Eastfield College  
Career Technologies Division  
Spring 2015  
Technical Drafting  
DFTG 1405.43426– 4 Credit Hours

Internet Based Class  
Instructor: Tina Goitia  
T-143  
972-860-7143  
tinagoitia@yahoo.com  
Email for Appointment

Course Description  
DFTG 1405 is an Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views, and reproduction processes. This course is cross-listed as DFTG 1305. The student may register for either DFTG 1405 or DFTG 1305, but may receive credit for only one of the two. (2 Lec., 6 Lab.)

Textbooks and Other Course Materials:  
ISBN: 978-1-58503-610-3

Recommended Materials:  
Circle template or compass, 12” ruler w/cm on 1 side, 30/60 degree triangle, 45 degree triangle, T-Square

Developmental Courses  
The Texas Success Initiative (TSI) is a statewide program designed to ensure that students enrolled in Texas public colleges and universities have the basic academic skills needed to be successful in college-level course work. The TSI requires assessment, remediation (if necessary), and advising of students who attend a public college or university in the state of Texas. The program assesses a student’s basic academic skills in reading, writing, and math. Passing the assessment is a prerequisite for enrollment in many college-level classes such as English 1301/1302, History 1301/1302, Math 1414, etc. Students who do not meet assessment standards may complete prerequisite requirements by taking developmental courses in the deficient area and passing them with a grade of C or higher. In some cases retesting will also be required. It is up to each student to be aware and informed about requirements that are subject to change. Additional information is available from the TSI Office.  
https://www1.dcccd.edu/cat0910/admiss/tsi.cfm?loc=4

Course Objectives:  
• To apply the conventions and standards of basic drafting theory.  
• B. To develop the skills of visualization for both two and three-dimensional graphics.  
• C. To satisfactorily complete graphic and mathematical solutions to drawing problems.  
• D. To effectively solve and produce parallel projections.  
• E. To effectively communicate design intent through technical drawings.

Evaluation Procedures:  
90% of your grade for the course is based on drawing assignments  
10% is based on quizzes and the final exam

Obtaining Final Course Grades Using eConnect  
Final Grade Reports are no longer mailed. Convenient access is available online at www.econnect.dcccd.edu. Use your identification number when you log onto eConnect, an online system developed by the DCCCD to provide you with timely information regarding your college record. Your grades will also be printed on your Student Advising Report, which is available in the Admissions Office.
Eastfield College Email Policy
Faculty and students must have and use a DCCCD account for all correspondence relating to academic coursework. For information on setting up a DCCCD student email account go to: https://www1.dcccd.edu/netmail/input_ssn.cfm

Attendance Policy:
Online students are required to submit all assignments prior to the 11th class day, February 1st, 2015 in order to verify their attendance. If you do not complete and submit the assignments, you risk losing financial aid.

Course Outline:

Assignments & Drawing Due Dates:
Drawings due dates are posted on Blackboard. Once graded, the student will have three days to correct the drawing and resubmit it for a maximum score of 90. Drawings turned in late are not eligible to be resubmitted.

**Title all and save work as follows:** SP15.DFTG.1405.First Initial.Last Name.Drawing Name. Add revised to the title if it is your second submission of work. Title the drawing, file, and e-mail with:
SP15.DFTG.1405.T.Goitia.P5.2.revised. Email Completed work to: tinagoitia@yahoo.com.

**Drawing Deadline:** Drawings submitted three days past the due date will have 10 points deducted. An additional 5 points will be deducted for each additional day that the drawing is late. The final exam and any quizzes are due the day assigned, no exceptions.

Financial Aid Statement - April 16th, 2015 is the last day to withdraw from the course.

Students who are receiving any form of financial aid should check with the Financial Aid Office prior to withdrawing from classes. Withdrawals may affect your eligibility to receive further aid and could cause you to be in a position of repayment for the current semester. Students who fail to attend or participate after the drop date are also subject to this policy.

Financial Aid Statement for Distance Learning Classes

If you are receiving Financial Aid grants or loans and are enrolled in a Distance Learning class, you must show participation in this class prior to the certification date by either e-mailing or contacting the instructor or logging on to eCampus. Do not drop or stop attending any class without consulting the Financial Aid Office. Changes in your enrollment level and failing grades may require that you repay financial aid funds. An assignment must be submitted by the 11th class day on February 1st, 2015.

Repeating This Course: (Third Attempt to Enroll in a Course)

Effective for Fall Semester 2005, the Dallas County Community Colleges will charge additional tuition to students registering the third or subsequent time for a course. All third and subsequent attempts of the majority of credit and Continuing Education/Workforce Training courses will result in additional tuition to be charged. Developmental Studies and some other courses will not be charged a higher tuition rate. Third attempts include courses taken at any of the Dallas County Community Colleges since the Fall 2002 Semester. See Third Attempt to Enroll in a Course at: http://www.dcccd.edu/thirdcourseattempt/

Academic Honesty Statement

Scholastic dishonesty is a violation of the Code of Student Conduct. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion.
As a college student, you are considered a responsible adult. Your enrollment indicates acceptance of the DCCCD Code of Student Conduct, published in the DCCCD Catalog at http://www1.dcccd.edu/cat0506/ss/code.cfm

Academic dishonesty includes, but is not limited to, cheating on tests, plagiarism and collusion. Cheating includes copying from another student’s test or homework paper, using materials not authorized, collaborating with or seeking aid from
another student during a test, knowingly using, buying, selling, stealing, or soliciting the contents of an unadministered test, and substituting for another person to take a test. **Plagiarism** is the appropriating, buying, receiving as a gift, or obtaining by any means another’s work and the unacknowledged submission or incorporation of it in one’s own written work. **Collusion** is the unauthorized collaboration with another person in preparing written work for fulfillment of course requirements. Academic dishonesty is a serious offense in college. You can be given a failing grade on an assignment or test, can be failed for the class, or you can even be suspended from college.

**Food and Drink Policy**

Food, drinks, and tobacco products are prohibited in Eastfield College classrooms. **If you work in the CAD Lab you must adhere to the rules posted.**

**ADA Statement**

Students with a physical, mental or learning disability who require accommodations should contact the college Disability Services Office in C237. Call 972.860.8348 or email efcdso@dcccd.edu. For more information: http://www.eastfieldcollege.edu/SSI/DSO/index.html

**Religious Holidays**

Absences for observance of a religious holy day are excused. Notification of the absence must be given to the instructor in writing at least two weeks prior to the date of the holy day. A student whose absence is excused to observe a religious holy day is allowed to contract with the instructor to take a make-up examination or complete an assignment within at a mutually agreed upon time after the absence.

**Withdrawal Policy**

If you are unable to complete this course, it is your responsibility to withdraw formally. The withdrawal request must be received in the Registrar’s Office by **April 16th 2015**. Failure to do so will result in your receiving a performance grade, usually an “F.” If you drop a class or withdraw from the college before the official drop/withdrawal deadline, you will receive a “W” (Withdraw) in each class dropped. For more information about drop deadlines, refer to the current printed Credit Class Schedule, contact the Admissions/Registrar’s Office at 972-860-7167 (Room C119), or contact the division office.

**STOP BEFORE YOU DROP**

For students who enrolled in college level courses for the first time in the fall of 2007, Texas Education Code 51.907 limits the number of courses a student may drop. You may drop no more than 6 courses during your entire undergraduate career unless the drop qualifies as an exception. Your campus counseling/advising center will give you more information on the allowable exceptions. Remember that once you have accumulated 6 non-exempt drops, you cannot drop any other courses with a “W”. Therefore, please exercise caution when dropping courses in any Texas public institution of higher learning, including all seven of the Dallas County Community Colleges. For more information, you may access: https://www1.dcccd.edu/coursedrops

**Family Educational Rights and Privacy Act of 1974 (FERPA)**

In compliance with the Family Educational Rights and Privacy Act of 1974 (FERPA), the College may release information classified as “directory information” to the general public without the written consent of the student. Directory information includes: (1) student name, (2) student address, (3) telephone numbers, (4) date and place of birth, (5) weight and height of members of athletic teams, (6) participation in officially recognized activities and sports, (7) dates of attendance, (8) educational institution most recently attended, and (9) other similar information, including major field of student and degrees and awards received. Students may protect their directory information at any time during the academic year. If no request is filed, directory information is released upon written inquiry. No telephone inquiries are acknowledged. No transcript or academic record is released without written consent from the student, except as specified by law.
Classroom Etiquette
Cell phones should be turned off in when using the CAD Lab.
Abuse or profane languages are not allowed.

The instructor reserves the right to amend this syllabus as necessary.

How to Use Book and DVD - Assignment 1

Click on the video link above to learn how use the book and DVD to complete exercises, in-class activities, and assignments.

Week 1 Assignment 1 Due 1.24.15
These assignments will serve as verification that you are enrolled in the class. Failure to submit these assignments could result in the loss of Financial Aid benefits.

Read Chapter One (1-1 to 1-27)

DVD Sections:
1) Introduction to Engineering Graphics
2) Orthographic Projection Introduction
3) The Glass Box Method
   • Exercise 1-1: Principal Views
4) The Standard Views
5) Line Types Used
   • Exercise 1-2: Line Types
   • Exercise 1-3: Line Type Use
6) Creating Orthographic Projection
   • Missing Lines 1 -
   • Missing Lines 2 -

DVD Video Exercises
Beginning Orthographic Projection
Intermediate Orthographic Projection
   • Exercise: Drawing 1 -
   • Exercise: Drawing 2 -
1-10: Advanced Orthographic Projection

Assignment 1 Worksheets From Book Due 1.24.15

Here is a video on orthographic projection: http://www.youtube.com/watch?v=05O1Fv4FJnY

Week 2 Assignment 1 Due 1.31.15
These assignments will serve as verification that you are enrolled in the class. Failure to submit these assignments could result in the loss of Financial Aid benefits. The assignments are due by 2.1.15 before midnight.

Remove the following worksheets from the textbook, complete the drawings, scan, attach to e-mail: tinagoitia@yahoo.com.

All titles should include your name, DFTG 1405, semester, and date. These assignments are located at the very end of Chapter One.
You can also use the grid paper provided to complete all drawings.

Use your own paper to hand draw an orthographic drawing of P1-49 on page 1-107. Scan and email the assignment to tinagoitia@yahoo.com.

Visit: [http://www.autodesk.com/education/free-software/all](http://www.autodesk.com/education/free-software/all) and download AutoCAD. It is a free download for students. You must register and then activate the software. If you do not activate the software the license agreement will expire in 30 days. Once you launch AutoCAD simply select activate and input the key codes provided when you downloaded the software. Next week we will draw an assignment in AutoCAD.

Assignment 2 Worksheets from Book Due 1.31.15
- SP1-4.jpg (869.199 KB)
- P1-49.jpg (193.751 KB)
- SP1-2.jpg (538.636 KB)

Week 3 Self Study Activity Due 2.7.14
DVD Exercise
Video: Auxiliary Views
Exercise: Auxiliary Views

Week 3 Assignment 1 Due 2.7.15
Use AutoCAD to create an orthographic projection of the object on P1-30. Include appropriate line types, but dimensions are not necessary at this point. Include proper title and attach to e-mail: tinagoitia@yahoo.com.

There is a video attached on how to complete this assignment.

Week 3 Video: Basic AutoCAD Techniques Due 2.7.15
Attached Files:
- DFTG1405 P1-30 Part 1.wmv (24.059 MB)
- P1-30.jpg (113.63 KB)
- DFTG1405 P1-30 Part 2.wmv (10.969 MB)

Use this video to complete P1-30. There are two parts and it is a bit longer than I usually post, but I felt it was a good video to get you started in AutoCAD.

Let me know if you have any questions.

Assignment 4 Activities Due 2.14.15
Read Chapter 2 - (2-1 to 2-29)

DVD Sections:
1) Detailed Drawings
2) Learning to Dimension
3) Appearance & Technique
   - Exercise: Dimension Types
   - Exercise: Spacing and Readability 1
   - Exercise: Spacing and Readability 2
   - Exercise: Duplicate Dimensions
   - Exercise: Dimension Placement
4) Dimensioning Simple Features
   - Exercise: Circular and Rectangular Views
• Exercise: Dimensioning and Locating Features

**DVD Video Exercises**

- Video Exercise 2-12: Beginning Dimensioning
- Video Exercise 2-13: Intermediate Dimensioning
  - Exercise: Dimensioning 1
  - Exercise: Dimensioning 2
  - Exercise: Dimensioning 3
  - Exercise: Dimensioning 4

**Assignment:** Use to video below to add dimensions using AutoCAD to P1-30 (The drawing from last week). Attach assignment to e-mail and send to tinagoitia@yahoo.com.

**Assignment 4 Video: Dimensioning in AutoCAD Video Due 2.14.15**

- [DFTG 1405 Dimensioning Final.wmv](#) (5.561 MB)

Use the video to add dimensions to P-1-30. This is the drawing that was turned in yesterday. Just add dimensions to the AutoCAD drawn P 1-30 and resubmit. Title it P 1-30 Dimensions.

**Assignment 4 Worksheets From Book Due 2.14.15**

- [Quiz 1 Iso.jpg](#) (37.166 KB)

On a sheet of notebook paper, sketch out what you think the front, top, and right side of Quiz 1 will look like. Scan and attach the sketch to my e-mail address. Title it Quiz One Sketch. If your sketch is proper I will send the answer key and you must then use AutoCAD to draw an Orthographic Projection drawing of the part. Submit the final drawing as Quiz 1. No dimensions are necessary at this time hidden (dashed) lines can be illustrated with a different color for now.

**Assignment Five Activities Due 2.21.15**

**DVD Sections**

- 5) Dimensioning Advanced Features
- 6) Dimension Choice
  - Exercise 2-8: Advanced Features
  - Exercise 2-9: Dimension Accuracy
  - Exercise 2-10: Rounding Off
  - Exercise 2-11: Dimension Choice

**DVD Video Exercises**

- 2-18 Advanced Dimensioning 1
- 2-19 Advanced Dimensioning 2

**Review the Supplemental Problems Section**

Use AutoCAD to add dimensions to P1-30. P1-30 was completed on AutoCAD last week. Launch the drawing, view the dimension video, and complete the drawing.

**Assignment 5 Due 2.21.15**

Draw the following problem in AutoCAD, properly dimension and title, send to tinagoitia@yahoo.com. All titles should include your name, DFTG 1405, semester, and date.

P7-1

**Assignment 5 Dimensioning PowerPoint Due 2.21.15**

- [Dimensions PowerPoint.pptx](#) (1.354 MB)

A summary of the chapter work on dimensioning.

**Assignment 5 Worksheets From Book Due 2.21.15**

- [P7-1 Worksheet.jpg](#) (138.836 KB)

No isometric (3D) drawing is required at this time. Use AutoCAD to draw P7-1 as shown and properly dimension. Draw a multiview (front, top, right side) Properly dimension and submit.
Create an orthographic projection drawing using AutoCAD. The final drawings should include proper line types and dimensioning.

P2-12

Assignment 6 Worksheet from Book Due 2.28.15

Assignment 7 Orthographic Projection and Dimensions Due 3.7.15

Draw an Orthographic (Multiview) of each drawing.

Include layers, line types and dimensions.

P1-31
P1-36

Assignment 7 Video P1-31 Polar Coordinates

Assignment 7 Worksheets From Book Due 3.7.15

Assignment 8 Activities Due 3.21.15

Read Chapter 5 (-1 to 5-15)

DVD Activities

1) Fasteners
2) Screw Thread Definitions
   Exercise: Thread Features (5-1 Attached - Submit for a Grade)
3) Types of Thread
4) Manufacturing Screw Thds
5) Drawing Screw Threads
6) Unified Threads

Exercise 5-1 Screw Thread Features

Assignment 8 Due 3.21.15

Draw the fasteners drawing in AutoCAD. Do not worry about sizes, just draw it proportionately and use the proper labels and symbols. Email the assignment to tinagoitia@yahoo.com.

fasteners.gif

Counterbore Symbols in AutoCAD.wmv

Assignment 9 Activities Due Date 3.28.15

DVD Activities

7) Metric Threads
8) Drawing Bolts
9) Bolt and Screw Clearances

Assignment 9
Redraw the holes worksheet in AutoCAD. Do not worry about sizes, just draw the fasteners proportionate to the page. Use the proper labels and symbols.

Assignment 10 Due Date 4.4.15
Read Chapter 6 (6-1 to 6-7)

DVD Activities

1) Definitions
2) Views Used in Assemblies
   - Exercise 6-1: Section lines (Attached - Turn in for Grade)
3) Things To/Not To Include
4) Standard Parts
   - Exercise 6-2: Working drawing 6 Sheets - Base, Weight Plate, Pin, Balloons, Title Block and Dimensions (Attached - Turn in for Grade)

Assignment 10
Remove the following worksheets from the textbook, complete the drawings, scan, attach to e-mail: TinaGoitia@dcccd.edu. All titles should include your name, DFTG 1405, semester, and date.

- DVD Led Exercise 6-1: Section lines
- DVD Exercie 6-2: Working drawing 6 Sheets - Base, Weight Plate, Pin, Balloons, Title Block and Dimensions

Draw 6-28 as an exploded assembly in AutoCAD. View the attached video over how to draw an isometric.

- Video Exercise 7-1: Beginning Isometric Pictorial 1
- DVD Led Exercise 7-2: Isometric Pictorial 1
- Video Exercise 7-3: Beginning 2
- DVD Led Exercise 7-4: Isometric Pictorial 2
- Video Exercise 7-5: Intermediate Pictorial

Assignment 11 Activities Due Date 4.11.15

Remove the following worksheets from the textbook, complete the drawings, scan, attach to e-mail: tinagoitia@yahoo.com. These drawings are also attached for your convenience.

All titles should include your name, DFTG 1405, semester, and date.

- Video Exercise 7-1: Beginning Isometric Pictorial 1
- DVD Led Exercise 7-2: Isometric Pictorial 1
- Video Exercise 7-3: Beginning 2
- DVD Led Exercise 7-4: Isometric Pictorial 2
- Video Exercise 7-5: Intermediate Pictorial
Draw Figure 7-16 in AutoCAD. Include the front, top, right side and an oblique. Use 45 degree angles to illustrate depth.

**Figure 7-16**
- [Instructor Led 7-4.jpg](#) (745.312 KB)
- [Instructor Led 7-3.jpg](#) (750.768 KB)
- [Instructor Led 7-2.jpg](#) (718.308 KB)
- [Instructor Led 7-1.jpg](#) (734.225 KB)
- [Instructor Led 7-5.jpg](#) (712.123 KB)
- [Figure 7-16.jpg](#) (811.671 KB)

Draw the oblique in AutoCAD. No dimensions are necessary. Complete the attached worksheets from the book. The worksheets are guided activities which are located on the EGE website.

[^1](http://www.engineeringessentials.com/ege/index.htm)

**Assignment 12: Ortho & Pictorial Practice Work: Due 4.18.15**
Use the attached AutoCAD Title Block drawing to complete an orthographic drawing of P 1-47. (Attached)

View the video on how to insert a block. Draw the isometric view of P 1-47, write block it, and insert into the title block orthographic drawing.

You will need to scale the isometric to fit the drawing.

**Figure P 1-47**
- [P 1-47.jpg](#) (275.029 KB)
- [Inserting a Write Block.wmv](#) (5.14 MB)
- [Standard Layer Properties.rtf](#) (15.118 KB)
- [Size A Titleblock No Layers.dwg](#) (66.413 KB)

**Assignment 13: Ortho & Pictorial Practice Work: Due 4.25.15**
Use the attached AutoCAD drawing to complete an orthographic drawing of P 1-48. (Attached)

The drawing limits are set for an ANSI B size drawing which is 11X17.

Create a border 1/2" from the edge of the page. (10 Pts.)

Offset the bottom of the border 1/2 up. Create a titleblock and make sure to section each piece of information into it's own block. (10 pts)

Layers are set up in the drawing. Make sure to use them for hidden lines, center lines, dimension lines, etc. (10 pts per layer)

Draw the isometric view of P 1-48, write block it, and insert into the title block orthographic drawing.

You will need to scale the isometric to fit the drawing.

**Figure P 1-48**
- [B Size Template.dwg](#) (66.753 KB)
- [P 1-48.jpg](#) (356.686 KB)
- [How to Draw Angles within an Isometric.wmv](#) (2.296 MB)

**Assignment 14: Ortho & Pictorial Practice Work: Due 5.2.15**
Use the attached AutoCAD drawing to complete an orthographic drawing of P 1-43.

The drawing limits are set for an ANSI B size drawing which is 11X17.

Create a border 1/2" from the edge of the page. (10 Pts.)
Offset the bottom of the border 1/2 up. Create a titleblock and make sure to section each piece of information into its own block. Meaning create a proper title block. (10 pts)

Layers are set up in the drawing. Make sure to use them for hidden lines, center lines, dimension lines, etc. (10 pts per layer)

Draw the isometric view of P 1-43, write block it, and insert into the title block or graphic drawing.

You will need to scale the isometric to fit the drawing. Use the B-Size Template from the last assignment to complete the drawing.

Draw a multiview (orthographic projection) drawing with an isometric. The drawing limits are 17, 11. The border is 1/2” from the edge. The title block is 1/2 from the border. (10 Points)
Create and Use layers (10 Points)
Use Proper Dimensioning Techniques (10 Points)
Draw a Multiview (35 Points)
Draw an Isometric (30 Points) Use wblock to insert the Isometric at half scale.
Change the Line Type Scale for hidden lines (5 Points)
The directions to set up for an Isometric are as follows:
Type Snap: Enter
Type S: Enter
Type I: Enter Twice
Turn F9 OFF
Turn F8 ON
Use F5 to Change Directions or Use Control Key + E
For drill holes make sure to use Ellipse: Isocircle.

Draw a multiview and properly dimension in AutoCAD. Create a title block. Make sure to use hidden lines and centerlines. Draw an isometric on a separate page and insert it as a block.

Title your work properly. The name of the drawing is Final Exam.