El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	**Computer-Aided Design**
COURSE RUBRIC AND NUMBER	**DFTG 1333**
COURSE TITLE	**Mechanical Drafting**
COURSE HOURS	**3 (Credits) 2 (Lec) : 4 (Lab)**

I. Catalog Description

Study of mechanical drawings using dimensioning and tolerances, sectioning techniques, orthographic projection, and pictorial drawings. **Corequisite: DFTG 1309. (2:4). Lab fee.**

II. Course Objectives

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

A. Unit I. Planning and Organization

1. Develop/prioritize work flow and practice time management
2. Assemble plans according to CAD standards and maintain project activity log.

B. Unit II. Complying with Industry Standards

1. Distinguish technical symbology and terminology
2. Apply ASTM/ANSI standards to production drawings
3. Perform electronic file management, demonstrate networking skills, and perform Internet searches

C. Unit III. Drawing for Manufacturing

1. Draw a Cast part with orthographic views, dimensions, tolerances and notes given an engineering sketch and other necessary information.
2. Detail the Machine drawing of a specified cast part including all necessary dimensions, tolerances, and notes given an engineering sketch and instructions.
3. Draw a Forged part showing sections and all necessary dimensions, tolerances, and notes given an engineering sketch and instructions.
4. Draw parts involving sheet metal and fabrication techniques that require primary and secondary auxiliary projections and specify bending information and flat pattern development from given engineering sketch.

D. Unit IV. Special Detail Drawings

1. Draw various types of internal and external threaded fasteners using schematic, simplified, and detailed conventional representations including key and pin applications on indicated machine parts given engineering sketches and instructions.
2. Draw Cam and Follower details with motion and displacement diagrams for various types of actions given engineering sketches and instructions.
3. Identify gear terminology and corresponding formulas for spur, bevel, and worm gears
4. Draw a typical spur gear detailing the teeth in circular view and in section and provide a table of dimensions (cutting data.)

E. Unit V. Assembly Drawings

1. Lay out an Assembly Drawing involving various detailed parts, purchased parts, and standard hardware with a list of materials and field call outs of all the given parts, sketches of parts, and necessary instructions.
2. Implement weld symbols into drawings

F. Unit VI. Pictorials

1. Draw a detailed part involving angular and circular surfaces in isometric fashion to include dimensions, tolerances, and notes.
2. Create an exploded assembly drawing with list of materials and balloon field call outs given sketches and instructions.
3. Make an oblique projection working drawing, fully dimensioned and toleranced given orthographic engineering sketches and instructions.
4. Import and export documents. E.g., .XREFs
5. Utilize 3D virtual navigation software

III. THECB Learning Outcomes (WECM)

Develop mechanical drawings including assembly, detail, and pictorial.

IV. Evaluation

A. Challenge Exam

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

B. Post-assessment

1. The instructor will maintain a continuous record of each student's progress.
2. Students should be evaluated periodically throughout the semester.
3. The instructor will determine the weight of each graded assignment.
4. Instructors may require drawing assignments, quizzes, practical/written drawing exams, and formal exams.

C. 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

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.

VII. Title IX and Sex Discrimination

Title 9 (20 U.S.C. 1681 & 34 C.F.R. Part 106) states the following "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance." The Violence Against Women Act (VAWA) prohibits stalking, date violence, sexual violence, and domestic violence for all students, employees and visitors (male and female). If you have any concerns related to discrimination, harassment, or assault (of any type) you can contact the Assistant to the Vice President for Student and Enrollment Services at 915-831-2655. Employees can call the Manager of Employee Relations at 915-831-6458. Reports of sexual assault/violence may also be reported to EPCC Police at 915-831-2200.