



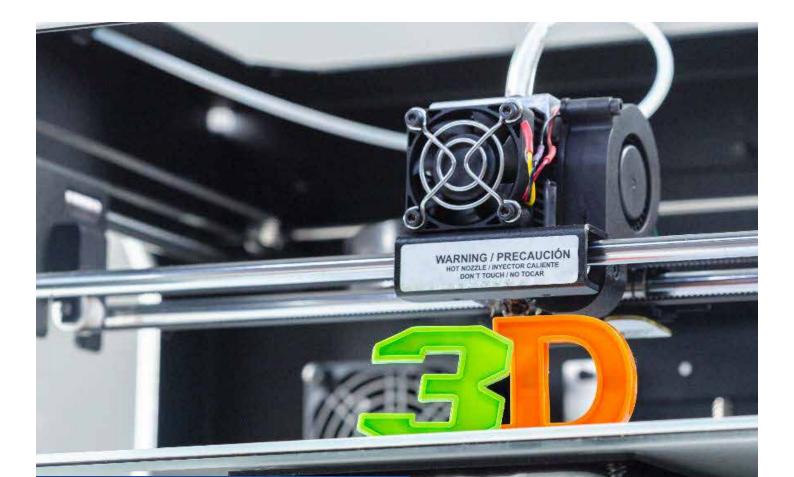
6 WEEKS COURSE

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Transforming education through technology



Course Aims & Objectives

This course is designed to teach students with a basic understanding of 3D printing and digital production how to bring their creations into the 3D realm. The course will cover topics such as the fundamentals of 3D printing, modeling software, designing for 3D printing, file organization, and materials selection.

Students will learn how to create optimized 3D models that can be easily fabricated using a 3D printer. By the end of the course, students will have gained the skills and knowledge necessary to bring their designs to life using 3D printing technology.

What is 3D Design?

3D design is the process of using software to create a mathematical representation of a 3-dimensional object or shape. The created object is called a 3D model and these 3-dimensional models are used for computer-generated (CG) design.

3D design is used in a variety of industries to help artists shape, communicate, document, analyze, and share their ideas. 3D printing is an additive process whereby layers of material are built up to create three dimensional objects, models and figures.

3D printers analyze a design or model given to them by a computer and print it out in real life by depositing some material, like wood filament or polymer resin layer by layer to create a 3D model.



Introduction to Blender

Course Introduction Navigating Blender 2.93 Installation Introduction to Blender UI Uses of 3D modeling

3D Modeling

Blender interface 3D modeling history Scene setup Terminology Methodology Low-Poly modeling Basic Blender tools Basic Blender modifiers

3D Reconstruction

Meshroom and the 3D Reconstruction process

Reducing Poly count using the Decimate Modifier

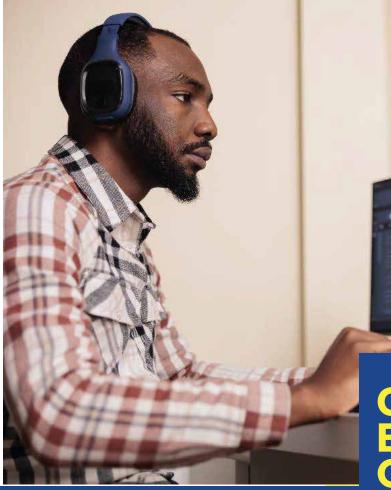
Modeling the Phone Stand

Import a Reference FBX Phone Model Absolute Grid Snap Connect Vertex Path & Shrink/Flatten Align Rotation to Target when Snapping Using a Boolean Modifier to Create Recess Applying Transforms and Fixing Model Errors

The Order of Selection Slicing to Create G-Code & 3D Printing

The Phone Case

Convert PDF File to SVG Importing & Scaling SVG Aligning SVG Sections to Different Views Separating, Dissolving & Creating the Profile Forming the Curved Case Converting the Curve to Mesh Dissolving Vertices Boolean Modifier Applying Modifiers & Fixing Errors 3D Printing the Phone Case



Modeling & Printing in Blender

Precautions when MSLA resin printing Using the Spin Tool to Form the Base Boolean Subtraction to form the Head Combing Both Sections into One Merging Both Sections Into One Increasing Resolution & 3D Printing Checks Exporting STL File Slicing The Model in Chitubox Rotating The Model, Slicing & Resin Printing

How does it work?

3D printer analyses a computer

created model of an object and then deposits material.

Layer by layer the object will be created to real life.

CAREER AND EMPLOYMENT OPPORTUNITIES

Models for Educational Purposes Product Design & Manufacturing 3D Animation Architecture Video games Movie

You can also make money by selling 3D business ideas or selling 3D printed products on your website.

Examples of 3D printing designs:

- Earphone holder
- Rubik's cube
- Measuring cube
- Ocarina
- Chopstick Trainer
 - Hanging planter
- Folding leaf bowl



3D PRINTING

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WARNING / PRECAUCIÓN HOT NOZZLE / INYECTOR CALIENTE DON'T TOUCH / NO TOCAR

"The art of turning dreams into reality."





"Is the bridge between the digital and physical worlds."



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