

CATALOG INFORMATION

Dept and Nbr: CONS 60            Title: BLUEPRINT READING: RESID  
Full Title: Blueprint Reading: Residential  
Last Reviewed: 4/16/2007

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	2.00	Lab Scheduled	0	4	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	2.00		Contact Total	35.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 105.00

Title 5 Category: AA Degree Applicable  
Grading:            Grade Only  
Repeatability:    00 - Two Repeats if Grade was D, F, NC, or NP  
Also Listed As:  
Formerly:            CONS 270

**Catalog Description:**  
Language of working drawing blueprints and specifications as applied to residential construction including: use of scales, drawing symbols and conventions in sketching, interpretation of drawing content, specifications, and code requirements.

**Prerequisites/Corequisites:**

**Recommended Preparation:**  
Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:**

**Schedule of Classes Information:**  
Description: Language of working drawing blueprints and specifications as applied to residential construction including: use of scales, drawing symbols and conventions in sketching, drawing content interpretation, specification interpretation, and code requirement interpretation. (Grade Only)  
Prerequisites/Corequisites:  
Recommended: Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>		Effective:	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Outcomes and Objectives:**

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

1. Use the architectural scale to interpret working drawing blueprints and to prepare sketches.
2. Retrieve and interpret information from architectural residential working drawing blueprints including: site plan, floor plan, foundation and floor framing plan, roof framing plan, sections, details, exterior and interior elevations and utility plans.
3. Identify architectural symbols used in construction drawing blueprints and use them to prepare sketches.
4. Evaluate working drawing blueprint information as it relates to County of Sonoma Residential Plan Check List.
5. Evaluate working drawing blueprint information as it relates to residential aspects of the California Building Code.
6. Synthesize working drawing blueprint content to prepare sketch solutions to problems.
7. Analyze electrical, mechanical and plumbing blueprints and relate them to architectural blueprints.

### **Topics and Scope:**

- I. Introduction to the design process
  - A. Professional roles
  - B. Documentation
- II. Use of the architectural scale
  - A. Measuring components of working drawings
  - B. Preparing sketches
- III. Freehand sketching and lettering techniques
  - A. Use of tools

- B. Professional standards
- IV. Theory of orthographic projections
  - A. 3-view drawings
  - B. Elevations
  - C. Sections
- V. Symbols and conventions used in residential architectural working drawings
- VI. Interpreting residential working drawings by type and relationships
  - A. Site Plan
  - B. Floor Plan
  - C. Foundation and Floor Framing Plan
  - D. Roof Framing Plan
  - E. Sections
  - F. Details
  - G. Exterior and Interior Elevations
  - H. Utility Plans
- VII. Residential working drawing content by drawing type
  - A. Structural
  - B. Electrical
  - C. Mechanical and plumbing
- VIII. Common residential Code requirements
  - A. Relationship to plan check documents
  - B. Relationship to documents and drawings
- IX. Common residential specification information
  - A. Organization
  - B. Division content
  - C. Description of materials
- X. Coordination of architectural drawings with structural, electrical, mechanical, and plumbing plans

**Assignment:**

1. Interpret drawings and prepare sketches using the architectural scale.
2. Analyze architectural drawings and describe the relationships between them.
3. Readings in text, 10- 20 pages per week.
4. Exercises from text at end of each week's reading assignment.
5. Interpret residential working drawing blueprints by:
  - a. Identifying building materials and components in the working drawing blueprints.
  - b. Identifying building system requirements as shown in the working drawing blueprints.
  - c. Describing the structural system of load transfer as shown in the working drawing blueprints.
  - d. Describing the attachment of system elements to each other and of finishes to the structural elements as shown in the working drawing blueprints.
6. Interpret common non-residential Code requirements by:
  - a. Identifying common Code references for residential construction as shown in the working drawing blueprints.
  - b. Identifying specific Code requirements portrayed in the working drawing blueprints.

- c. Sketching details of a building to demonstrate Code compliance, minimum 1 every 2 weeks.
- 7. Interpret residential specifications by:
  - a. Describing the organization of a specification.
  - b. Identifying where to find specific material information in a specification.
  - c. Identifying acceptable materials to be used in construction according to the specification.
  - d. Identifying acceptable installation requirements for a material according to the specification.
- 8. 2-3 brief essays (2-3 pages each) about issues related to blueprint reading.
- 9. Final exam.

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Essays

Writing  
10 - 20%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Text exercises; interpreting blueprints

Problem solving  
30 - 50%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Sketching exercises; sketch preparation with scale

Skill Demonstrations  
10 - 20%

**Exams:** All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion

Exams  
20 - 30%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Class participation

Other Category  
5 - 10%

### Representative Textbooks and Materials:

Del Pico, Wayne. Builder's Essential: Plan Reading & Material Takeoff. R.S. Means, 2000.

Brown, Walter Charles. Print Reading for Construction: Residential and Commercial. Goodheart-Wilcox, 2005.