**3D Printing, Rapid Prototyping, and Additive Manufacturing**

**Homework 01, Due Monday of Week n+1**

1. Install the Makerbot software on a computer that you plan to use for the class. This can be your own computer, or one of the lab computers. You can find the software on the Makerbot.com web page. http://www.makerbot.com/desktop
2. Install the CubePro software. You can find the software on the 3dsystems.com web site. http://www.3dsystems.com/shop/cubepro/downloads
3. Make a list of the part build parameters for both the CubePro and Makerbot and describe the function of the different parameters. You can refer to the help for a lot of information. Just try and put it in your own words and use this as an opportunity to familiarize yourself with the Makerbot host and slicer settings.
4. Carefully observe the starting of a print job on the Makerbot.
5. Write out the list of actions
6. Describe the purpose of each actions
7. Describe the raft formation and reasons for the patterns being printed.
8. Slice the 1inch\_cube.stl for the following parameters. You do not print it, you only slice it for these parameters and record the time and weight.



1. List and describe in a few sentences the different 3D/AM technologies that will be the focus of this class.
2. Why are we focusing on these technologies and not others…
3. Describe in your words a voxel and an overhang.
4. For each chapter of assigned reading write a short summary/outline and tell me the 3 most important things you learned in each chapter.
5. Print the part provided to you by the instructor (block\_XX.stl). Remove the support and material. Hand in both the part and the raft. The raft can be used for question 4c.