

El Paso Community College

Syllabus

Part II

Official Course Description

| | |
|---------------------------------|---|
| SUBJECT AREA | <u>Computer-Aided Design</u> |
| COURSE RUBRIC AND NUMBER | <u>DFTG 1317</u> |
| COURSE TITLE | <u>Architectural Drafting-Residential</u> |
| COURSE HOURS | <u>3 2 :</u> <u>4</u> |
| | Credits Lec Lab |

I. Catalog Description

Architectural drafting procedures, practices, terms, and symbols. Preparation of detailed working drawings for residential structures. Emphasis on light frame construction methods. **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. Demolition Preparation**
Develop demolition plan if applicable.
- B. **Unit II. Planning and Organization**
 1. Select a design for a two story or split level home suitable for a sloping lot, which satisfies specific material and design parameters.
 2. Identify and plan appropriate sheets JAW, AJA and NCS standards and practice time management
 3. Organize project XREF's and overlays, prioritize work flow, and coordinate plans with other disciplines
 4. Maintain project activity log and drawing files
 5. Identify and work with network assets
- C. **Unit III. Introduction to Architectural Drafting**
 1. Distinguish architectural symbology and terminology.
 2. Work with construction material nominal values.
 3. Recognize and follow international, national, and local building codes.
 4. Research vendor data and specifications utilizing network searches
 5. Adapting to company policies and procedures.
 6. Maintaining an organized work environment.
- D. **Unit IV. Floor Plans**
 1. Draw and dimension the walls of a lower floor plan from selected design sketch.
 2. Draw and dimension the walls of an upper floor plan that is superimposed over the previously drawn lower floor plan.
 3. Draw on to the previously drawn floor plans all interior and exterior doors and windows.
 4. Dimension all exterior openings and create a door and window schedule.

5. Create door, window, and finish schedules

E. Unit V. Mechanical and Electrical Systems

1. Draw in on the floor plans or on a separate Mechanical and Electrical Plan all the electrical fixtures to be utilized, using conventional architectural symbols and function connections where indicated.
2. Draw in on the floor plans or on a separate Mechanical and Electrical Plan all the HVAC equipment and ducting required.
3. Draw in all kitchen and bathroom fixtures without any plumbing connections shown. Builder supplied appliances and cabinetry should be included or space allocated for future installation.
4. Develop mechanical/electrical/plumbing legends and schedules.

F. Unit VI. Mechanical, Electrical, and Plumbing Systems

1. Draw a SITE BOUNDARY with the BUILDING SET BACKS and SIDE LOTS according to local zoning ordinances.
2. Draw a proposed structure on the site plan with proper orientation to sun and existing terrain.
3. Draw all exterior improvements such as DRIVEWAY, WALKS, and FENCES.
4. Develop electrical/mechanical/plumbing legends and schedules

G. Unit VII. Foundation Plan

1. Draw FOUNDATION PLAN for the proposed design such that the lower floor is a monolithic concrete slab and the intermediate floor foundation is concrete block perimeter type.
2. Draw all the necessary foundation details to fully describe the construction and compliance with local building codes.
3. Indicate DRIVEWAY, PATIOS, or PORCHES in PHANTOM lines and show DOWEL PIN connectors.

H. Unit VIII. Roof Plan

Draw and dimension the ROOF PLAN superimposed over the previously drawn UPPER FLOOR PLAN given specific design parameters.

I. Unit IX. Elevations

1. Draw a FRONT ELEVATION of the house with the necessary vertical dimensions to comply with local building ordinances.
2. Draw the SIDE ELEVATION, which shows the most features, and include necessary vertical dimensions
3. Draw the existing grade and any proposed changes in profile and in compliance to building ordinances.
4. Indicate by note or graphic description all exterior finish on both elevations.

J. Unit X. Stairs & Wall Sections

1. Draw a stair detail showing an elevation or section through the stairs, which shows vertical and horizontal features and dimensions of the stairs to be utilized between floors.
2. Draw at the same scale as the floor plans the plan view of the stairs on both the lower and upper floor plans.
3. Draw and dimension a wall section taken through the two-story portion of the house which shows roof slope and cantilever if any is utilized.
4. Indicate by note or graphic representation all construction features and materials used in the section.

K. Unit XI. Miscellaneous Plans

1. Draw a landscape plan for project house
2. Develop an irrigation plan for project house.

L. Unit XII. Introduction to Residential 3D Modeling

1. Convert an existing 2D floor plan to 3D utilizing AutoCAD or AutoDesk Revit
2. Use to AutoCAD Architectural desktop or AutoDesk Revit
3. Produce batch plots.

III. THECB Learning Outcomes (WECM)

Utilize architectural terms, symbols, residential construction materials, and processes to produce a set of residential construction drawings including site plan, floor plan, elevations, wall sections, schedules, details, and foundation plan using reference materials.

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.