



Digital Design Graphics Technology
Napa Valley College

Gary Strommen
Program Coordinator
ddgt@napavalley.edu
707-256-7526

DDGT130 – 3D Printing Assignment Description Summer Bootcamp

Guidelines:

- You are allotted 30 cubic inches of material and support combined.
 - This includes material and support for failed prints.
 - Plan on leaving yourself extra material in case of a failed print.
 - You can print one or multiple projects with your allotted material.
- All projects should be discussed with the instructor for approval BEFORE you begin on the project.
- No designing weapons.
- All designs must be designed by you using the Autodesk Fusion 360 software.
- If you print multiple parts at the same time, be aware you will only be allowed to use one color (this is a limitation of the 3D Printer).
 - If you want separate colors, you will need to print your parts individually and it will need to be assembled afterwards.
- Minimum clearance between parts is .7mm. Maximum clearance between parts is 1mm.
 - Take scaling into consideration
 - Take post processing into consideration (epoxy addition)
- You are allowed to print “solid” or “hollow”.
 - Be aware that “solid” will be stronger but it will use up additional material.
- All files for 3D Printing must be submitted as an STL file format with your name and project title included in the file name. Instructor will assist.
- Design considerations:
 - Strength – the parts must be strong enough to resist breaking (not too thin anywhere).
 - Support material removal – can the liquid bath penetrate all support areas for proper support removal?
- Your assignment(s) must be submitted for printing and grading by the last day of class.
- For every 3D Printed model, you must submit a project review (to be supplied by the instructor).

Note: Due to the class size and the condensed summer schedule, be aware that not all projects will be printed and returned before the end of the class and you may not receive your project until the beginning of the Fall semester. If this happens, the instructor will schedule with you for pick up.

Note: The color of the plastic and which 3D Printer is used is up to the discretion of the instructor.

Your project will be graded on the following criteria:

(30% of your final grade will be based on the 3D Printed Assignments)

- 10% - Project Review Handout
- 10% - Did you meet your scheduled deadline?
- 20% - Originality / Creativity
 - Did you just copy someone else's design online or did you come up with something original?
 - Those students who create a working assembly will receive extra credit.
 - Was your project interesting and a good use of material or did you just come up with something randomly with no real thought to fulfill the assignment?
- 50% - Design complexity
 - Designs that are too simple will be marked down.
 - Designs that are too complex may set yourself up for failure.
 - How long did it take you or should have taken you?
 - How challenging was it?
- 10% - Review of Projects / Material Use
 - You will be graded on how well you used your material allotment.
 - Those who print simple, basic projects at large sizes will be marked down.
 - How many revisions were needed? Were there obvious mistakes such as intersection parts when there should not have been?

Revised 12/20/2018 gjs