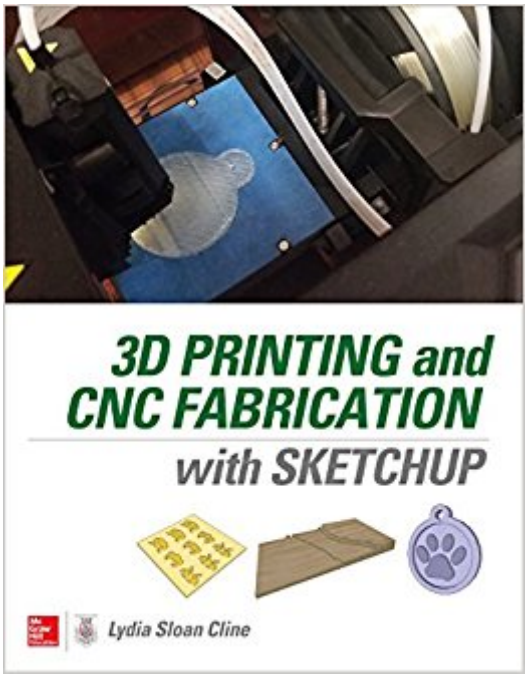
3D Printing And CNC Fabrication With SketchUp (Electronics)



Synopsis

Model and print your own 3D creations using SketchUp!Get up and running fast in the consumer design and fabrication world using the hands-on information in this guide. 3D Printing and CNC Fabrication with SketchUp features step-by-step tutorials of fun and easy DIY projects. Learn how to create your own 3D models, edit downloaded models, make them printable, and bring them to physical life either on your own printer or through an online service bureau. Download and install SketchUp on your Mac or PCNavigate the interface and SketchUpâ ™s native design toolsDownload design and analysis tools from the Extension Warehouse.Edit models downloaded from the 3D Warehouse and Thingiverse.Import and export STL files.Analyze your projects for 3D printability.Set up, use, and maintain a home 3D printerWork with AutoCAD, 123D Make, 123D Meshmixer, and Vetric Cut2DGenerate files for CNC cutters

Book Information

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Customer Reviews

Great book for getting started with Sketchup. The step-by-step projects are a fine reference even

after completing the exercises. It is occasionally confusing because it is based on a slightly older version of the program but that just makes the lessons a bit more challenging. I now know I made a good choice with Sketchup as a first 3D design tool.

It is a more like a beginner’s SketchUp book with limited introduction to 3d printing and CNC fabrication. I previously purchased 3D Prining with SketchUp by Marcus Ritland and that book has way more information than this one. Also, I downloaded MakerBot In the Classroom from Thingiverse which also covered the same if not more information on 3d printing using different programs instead of SketchUp.It is a okay book for people with no SketchUp or 3d printing experience and wants to get started.

Clear, precise, easy to follow info on this software for 3D printing.

Book primarily focused on 3d printing only ... CNC seems to have been an afterthought...

If you have a 3D printer, but still aren’t printing your own designs--because you haven’t tried SketchUp or have looked at it and found it confusing--then 3D PRINTING AND CNC FABRICATION WITH SKETCHUP may be exactly the right book for you. Aimed at SketchUp beginners (like myself), it presents an excellent step-by-step "course" in designing printable 3D models with the downloadable SketchUp software. (SketchUp Make is free; SketchUp Pro is a pay version with more capabilities. Both versions are covered.)What I really like about this book, is that it begins by explaining how the SketchUp Make interface and tools work (with navigational screen shots and clear 3D drawings of what to expect from the tools), and then provides simple step-by-step "workbook" projects (e.g., a virtual name stand, a virtual travel mug) that teach you how to actually use the tools for designing in three dimensions. (See Chapter 2, Getting Started: The Interface; and Chapter 3, Projects Using SketchUp Make’s Native Tools.) The book then moves on to more "workbook" projects for SketchUp Pro. These projects teach the use of downloaded models as components, and the use of extensions (plug-ins, or scripts). (See Chapter 4, Projects Using Sketchup Pro and Extensions.)Of special interest is Chapter 5, Making the Model 3D-Printable, which discusses the elements that you must satisfy to be able to actually print a physical model from your design. A printable design (1) has thickness; (2) has appropriate thickness; (3) considers plastic shrinkage; (4) leaves enough clearance between moving or component parts; and (5) has rounded, not pointed, features. In addition, a printable model must meet certain structural

requirements: (1) have no holes, extra faces, or extra edges in its mesh; (2) be manifold; (3) have front-facing polygons; (4) be in a format that a 3D printer recognizes; and (5) be in one solid piece with no surface intersections. The chapter also discusses methods of finding and fixing problems with 3D models that won't print.The book ends with a general chapter about 3D printing (including considerations for choosing a 3D printer), and a general chapter about CNC fabrication (which requires computer-aided-design (CAM) software and a Computer Numerical Control router--a machine that cuts or carves sheets of wood, plastic, glass, nonferrous metal, foam, and wax). (See Chapter 6, 3D Printing the Model; and Chapter 7, CNC Fabrication with Pro, 123D Make, and Cut2D.)For me, this book provides exactly what I was looking for--a quick, simple, clearly-written, clearly-illustrated guide to using SketchUp that dramatically shortens the 3D design learning curve--by explaining how the application works, what to expect in the way of glitchiness in the application itself, and what can go wrong with 3D printer design files to make them unprintable.

This is an excellent book for anyone who wants to learn 3D printing and CNC fabrication. I, myself, am interested in 3D printing and this book takes you step by step through the process using a computer design program called Sketchup. This book will take you through the steps from downloading Sketchup to using it and the final product. There is an incredible amount of information in this book and is well worth the price of $19.98. In fact, I would say $19.98 is a great price for this book. In a nutshell its a manual on how to create using the Sketchup platform, how to design, and how to bring your design to fruition. I am extremely happy with this book. It is very well done and easy to understand. I wholeheartedly recommend this book to anyone who wants to learn 3D printing and CNC fabrication using the Sketchup software.

3D Printing and CNC Fabrication with SketchUp by Lydia Cline couldnt have come at a better time for me. I have been thinking of a model to make. I tried to do it by myself in sketchup but didnt have the language in the head as to how to proceed. I tried a bit of TinkerCAD too and got further ahead in the articulation of the idea and am able to verbalise better as to my needs of wanting a groove in an object and link to another. I can spend hours familiarizing each of the buttons and options in the software or look at the projects in this book and ramp up my understanding with various 3D objects. Like how a ring is made. The best thing about this book is that it does not leave you with the awful feeling of you know what all the options in the tool are but not the theory behind it. The pictures help you in gaining ground of that. My personal favourite is the terrain project. The book is best suited to novices of SketchUp.

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