

CATALOG INFORMATION

Dept and Nbr: CONS 61

Title: BLUEPRINT READ: NON-RES

Full Title: Blueprint Reading: Non-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:

**Catalog Description:**  
Language of working drawing blueprints and specifications as applied to non-residential construction including: interpreting architectural, structural, electrical and mechanical documentation; working drawing content interpretation; specification and code requirement and content interpretation.

**Prerequisites/Corequisites:**  
Course Completion of CONS 60 ( or CONS 270 or CONS 370 or CONS 82)

**Recommended Preparation:**

**Limits on Enrollment:**

**Schedule of Classes Information:**  
Description: Language of working drawing blueprints and specifications as applied to non-residential construction including: interpreting architectural, structural, electrical and mechanical documentation; working drawing content interpretation; specification and code requirement and content interpretation. (Grade Only)  
Prerequisites/Corequisites: Course Completion of CONS 60 ( or CONS 270 or CONS 370 or

CONS 82)

Recommended:

Limits on Enrollment:

Transfer Credit: CSU;

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>	Transferable	Effective:	Fall 2002	Inactive:	Summer 2012
<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. Analyze architectural working drawing blueprints and describe the relationships between them.
2. Retrieve information from architectural 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, and consultant drawings including: structural, electrical, mechanical and plumbing.
3. Identify architectural symbols used in construction drawings and use them to prepare sketches.
4. Analyze information on working drawing blueprints as it relates to non-residential Code requirements.
5. Evaluate working drawing blueprint information as it relates to specification requirements.
6. Synthesize working drawing blueprint content in order to prepare sketch solutions to problems.
7. Analyze electrical, mechanical, and plumbing blueprints and related them to architectural blueprints.

### **Topics and Scope:**

- I. Introduction to the design process for non-residential buildings
  - A. Professional roles
  - B. Documentation (working drawings and specifications)
- II. Review of sketching techniques and requirements
  - A. Scale

- B. Linework
- III. Symbols and conventions used in non-residential architectural working drawings
- IV. Interpreting non-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
  - I. Detail sketches
- V. Non-residential working drawing content by drawing type, and consultant drawings
  - A. Structural
  - B. Electrical
  - C. Mechanical and plumbing
- VI. Common non-residential Code requirements
  - A. Relationship to plan check documents
  - B. Relationship to drawings
- VII. Common non-residential specification information and relationship to drawings
  - A. Organization
  - B. Division content
  - C. Description of materials
- VIII. Coordination of architectural drawings with structural, electrical, mechanical and plumbing plans

**Assignment:**

1. Readings in text, 10 - 20 pages per week.
2. Exercises from text at end of each week's reading assignment.
3. Interpret 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.
  - e. Prepare detail sketches from working drawing references, minimum 1 every 2 weeks.
4. Interpret common non-residential Code requirements by:
  - a. Identifying common Code references for non-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.

5. Interpret non-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.
6. 2-3 brief essays (2-3 pages each) about issues related to blueprint reading.
7. 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.

Homework problems, Text exercises; interpretation assignments

Problem solving  
30 - 40%

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

Sketching

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:

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