



Frank Phillips College
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1. General Course Information

- 1.1. **Course Number:** DFTG 2319
- 1.2. **Course Title:** Intermediate Computer Aided Drafting
- 1.3. **SCH [Semester Credit Hours]:** 3 **CEU [Continuing Education Units]** 4.8

NB: CLASS CAN NOT BE TAKEN FOR BOTH ACADEMIC AND CEU CREDIT

- 1.4. **Pre-requisites:** DFTG 1309 or consent of instructor
- 1.5. **Co-requisites:** none
- 1.6. **Course Description:** An intermediate class in computer aided drafting [CAD]. Emphasis is placed on production drawing setup; creating and modifying two and three dimensional geometry; creating, storing and retrieving predefined shaped [blocks]; adding extensive text and dimensions; dual dimensioning; layer control; coordinate systems; file encrypting and electronic transfer; system customization, configuration and optimization for specific drafting tasks.
- 1.7. **Semester/year**

2. Instructor:

- 2.1. **Name:** Dr. F. George McDuffee¹
- 2.2. **Office:** Library Building Room L10 or CAI-104A on the Borger Campus
- 2.3. **Extension:** (w) 806.274.5311 X791 (L10) or X806 (CAI104) (h) 806.274.2113
- 2.4. **Office Hours:** 9AM/4PM M-F however call as I am frequently out of the office or try CAI-104
- 2.5. **Email:** gmcduffee@fpc.cc.tx.us

3. Objective of this class: On successful completion of this course the participant will be able to demonstrate an ability to:

- 3.1. Name and identify the normal components of a typical CAD system
- 3.2. Save drawing, template and other files to fixed and removable media
- 3.3. Compress and encrypt drawing & support files for secure electronic transfer
- 3.4. Electronically transfer encrypted, compressed and uncompressed drawing and data files over the Internet.
- 3.5. Transfer their drawing files between fixed and removable media
- 3.6. Download component drawing and support files from the Internet and incorporate these into their drawings.
- 3.7. Set all AutoCAD system parameters / variables
- 3.8. Classify and use absolute, relative and polar coordinate systems
- 3.9. Create and edit precise two and three dimensional models for simple to intermediate parts which include the following:
 - 3.9.1. Draw all CAD entities
 - 3.9.2. Layers that illustrate different colors and line types
 - 3.9.3. Text in different fonts and qualities
 - 3.9.4. Block, symbols, titles, etc.
 - 3.9.5. Dimensioning and related notations
 - 3.9.6. Hatching
 - 3.9.7. Editing entities using AutoCAD commands and grips
- 3.10. Place geometry, notes [text] and dimensions on different [correct] layers

¹ AS Coffeyville Junior College 1960, BS [Applied Mathematics and Statistics] Southern Illinois University at Edwardsville, 1969, MS [Manufacturing Technology] Pittsburg State University 1993, EdS [Industrial Education] Pittsburg State University 1995, EdD [Occupational and Adult Education] Oklahoma State University 1999. With some overlap, 30 years manufacturing, 15 years consulting [technology transfer] and 10 years teaching.

- 3.11. Set the correct line type patterns, colors and weights per ANSI & ISO standards
- 3.12. Add notes [text] to a drawing using different fonts, weights and colors
- 3.13. Set up drawing limits and units of measure to ANSI & ISO standards
- 3.14. Control the display as required while creating and editing two and three dimensional geometry
- 3.15. Plot two-dimensional geometry, borders and title blocks at various scale factors
- 3.16. Complete geometric constructions and projections with the aid of the computer
- 3.17. Complete section, isometric, and auxiliary views of objects
- 3.18. Add dimensions and tolerances using ANSI & ISO standards
- 3.19. Apply the “spelling” and “style” checkers within the AutoCAD program
- 3.20. Differentiate between and correctly apply and indicate first and third angle projection

4. **Textbook and Other Required Materials**

- 4.1. **TBA** – check with FPC bookstore for current text
- 4.2. (5) 3.5 1.44 megabyte floppy disks w/case or 2.5 megabyte ZIP disk w/case [*see note on saving work in the “Course Specific Notes” section at the end of this syllabus.*]
- 4.3. 8.5 X 11 spiral bound notebook
- 4.4. File folder for class hand outs
- 4.5. Manual writing instrument such as pencil or ball point pen
- 4.6. High-lighter

5. **Classroom Policy and Instructor Expectations**

- 5.1. The students and instructor will show mutual respect at all times. *Please see the S.C.A.N.S. section below for additional discussion on this point.*
- 5.2. Behavior inconsistent with a safe and student-friendly learning environment for all students is not acceptable. *Please see the S.C.A.N.S. section below for additional discussion on this point.*
- 5.3. Habits of neatness and safety are common workplace requirements. They are therefore required in this class. *Please see the S.C.A.N.S. section below for additional discussion on this point.*
- 5.4. Honesty is expected of all students. Cheating and plagiarism are violations of honesty. Cheating occurs whenever one uses deceitful means, for example crib notes or copying assignments. Plagiarism is presenting the language and ideas of another as one's own work such as copying papers, themes, abstracts, sections of books, magazine articles, etc.

6. **Additional/Supplemental References**

- 6.1. AutoDesk User's Guide AutoCAD 2002 p/n 0012220010000-5020A June 2001
- 6.2. The instructor will provide additional handouts during class

7. **Methods of Evaluation & Schedule**

- 7.1. Participants will complete a minimum of (6) two-dimensional and (2) three-dimensional drawings. These will be sized to fit standard ANSI paper and will include appropriate borders, title blocks, dimensions, hatching, etc. generally expected on actual manufacturing prints. Additional drawings and other assignments will be given that lead to the completion of these drawings.
- 7.2. The final grade will be determined by the timely submission of the above drawings, which will indicate the participants' mastery of the commands, techniques, conventions, etc. required to create the drawings. Pop quizzes will be given from time to time so that the instructor can evaluate the participants' progress and the efficiency of instruction. Student participation in class discussions and projects will also be considered in the determination of the final grade.
- 7.3. Testing/Evaluation Schedule TBA

Attendance Policy

- 7.4. While attendance in many college classes is optional, ***attendance in life and at work is not***, therefore all participants are expected to attend all sessions. *Please see the S.C.A.N.S. section below for additional discussion on this point.*
 - 7.5. I do not waste my or the class's time by presenting unimportant or non-essential information, therefore every class is important.
 - 7.6. Much of the material is cumulative, that is to understand material presented in class two it is essential that you attended class one.
 - 7.7. Participation is an important part of life, and class participation is a significant element in student evaluation. If you do not attend, you can't participate. *Please see the S.C.A.N.S. section below for additional discussion on this point.*
 - 7.8. It is assumed that you are participating in this class to obtain skills and knowledge. It is obvious that if you do not attend, you cannot obtain these skills and knowledge.
 - 7.9. FPC has excellent relations and high credibility with the area employers. A major factor in this is that our graduates have traditionally exhibited high "on-the-job" performance consistent with the skills and knowledge described in the course syllabi. The only way to maintain these relationships and credibility is to insure that every student is presented with the opportunity to obtain these skills and knowledge, and verification of the acquisition of these skills and knowledge, which obviously requires class attendance.
 - 7.10. One of the most valuable and enjoyable aspects of adult education is the sharing of knowledge and experiences among the participants. If you do not attend, you cannot contribute your unique experiences and observations. Thus, your absences affect not only your learning opportunities but also the learning opportunities of all the other participants, which includes the instructor.
8. **SCANS² Workplace Competencies Addressed in this Class:**
- 8.1. **Resources:** Identifies, organizes, plans, and allocates resources:
 - 8.1.1. Time--Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules
 - 8.1.2. Money-- *[included for completeness but not used in this class]* Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives
 - 8.1.3. Material and Facilities--Acquires, stores, allocates, and uses materials or space efficiently
 - 8.1.4. Human Resources--Assesses skills and distributes work accordingly, evaluates performance and provides feedback
 - 8.2. **Interpersonal:** Works with others
 - 8.2.1. Participates as Member of a Team--contributes to group effort
 - 8.2.2. Teaches Others New Skills
 - 8.2.3. Serves Clients/Customers--works to satisfy customers' expectations
 - 8.2.4. Exercises Leadership--communicates ideas to justify position, persuades and convinces others
 - 8.2.5. Responsibly challenges existing procedures and policies
 - 8.2.6. Negotiates--works toward agreements involving exchange of resources, resolves divergent interests
 - 8.2.7. Works with Diversity--works well with men and women from diverse backgrounds
 - 8.3. **Information:** Acquires and uses information
 - 8.3.1. Acquires and Evaluates Information
 - 8.3.2. Organizes and Maintains Information

² Secretary's Commission on Achieving Necessary Skills
See <http://pueblo.pc.maricopa.edu/MariMUSE/SCANS/SCANS.html> for details.

- 8.3.3. Interprets and Communicates Information
- 8.3.4. Uses Computers to Process Information
- 8.4. Systems: Understands complex inter-relationships
 - 8.4.1. Understands Systems--knows how social, organizational, and technological systems work and operates effectively with them
 - 8.4.2. Monitors and Corrects Performance--distinguishes trends, predicts impacts on systems operations, diagnoses deviations in systems' performance and corrects malfunctions
 - 8.4.3. Improves or Designs Systems--suggests modifications to existing systems and develops new or alternative systems to improve performance
- 8.5. Technology: Works with a variety of technologies
 - 8.5.1. Selects Technology--chooses procedures, tools or equipment including computers and related technologies
 - 8.5.2. Applies Technology to Task--Understands overall intent and proper procedures for setup and operation of equipment
 - 8.5.3. Maintains and Troubleshoots Equipment--Prevents, identifies, or solves problems with equipment, including computers and other technologies

9. Next Recommended Course in Sequence:

10. Frank Phillips College [FPC] General Policies:

- 11.1. **Assessment of Student Academic Achievement** - *Student learning is central to all that we do at the College.* Faculty assess student learning in a variety of ways, including in-course assessments, portfolios, certification examinations, employer surveys, transfer studies, and many others. The College measures its effectiveness through the results of our assessment of student learning and uses those results to improve student learning. **This two-way feedback is critical to our ongoing efforts to improve and expand our instructional efforts.**
- 11.2. **Students with Disabilities** - It is FPC's policy to provide reasonable accommodations to students with disabilities. Our goal is to help students succeed in this course. If you have a physical, mental, or learning disability and you need a reasonable accommodation to help you achieve success, please contact Toni K. Cyan-Brock, Title IV Director (LIB 19 phone EXT 753). To best provide the accommodation you need, make this request as soon as possible, since **accommodations cannot be made to change a grade you have received for course work already completed.**
- 11.3. **Tutoring Services** - Tutoring services are available for most courses. These services are provided free of charge. Tutoring is provided by professional and student tutors. Tutor request cards are located at Student Services. For information, please call EXT 753.
- 11.4. **Course Withdrawal** - If for any reason you cannot complete this or any other course, you must officially withdraw from the class. Even if you never attend class, if you are officially enrolled in a course, you will receive a grade for the course unless you complete and submit a drop form with appropriate signatures to the registrar. If you have not completed all of the work, that grade can only be an F. Drop forms are available in the division office, in the counseling office, or from the registrar. After midterm, you must have the instructor's permission to withdraw from a class; therefore, his or her signature must be on the form before you submit it to the registrar. For the last date to withdraw without the signature of the instructor, check the quarterly schedule. ***If you do decide to withdraw from a class and have any kind of financial aid, you should consult with the financial aid office prior to the withdrawal to determine what, if any, effect it will have on your status³.***

³ For example, a change from enrollment for 12 or more semester credit hours [SCH] to less than 12 SCH is a change from full-time to part-time student classification which may affect scholarships, athletic eligibility, student loan category and draft status.

- 11.5. **Incomplete Grade** - If you have been progressing satisfactorily in a course, but for reasons beyond your control (death in family, personal illness, etc.) you cannot complete all of the requirements for the course, you can request an incomplete grade (I) from the instructor. If the instructor agrees, you will work out a mutually agreeable completion schedule. The instructor will complete a grade change form once the course work is completed. If the grade change is not submitted by the Friday of the fifth week of the following term (fall for both spring and summer), the grade will automatically change to an F.
- 11.6. **Academic Dishonesty** - Using the ideas, expressions, writings, etc., of another person and representing them as your own is one form of academic dishonesty and can result in severe penalties, including failure on a project or in a course. Plagiarism includes not only word-for-word copying *but also the use of the general ideas of another without giving appropriate credit to the source.*
- 11.7. **General Conduct:** Students are responsible for knowing the Law and Order [General Conduct and Behavior] Regulations in the college catalog.
- 11.8. **Children in Classes:** Children are not allowed in classes without the *prior* approval of the instructor. If permission is granted to bring a child into a class, it is the parent's responsibility to see that the child in no way disturbs other students or the class in general. Even after permission is granted, the instructor always has the right to ask a parent and child to leave a class if any kind of disruption takes place. Individuals who bring children to the college for any reason are expected to supervise them at all times.

12. Course Specific Notes:

- 12.1. **Do not attempt to work directly from your floppy or zip disk.** There is an “undocumented feature” [bug] that will scramble the file directory on the entire disk at random intervals. There is no known way to recover this data. Always transfer your saved files to your directory on the fixed media on the machine, work on these files, and when you are finished copy the completed files back to your removable media.
- 12.2. **Do not assume that any file you leave on the machine will be there when you return.** Someone may have erased or changed your files, the machine may be occupied when you want to work on your project, the machine or drive may have been replaced, or someone may copy your files.