



El Camino College
 COURSE OUTLINE OF RECORD – Official

Course Acronym:	ARCH
Course Number:	170
Descriptive Title:	Graphic Communications I: Orthographic Drawings
Division:	Industry and Technology
Department:	Architecture
Course Disciplines:	Architecture
Catalog Description:	This course introduces students to the fundamental tools and techniques used in professional practice to create architectural drawings. Lectures will present contemporary methods of illustrating form and space through the use of orthographic drawings such as plan, section, and elevation. Students will survey the development of drawing throughout history as artists and designers found ways to express ideas, present design solutions and create visual narratives.
Prerequisite:	
Co-requisite:	
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	2
Hours Laboratory (per week):	4
Outside Study Hours:	4
Total Course Hours:	108
Course Units:	3
Grading Method:	Letter Grade only
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	Prior to July 1992
Transfer UC:	propose
Effective Date:	
General Education: ECC	
Term:	
Other:	
CSU GE:	
Term:	
Other:	

IGETC:	
Term:	
Other:	
Student Learning Outcomes:	<p>SLO #1 Graphic Tools</p> <p>Given lecture information, handouts and in-class discussion, students will be able to demonstrate the ability to delineate the entourage necessary to illustrate an architectural presentation drawing. The student will be knowledgeable in the use of various graphic tools that architects use in their office to delineate presentation drawings.</p> <p>SLO #2 Orthographic Projection</p> <p>Given lecture material, students will be able to orthographically project elevation and section views of buildings from plan views of said building.</p> <p>SLO #3 Illumination</p> <p>Given lecture material, handouts and classroom discussion, students will be able to illuminate objects in plan, elevation and perspective so as to show materials in illuminated form as well as showing shade and shadow forms.</p>
Course Objectives:	<ol style="list-style-type: none"> 1. Differentiate among all graphic tools available to architects for purposes of delineation. 2. Develop orthographic drawings including plan, section and elevations indicating different line weights and types. 3. In different drawing types, construct lines, shade and shadows that describe how light sources act upon a building. 4. Draw various textures that would commonly appear on floor and wall plans. 5. Compose entourage in plan, elevation and section that will support the purpose of the drawing. This includes people, trees, cars, and furniture. 6. Compose different graphic diagrams such as linear, circular and radial, which depict the essence of conceptual ideas. 7. Compare and contrast important aspects in composing an architectural presentation for a project.
Major Topics:	<p>I. Graphics techniques overview (2 hours, lecture)</p> <ol style="list-style-type: none"> A. Showing professional illustrations B. Course projects C. Application of computer software <p>II. Introduction to graphics tools (2 hours, lecture)</p> <ol style="list-style-type: none"> A. Drafting equipment

- B. Various presentation medium
- C. Design pens

III. Introduction to graphics tools (10 hours, lab)

- A. Orthographic projection exercises
- B. Ink versus pencil graphite

IV. Light source layout (4 hours, lecture)

- A. Illumination - natural versus artificial
- B. Delineating shaded sides of objects
- C. Constructing the object's shadow

V. Light source layout (12 hours, lab)

- A. Shade/shadow exercises in plan and elevation
- B. Shade/shadow exercises in perspective

VI. Various textures (6 hours, lecture)

- A. Hatch, crosshatch, stipple and scribble
- B. Using sandpaper, screen and netting to get textures
- C. Using graphite to acquire tone in drawing

VII. Various textures (16 hours, lab)

- A. Adding tone to three-dimensional cubes
- B. Applying graphite to paper
- C. Delineating perspectives with tones

VII. Types of entourage (18 hours, lab)

- A. Drawing people in plans, elevations and perspectives
- B. Incorporating outside entourage in perspectives - cars, trees, shrubs and ground covers
- C. Drawing background skies and mountains

IX. Types of entourage (6 hours, lecture)

- A. Drawing people
- B. Drawing cars, motorcycles, planes, and boats
- C. Drawing trees, shrubs and groundcovers

X. Residential values of line and tone (6 hours, lecture)

- A. Pure line drawings
- B. Pure tone drawings
- C. Line and tone drawings
- D. Tone of lines drawings

XI. Residential values of line and tone (16 hours, lab)

	<p>A. Delineating an artistic tone drawing of an elevation B. Delineating a detailed tone drawing of a building perspective</p> <p>XII. Basic graphic diagramming (10 hours, lecture)</p> <p>A. Using an "ordering system" to rationalize the scheme B. Using different geometric shapes to represent different functional spaces C. Using line types and thickness' to illustrate the relationship between the spaces D. Presenting a design proposal for a new house</p>
Total Lecture Hours:	36
Total Laboratory Hours:	72
Total Hours:	108
Primary Method of Evaluation:	3) Skills demonstration
Typical Assignment Using Primary Method of Evaluation:	Graphically render a site and floor plan, an interior perspective and an exterior elevation of a house. With proper materials in their place entourage delineated, complete with shadows. Submit floor plan to the instructor.
Critical Thinking Assignment 1:	On a drawing, orthographically project a front elevation of a house from a given roof plan. Submit drawing to the instructor.
Critical Thinking Assignment 2:	Draw a section from the cutting plane shown on a given site plan. Submit site plan to the instructor.
Other Evaluation Methods:	Performance Exams, Class Performance, Homework Problems, Presentation
Instructional Methods:	Demonstration, Guest Speakers, Lab, Lecture, Multimedia presentations
If other:	
Work Outside of Class:	Problem solving activity, skill practice
If Other:	
Up-To-Date Representative Textbooks:	Francis D. K. Ching. <u>Architectural Graphics</u> . 5th ed. John Wiley, 2015. (Discipline Standard)
Alternative Textbooks:	
Required Supplementary Readings:	
Other Required Materials:	<p>DRAFTING TOOLS</p> <p>Lead holder</p> <p>Leads (2H, H, F)</p> <p>Eraser</p> <p>Erasing shield</p> <p>30/60 degree triangle</p>

	<p>45 degree triangle</p> <p>Adjustable triangle</p> <p>Architectural scale</p> <p>Engineering scale</p> <p>Brush</p> <p>1/4" fixture template</p> <p>Pens, inking - reservoir type #00, #1</p> <p>Paper, vellum and drafting film</p> <p>Flash drive</p>
Requisite:	
Category:	
Requisite course(s): List both prerequisites and corequisites in this box.	
Requisite and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s).	
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Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Michael Stallings
Date:	11/06/2015
Original Board Approval Date:	09/01/1992
Last Reviewed and/or Revised by:	Michael Stallings
Date:	11/06/2020
Last Board Approval Date:	1/17/2023