

SketchUp Basics with Mark Sterner

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This class presents an essential introduction to the field of 3D design for the woodworker new to CAD while exploring several versions (from free to professional) of one of the most approachable CAD programs - SketchUp.

The goal of the class is to remove many obstacles that new CAD users face when first starting to work with digital design so they can start getting more out of SketchUp right away. This course will be paced for someone who has never used SketchUp to make 3D models. As such, the emphasis will be placed on building good foundational skills, how to learn more when you are back at the shop and (most importantly) how to recover when things go wrong.

Tool List

1. A *working* computer (Mac or PC) with a discrete graphics card (not integrated graphics).

- * Mac - OS 10.11 and above

- * Windows - Windows 7, Windows 8, Windows 10

- * Windows users can validate their computers at:

- <https://help.sketchup.com/en/sketchup-checkup>

The full list of computer requirements to run SketchUp can be found at:

<https://help.sketchup.com/en/sketchup/sketchup-hardware-and-software-requirements>

2. A *good* 3-Button Mouse

- * Consider getting a Logitech mouse - a cheap mouse makes CAD unusable!

- * Note: Laptops are fine, but you'll still need the 3-button mouse

3. A *working* version of SketchUp

- A working version you already own (anything since SketchUp 2016)

- A newly downloaded version of the current version of SketchUp

Latest version of SketchUp Pro is available as a 30 day free trial. Please verify your installation launches properly before you leave for class.

Available at <https://help.sketchup.com/en/sketchup/downloading-sketchup>

4. Notebook and Pen - You will want to take notes...

Course Outline

Saturday

I. Obstacles to a successful CAD experience

1. Some horror stories
2. Hardware matters!
 - * Computer horsepower
 - * Input Devices
3. Limitations of Computer Aided Design

II. Benefits of CAD

III. Meet the SketchUp interface

IV. Introduction to SketchUp - Key Principles

1. Setting up the program
2. Changing your point of view
3. Meet the basic tools - 2D drawing
 - * Play with 2D drawing
4. Adding dimensions
5. Accuracy counts!
6. Three dimensions on a 2D monitor
 - * Play with 3D shapes
6. Simple shapes become complex shapes
 - * Play with the Group command

Sunday

I. Workflow and Planning

1. Layers add organization
2. Why draw something twice? - Use Mirror
3. Components save time
 - * Play with layers, mirror and components

II. Building a simple model

1. Making the digital parts
2. Assembling the model

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