

DESIGNING WITH SKETCHUP WITH BOB LANG

August 27-31, 2012

Thank you for your interest in this year's SketchUp class at Marc Adams School of Woodworking. It will be an interesting and entertaining week, and my assistant and I will do everything we can to make sure that you leave the class with a sense of accomplishment and the ability to use this amazing design and planning tool.

What to Bring:

- **Essentials:**
 - Your own computer. A laptop is easiest, but working on a small screen for an entire week can be a strain. You might want to consider upgrading (or borrowing) a laptop with a large screen, or if you want to bring in a desktop computer, you can.
 - You don't need to be a computer whiz, but you should be familiar with basic terms, commands and operations of locating menus, and using a mouse.
 - A three-button scroll wheel mouse. This is absolutely essential for working efficiently in SketchUp. If you're working with a Mac, you can get by with a "Mighty Mouse", but I don't recommend it. Don't buy a fancy mouse with built-in extra functions; just get the least expensive mouse in the store with a left and right button and a scroll wheel.
- **Might be Nice to Have:**
 - Notebook or recorder for taking notes.
 - Pad or pillow to sit on.

What to Expect:

- My computer will be hooked up to a projector, so that the entire class can see what should happen. Students share tables in the classroom, there is plenty of space to spread out, and power to each table. Wireless internet access is available.
- I believe the best way to learn is by doing, so most of the class time will be guided hands-on work on your own computer. I will explain a procedure or technique and then students will practice that technique. During the practice time, I will be answering questions and showing students one-on-one what to do. There will also be an assistant in the class to help with questions and problems.
- We will take a 10-15 minute break mid-morning and mid-afternoon to stretch our legs.

What to do Before Coming to Class:

- Go online to www.sketchup.google.com and download the latest version of SketchUp. The basic version of SketchUp is free, and there isn't any advantage to having the Pro version for this class. The differences between the two will be discussed during class.
- Install SketchUp on your computer, and work through the first few tutorials that come with the program. We will go through basic setups, but you want to be sure the program will function on your machine, and that you are familiar with basic navigation and commands.

Here is a basic outline of the topics we will cover, in order. At class, a detailed outline will be available. All of these topics will be taught in the context of making furniture, and by the end of the week everyone will be working on a project of their choice and design.

1. Introduction to SketchUp
 - a. Setting up the on-screen work environment
 - b. Navigating the three-dimensional drawing area
 - c. Terminology and concepts used in modeling
 - d. Basic tools and their use
2. Making simple 3-D parts
 - a. Lines and rectangles
 - b. Pieces of wood
 - c. Non rectangular shapes
3. Manipulating parts
 - a. Combining lines and faces into manageable groups
 - b. Moving, copying and placing
 - c. Rotating and scaling
 - d. Changing sizes-board stretching and shrinking is possible in SketchUp
4. Combining parts to make furniture and cabinets
 - a. Laying out accurate guidelines and measuring
 - b. Placing parts in relation to each other
 - c. Combining parts to form panels, doors and drawers
5. Structural details
 - a. Making common woodworking joints
 - b. Making complex woodworking joints
 - c. Curved and tapered parts
6. Decorative details
 - a. Simple molding profiles
 - b. Turned parts
7. Gathering information from the model
 - a. Dimensions and notes
 - b. Generating part and cut lists
 - c. Planning work sequences
 - d. Printing model views
8. Design types and their methods
 - a. Conceptual modeling-deciding what it will look like
 - b. Engineering-deciding how it will be made
 - c. Degrees of detail

Thanks again for your interest in this class. If you have any questions before the class, my e-mail address is: bob@craftsmanplans.com

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