



Computer Aided Design/3D Printing

Introduction:

This class centers around the cutting edge technology of 3D printing. Students will use AutoCAD to design and draw products and objects that can be printed using state-of-the-art 3D printers. Students, as individuals as well as in teams, will be tasked to create and design parts, and items that can be assembled and function in the physical world. Students will learn basic AutoCAD commands, as well as some advanced AutoCAD functions in order to design, draw, and create 3D objects while they gain a greater understanding of constraints, physical properties of objects, and consumer wants and needs, as they function as engineers in order to produce a workable item that applies to the modern world.

Classroom Rules:

- ✓ Be in your assigned seat when the bell rings
- ✓ Respect yourself and others (i.e.: no name calling, no foul language)
- ✓ Follow directions the first time they are given
- ✓ Obey district rules and policies
- ✓ Learn and have fun

Classroom Procedures:

When you enter the classroom, I expect you to be ready for instruction. That requires coming to class prepared (pencil). This is a drawing class that will focus on engineering. Treat the classroom as if you were an employee at an architecture firm. Use your time effectively and produce quality drawings.

*Remember the "Golden Rule" SHOW RESPECT GET RESPECT

Always be ready for instruction.

Supplies:

- Notebook
- Pencils

Grading:

Each part of the learning experience will be reflected in your grade: class work, class participation, organization, preparedness, test, quizzes, and homework.

Class participation, Drawings, Projects, Portfolio	75%
Test and Quizzes, Homework	25%

Attendance:

If you are absent it is YOUR responsibility to get the work that you missed. Come after school or before the bell, do not ask during class. Cuts and lateness's will conform to district policy.

Class work:

Class work is an important component in the learning process. There are many types of activities we will do that will be assessed and worked into your grade. To that end, appropriate participation in activities is another essential component to success. It begins by organizing your folders, producing clean and neat drawings, and continues with organizing your thoughts and actions. Appropriate classroom behavior includes remaining focused and on task.

Tests and Quizzes:

Tests and quizzes will be announced with at least one day to prepare (some quizzes may be unannounced). At times, homework may qualify as a quiz grade; in those cases you will be told when the assignment is given.

If we work together, this will be a very successful partnership. I look forward to a terrific school year.

Sincerely,
Mr. Byrne
Technology Education Teacher
Sachem High Schools

Please note that by signing these papers, you understand what is required in the classroom. This is your commitment to learning

Student Name (printed)

Parent/Guardian (printed)

Signature

Signature

Course happenings and updates to parents can be found on my teacher website. This will be the best way to know what your student is doing in class.

Parent Email: _____

Creating a boarder and title block

Steps to follow

Boarder

1. Create a rectangle
 - a. 11 x 8.5
2. Offset the rectangle by .3 inwards.
3. Explode the inner rectangle

Title Block

1. Offset the bottom line up by 1.0
2. Offset the line you just created down by .39.
3. Offset the line you just created down by .39
- 4.
5. .

YOU SHOULD NOW HAVE 3 LINES ABOVE THE BOARDER.

6. Draw a line in the center of the title block from top to bottom of box.
7. Offset a line from THE CENTER LINE 3 inches in either direction.
8. Trim the box on the left to create a logo box. Remove the lines

Creating titles (caps lock on)

Set the text size to .1875

BOX #

Your name	Drawing name	SCALE
Drawing Number	3d printing/ P#7	DATE

Save this as your name and Title block

Uploading your title block

1. Open your title block
2. Go into layout 1 and erase it.
3. Go back to model
 - a. Highlight everything
 - b. Right click
 - i. Clipboard
 - ii. Copy with base point
 - iii. Choose a base point
4. Go to layout 1
 - a. Right click on the screen
 - i. Choose clipboard
 - ii. Paste
 - iii. Save
5. Open your current drawing
6. Right click on layout
 - a. Choose (from template)
 - b. Find your title block and select it.
7. It is now inserted.
8. Go to layout 3
 - a. Type in "viewport"
 - b. Select ok
 - c. Create a view port in the open area of the title block
 - d. Your drawing will be there.
9. Select an appropriate scale.
10. Fix the drawing #, Drawing name and date.
11. Print and turn in.

MR. BYRNE	DRAWING NAME	SCALE
DRAWING #	3D PRINTING/P2	DATE

3. Clamp



