El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	**Computer-Aided Design**
COURSE RUBRIC AND NUMBER	**DFTG 2419**
COURSE TITLE	**Intermediate Computer-Aided Drafting**
COURSE HOURS	**4 3 : 3** **Credits Lec Lab**

I. Catalog Description

Continues practices and techniques used in basic computer-aided drafting emphasizing advanced dimensioning techniques, the development and use of prototype drawings, construction of pictorial drawings, interfacing 2d and/or 3d environments and extracting data. **Prerequisite: DFTG 1309. (3:3). Lab fee.**

II. Course Objectives

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

A. Unit I. Introduction and Review

1. Utilize AutoCAD's 2-D coordinate system.
2. Apply basic CAD commands at keyboard speed of 35 w.p.m.
3. Apply basic CAD functions to the production of fully dimensioned orthographic drawings such as those drawn at the end of the prerequisite course CAD I.

B. Unit II. Customizing AutoCAD

1. Create alternate AutoCAD configurations.
2. Customize toolbars.
3. Create new toolbars and new buttons.
4. Create custom hatch patterns, linetypes, and layers.

C. Unit III. Advanced AutoCAD Drawing and Editing

1. Use the Polyline, Spline, and Multiline commands to draw objects and revise or edit existing polylines and multilines.
2. Produce a fully dimensioned floor plan utilizing the above commands given an architectural sketch and all necessary information.
3. Define and use dimension tolerancing and terminology.
4. Create dimension styles with specified tolerance settings.
5. Define the terminology used for gears and cams.
6. Produce fully dimensioned working drawings of a machined part with secondary and successive auxiliary views given an engineering sketch and all necessary information.

D. Unit IV. Working with Attribute Drawings, External References, Database Format Attachments, and Script Files

1. Assign visible, constant, and hidden attributes to blocks.
2. Create an attribute extract template file and extract attribute values to create a bill of materials.
3. Define the function of external references and edit them in the current drawing.

4. Produce fully dimensioned working drawings having database format attachments and external referencing tools.
5. Make and view slides using the Mslide and Vslide commands.
6. Write a script file and present a slide show of the slides created above.

E. Unit V. Pictorials

1. Describe the difference between oblique, axonometric, and perspective drawings.
2. Set an isometric grid and construct isometric objects given an engineering sketch and all necessary information.
3. Demonstrate isometric text and dimensioning techniques.
4. Produce a fully dimensioned isometric pictorial given an engineering sketch and all necessary information.
5. Produce batch plots.
6. Prioritize work, maintain log of work time spent, and demonstrate multi-tasking skills
7. Demonstrate hard copy and scanned image management

F. Unit VI. Introduction to 3-D

1. Use AutoCAD's 3-D rectangular coordinate data system to include absolute, relative, and polar coordinate data entry.
2. Create basic 3-D shapes using Elevation and Thickness commands.
3. Display 3-D drawings using the Vpoint and View commands.
4. Set up multiview displays and utilize parallel and perspective views.

III. THECB Learning Outcomes (WECM)

1. Produce 2D and 3D drawings, pictorial drawings.
2. Use external referencing of multiple drawings to construct a composite drawing.
3. Import and extract data utilizing attributes.

IV. Evaluation

A. Pre-assessment
Instructors should check each student's prerequisites the first week of class. Those who do not qualify should be sent back to Admissions.

B. Challenge Exam
There is a challenge exam available for this course. Coordination for any challenge exam should be made through the Drafting Department Coordinator.

C. Post-assessment
1. The instructor will maintain a continuous record of each student's progress on an institutionally approved grade sheet or computerized substitute. All instructors must keep records in such a way that information would be clear to a second party having to check grade computation in special cases. An explanatory legend should be provided on the grade sheet.
2. Students should be evaluated periodically throughout the semester.
3. It is recommended that six graded drawing assignments be administered. However, the instructor will be responsible for determining the actual number and complexity of the graded drawing assignments.
4. Instructors are required to administer a minimum of four evaluations. They can be in a form of the instructor's choosing, such as quizzes, practical/written drawing exams, or formal exams.
5. The instructor will determine the weight of each graded assignment and exam.

D. Remediation
Make-up exams will only be given upon the student-initiated request and at the discretion of the instructor. Make-up work and tests must be arranged with the instructor immediately after an absence.

E. Grading Scale

A = 92.5 - 100
B = 85.0 - 92.4
C = 75.0 - 84.9
D = 65.0 - 74.9
F = below 65
I = Incomplete
W = Withdrew or Withdrawn

F. Grading Percentages

For grade percentage of individual assignments and exams refer to the Syllabus - Instructor's Course Requirements.

V. Disability Statement (Americans with Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC
Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.