

## Intermediate Computer-Aided Drafting (DFTG 2319)



**Credit:** 3 semester credit hours (2 hours lecture, 4 hours lab)

**Prerequisite/Co-requisite:** DFTG 1309

### Course Description

A continuation of practices and techniques used in basic computer-aided drafting including the development and use of prototype drawings, construction of pictorial drawings, extracting data, and basics of 3D.

### Required Textbook and Materials

1. *AutoCAD and its Applications - Comprehensive* by Shumaker/Madsen/Madsen, 25<sup>rd</sup> edition
  - a. ISBN number is 978-1-63563-063-3
2. Flash Drive – 1GB minimum
3. Notebook with dividers
4. Access to computer with AutoCAD

### Course Objectives

Upon completion of this course, the student will be able to:

1. Produce a working set of detailed dimensioned drawings with the proper orthographic projections and scales.
2. Create external reference drawings (XREFs) to produce another detailed drawing.
3. Set-up and create Prototype (Template) drawings to the proper scale for use with other drawings.
4. Create pictorial drawings (Isometrics) from 2D views of objects.(Isometrics)
5. Successfully Extract 100% of the data from graphic files using Attributes and use this data to create a bill of material.
6. Create 3D Wireframe and Solids models to scale. Extract the 2D orthographic projections to create a dimensioned detailed working drawing

### Course Outline

- A. Introduction
  1. Introduction of faculty and students
  2. Review syllabus
  3. Review class policies
  4. Basic drawing setup and workspace
- B. Proto-type (template) drawings
  1. Types of drawings
  2. Where to store drawings
  3. How to use templates

## **DFTG 2319 Course Syllabus**

### **C. Advanced drawing fundamentals**

1. Model space and viewports
2. External references (XREFs)
3. Blocks and attributes

### **D. Pictorial drawings**

1. Types of pictorial drawings
2. Anatomy of an isometric drawing
3. Setting up an iso grid
4. Iso lines, circles, dims and text

### **E. Introduction to 3D modeling**

1. Right hand rule
2. What is the UCS
3. Manipulating the UCS
4. Where is the “Z” axis

### **F. Solids modeling**

1. Primitives
2. Creating 3D objects
3. Boolean operations
4. Modify commands and 3D

### **G. 3D drawings**

1. Rendering
2. Creating 2D drawings from 3D objects
3. Model documentation
4. Materials in AutoCAD

## **Grade Scale**

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

## **Course Evaluation**

Varies per instructor

## **Course Requirements**

1. Read chapters and complete reviews
2. Study handouts
3. Complete drawings
4. Attend class and take notes from lectures

## **Attendance Policy** (all work during absence must be made up)

Varies per instructor

## Course Policies

1. No food, drinks or use of tobacco products in class.
2. No foul or harsh language will be tolerated.
3. Turn off all cell phones during lectures.
4. Headphones may be worn only upon instructor approval.
5. Do not bring children to class.
6. No cheating of any kind will be tolerated. Students caught cheating or helping someone to cheat can and will be removed from the class for the semester. Cheating can result in expulsion from LIT.
7. If you wish to drop a course, the student is responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course you will earn an "F" in the course.
8. Back-ups  
It is the student's responsibility to make back-up copies of their work. Do not rely on the server to be there 100% of the time. I cannot help you if you lose your work. Remember that in order for your work to be graded it must be turned in.
9. Internet usage
  - a. Classroom computers have access to the internet.
  - b. Student usage of the internet will be monitored.
  - c. Proper usage of the internet will be allowed to be used for classroom research or as directed.
  - d. Any unauthorized use of the internet will not be tolerated.
  - e. Improper usage of the internet, such as profanity, pornography, gambling, etc. will result in disciplinary action not limited to expulsion from LIT.

## Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the online resource:

<http://www.lit.edu/depts/stuserv/special/defaults.aspx>

## Student Code of Conduct Statement

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at [www.lit.edu](http://www.lit.edu) or obtained in print upon request at the Student Services Office.

## Supplemental Instruction

Supplemental Instruction (SI) consists of group tutoring sessions conducted once a week for 50 minutes for selected subjects. The SI Leader is a peer who helps students learn difficult content in those specific courses. The SI Leader attends the class with the students to keep up with the course content and engage students in interactive learning

## DFTG 2319 Course Syllabus

strategies at the 50 minute sessions. For this course, the supplemental instruction session will be held on “day” at “time” in “bldg/room”.

### **Starfish**

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.



### **Contact information**

Instructor:      Varies per instructor

**Refer to Calendar for important dates and course schedules!**