

## Lesson 1

# Structures

## Beginning Drawing

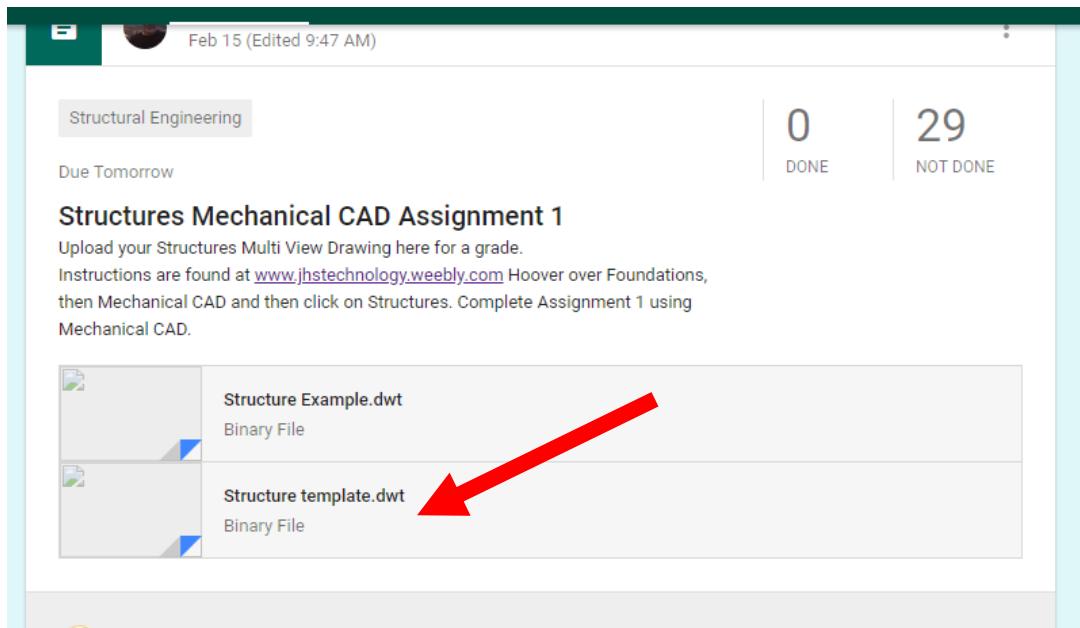
### Objectives

In this assignment you will learn the basics of an Engineering Drawing.

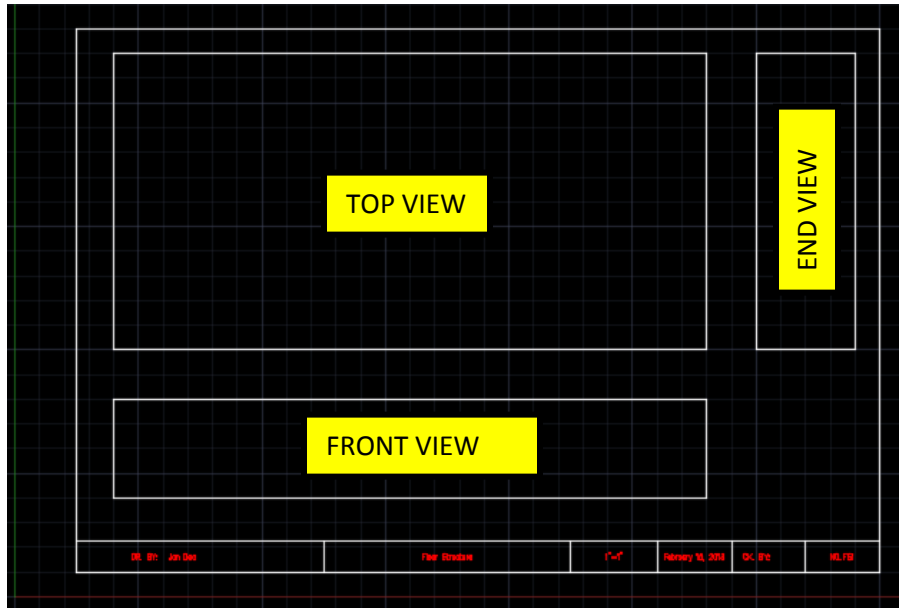
### Getting Started

Detailed instructions will be given for the activities in assignment 1.

1. Select the Windows icon at the bottom left of the screen:
2. Select "All Programs"
3. Select "Autodesk"
4. Select "AutoCAD 2016 – English"
5. Navigate to Google Classroom and download the structure template.dwt file.

A screenshot of a Google Classroom assignment page. At the top, it says 'Feb 15 (Edited 9:47 AM)'. Below that, the subject is 'Structural Engineering'. There are two progress indicators: '0 DONE' and '29 NOT DONE'. The assignment title is 'Structures Mechanical CAD Assignment 1'. The instructions say: 'Upload your Structures Multi View Drawing here for a grade. Instructions are found at [www.jhstechnology.weebly.com](http://www.jhstechnology.weebly.com) Hoover over Foundations, then Mechanical CAD and then click on Structures. Complete Assignment 1 using Mechanical CAD.' Below the instructions, there is a list of files. The first file is 'Structure Example.dwt' (Binary File). The second file is 'Structure template.dwt' (Binary File), which is highlighted with a red arrow pointing to it from the right.

- Once the download is complete, double click on the file to open it. (Note: Mechanical CAD 2016 must already be opened.)
- Notice that a **title block** (including borderlines) with the **drawing information** appears on the computer screen.

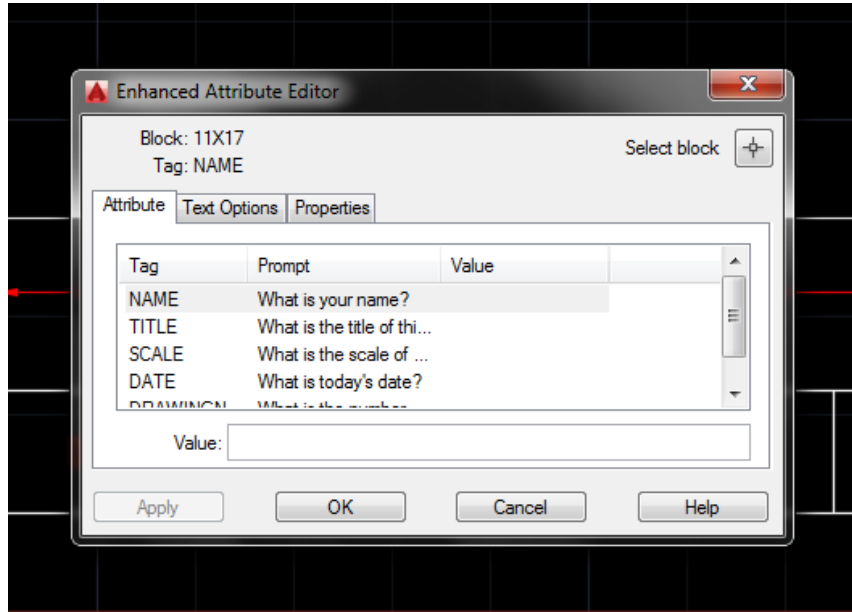


- Double Click as shown to open the pop up so the Title Block can be updated.

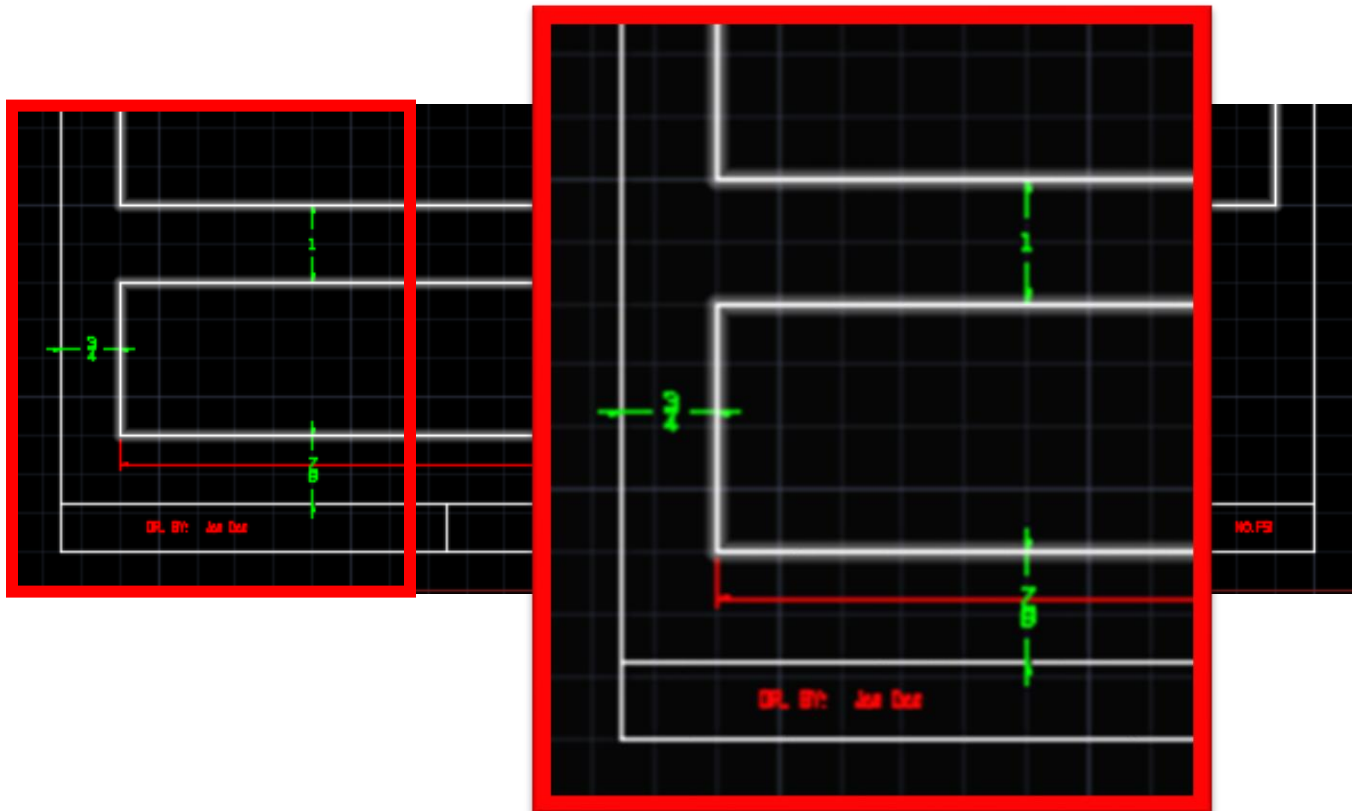
9.



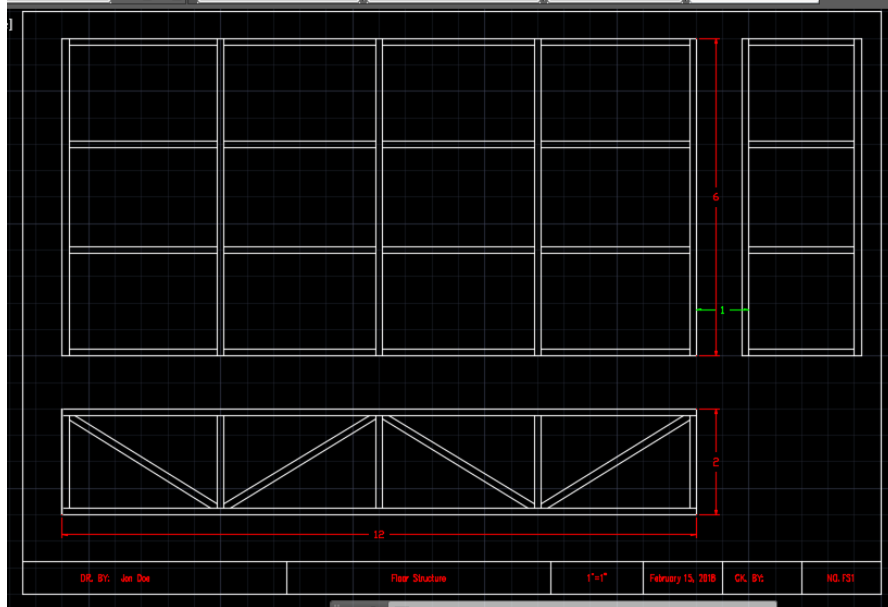
- A window will appear and by first selecting the Tag (Name, Title, Title,...) and then entering a Value. (Tag: Name, Value= John Doe)



- Using the drawing you did on graph paper for your Floor Structure begin by drawing the Front View as shown below. The green dimensions are only for reference in setting up your views. Only the red dimensions will be drawn on the finished drawing.



- Once you have laid out the views it is time to complete them. Using the drawing you made to create a pattern to use in building your own floor structure, transfer your design to the views on the computer.



## ***Saving Your Work***

If you have not done so, create a folder in your computer profile and name it “Mechanical CAD”.

To Save your drawing, select “Save As” and navigate to the Mechanical CAD folder in your 002LJTXXX folder. Name this File as, Structures Last Name First Name

Ex.: StructuresDoeJohn

## ***Submitting in Your Work for a Grade***

Take a Print Screen of your drawing. Paste it into a Google Doc and submit it for a grade.

## ***Terms to Know***

Instructions: Copy the following terms into your notebook and define them.

Pattern

Multi-view drawing

Dimension

Offset

Trim  
Graph paper  
Title Block  
Borderline  
Object line  
Layer  
Template  
Block