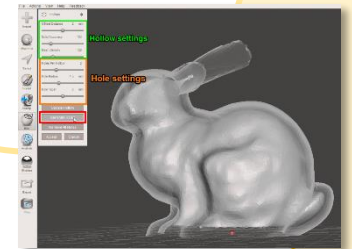
The SPC will work with you in seeking a member of staff who can help develop your project, is also good with MeshMixer and also have good knowledge of the media types used in Digital Fabrication.

MeshMixer Guide

START HERE!

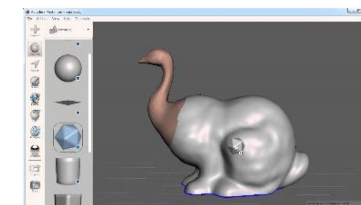
Digital Fabrication use a range of programs to generate an array of creative projects. One of these is called MeshMixer, from Autodesk.

MeshMixer is open-source and is free to download for Windows PC or Mac.



3D Models can also be called Meshes or Wireframes, hence the name MeshMixer. With MeshMixer, you can:

- Import almost all mesh types
- Repair Mesh Faults
- Sculpt onto a mesh surface, using creative brushes



- Mix-up multiple meshes into a single mesh object

- Export to almost all 3D printing and CNC Milling file types.