Course Syllabus for Drafting TECH 1303 Engineering Graphics

Instructor: Mr. Jimmie Bybee

Phone: 903-360-7255 -- I don't know if you want them calling you...maybe just an email?

Course dates:

Class will meet every Thursdays nights 6:00 to 8:45 beginning Jan 21 through May 5th. This is about 14 class days and one final exam day.

- We will be out for Spring Break on February 10th.
- Final Exam will be on April Thursday, May 5th.

Course grade Grading Requirements

will be 60 percent from project drawings/ quizzes and 40 percent from the final exam.

Course Overview

The course will cover the following areas through a number of drawing projects using a drafting notebook, AutoCAD and YouTube. You will learn to draw in AutoCAD using 3d modeling and turn the drawing into 2d drawings on title block pages. Recommended it is highly recommended that students obtain flash drive to save drawings on.

Text will be Mechanical Drawing chapters 1 - 17

- Design and Sketching
- Drafting Equipment
- Basic drafting Techniques
- Geometry for Drafting
- Multiview Drawing
- Dimensioning
- Sectional Views
- Auxiliary views and Revolutions
- Basic Descriptive Geometry
- Fasteners
- Pictorial Drawings
- Working Drawings
- Pattern Development
- Welding Drafting
- Pipe Drafting
- Cams and Gears

Project drawings will include the following AutoCAD skills

**APPLY BASIC DRAWING SKILLS**

Create, open, and publish files
Draw circles, arcs, and polygons
Draw lines and rectangles
Fillet and chamfer lines
Select objects
Use coordinate systems
Use dynamic input, direct distance, and shortcut menus
Use inquiry commands

**USE DRAWING AIDS**

Use Object Snap Tracking
Use Ortho and Polar Tracking
Use PolarSnap
Use Running Object Snaps
Work with Grid and Snap

**EDIT ENTITIES**

Create and use Arrays
Create Selection Sets
Stretch Objects
Use Grip Editing
Use Move and Copy
Use Offset and Mirror
Use Rotate and Scale
Use Trim and Extend

**WORK WITH CURVES**
Blend between objects with Splines
Draw and edit curved Polylines

**CONTROL OBJECT VISIBILITY AND APPEARANCE**
Alter layer assignments for objects
Assign properties by Object or Layer
Change object properties
Control layer visibility
Manage layer properties

**USE BLOCKS AND XREFS**
Define Blocks
Reference external drawings

**USE HATCHING AND GRADIENTS**
Apply hatch patterns

**CREATE AND EDIT TEXT**
Create Text Styles
Write Lines of Text

**DIMENSIONING**
Create and apply Dimension Styles
Use Multileaders

**ANNOTATIVE OBJECTS**
Create Annotative Styles and Objects
Create Layouts
Use the Window Command
Use Viewports

**PRINTING AND PLOTTING**
Set printing and plotting options

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**YouTube drawing projects to learn AutoCAD skills**

- 3d model: https://www.youtube.com/watch?v=fHqolQwz93U
- Machine part: https://www.youtube.com/watch?v=wiJWhLkfl8
- Title block page and templets: https://www.youtube.com/watch?v=q5YW Ke_SU
- Annotating dimension: https://www.youtube.com/watch?v=ozPV_Wlgx8
- Working with viewports: https://www.youtube.com/watch?v=CZth QTJQnE
- Coke bottle: https://www.youtube.com/watch?v=djXtLDwJdEy
- Sphere: https://www.youtube.com/watch?v=bsxHPVJHUn0
- Loft: https://www.youtube.com/watch?v=rsktTFZe6ho
- Pulley Gear: https://www.youtube.com/watch?v=pvCVCV99ejk
- Slated 3d model: https://www.youtube.com/watch?v=m_CExLusDw
- Computer Fan: https://www.youtube.com/watch?v=RSkVtgz0lB4
- Jet Engine: https://www.youtube.com/watch?v=0k-On5Mcn8s
- Impeller: https://www.youtube.com/watch?v=3vzdi6m0dY
- Light Bulb: https://www.youtube.com/watch?v=8JpN97sR6w
- LED light Bulb: https://www.youtube.com/watch?v=5Q1s XIAKti
- MB bolt and nut: https://www.youtube.com/watch?v=d7uLq4MDv4U
- Tire: