

# BCN 1251C Construction Drawing

Campbell · Fall 2017

3 Credits

Meeting Location: RNK210

Morning Class: T, R 4-5 Periods (10:40am-12:35pm)

Afternoon Class: T, R 8-9 Periods (3:00pm-4:55pm)

Instructor:

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## Goal

To develop the graphic skills necessary to effectively communicate in the construction industry and to acquire a basic understanding of construction drawings and details.

## Objectives

- Develop skills necessary to communicate in the construction industry.
- Develop an understanding of construction drawings and their evolution to the Post Construction Phase.
- Acquire an understanding of the logical assumptions of the way something might be constructed and refine these assumptions through graphical interaction.
- Become familiar with Sketch Up.

## Course Learning Outcomes

Upon completion of the course students will demonstrate their ability to:

1. Develop graphical skills necessary to communicate in the construction industry (ACCE SLO 7)
2. Develop an understanding of construction drawings and their evolution from conception to completion (ACCE SLO 7)
3. Use Free-Hand sketches to visualize and communicate two and three dimensional construction drawings (ACCE SLO 7)
4. Demonstrate the ability to manipulate drawings through use of architectural and civil engineering scales (SACS 1, ACCE SLO 7)
5. Express how a structure would be constructed using two dimensional drawing techniques(SACS 1, ACCE SLO 7)
6. Distinguish the differences of typical drawing set elements such as plan, elevation and section (ACCE SLO 7)
7. Relate various viewpoints of a three dimensional object in two dimensions using orthographic projection(SACS 1, ACCE SLO 7)
8. Employ techniques acquired during the introduction into three dimensional computer modeling (ACCE SLO 10)

*SACS 1: Apply knowledge of engineering, materials, methods, equipment, and processes to safely construct buildings and structures.*

*ACCE SLO 7: Analyze construction documents for planning and management of construction processes.*

*ACCE SLO 10: Apply electronic-based technology to manage the construction process.*

SACS = Southern Association of Colleges and Schools ACCE = American Council for Construction Education SLO= Student Learning Outcome

CLO= Course Learning Outcome

**ASSESSMENT METHODS AND TARGETS:**

<b>Assessment</b>	<b>CLO 1</b>	<b>CLO 2</b>	<b>CLO 3</b>	<b>CLO 4</b>	<b>CLO 5</b>	<b>CLO 6</b>	<b>CLO 7</b>	<b>CLO 8</b>	<b>Target</b>
<i>Final Exam</i>	X								At least 80% receive a C-or better
<i>Midterm Exam</i>	X								At least 80% receive a C-or better
<i>In-Class Exercises</i>	X	X	X	X		X	X		At least 80% or better receive an A
<i>SketchBook</i>			X						At least 80% receive a B-or better
<i>Plan Portfolio</i>					X				At least 80% receive a B-or better
<i>Revit/Sketchup Project</i>								X	At least 80% receive a B-or better

**Teaching Philosophy**

The teaching format is oriented towards instruction, examples, physical and/or visual aids and a large amount of practice, in class and as assignments. Students are encouraged to ask questions and interject their experiences to increase the overall learning experience.

**Suggested Texts**

Architectural Drawing and Light Construction, Philip A. Grau, Edward J. Muller, 8th Edition ISBN-10: 0135132150, ISBN-13: 9780135132159

Building Construction Illustrated, Francis D.K. Ching Architectural Graphic Standards, Ramsey and Sleeper Architectural Graphics, Francis D.K. Ching

Reading Architectural Working Drawings, E L Muller Construction Details for Commercial Buildings, G E Wiggins

**Required Materials**

- 12"x18" drafting board w/ parallel gliding edge **OR** T-square
- Scales: architects and engineers
- Drafting tape or Drafting Dots
- Circle template (general use 3" max circle)(OPTIONAL)
- 45° Triangle & 60°/30° Triangle
- 0.3mm, 0.5mm, 0.7mm Mechanical pencils
- White eraser or similiar
- Sketchbook

## **Paper Policy**

Standard 11x17 and 8.5 x 11 paper will be provided.

Grading Policy: Tentatively Grades and scores will be determined from the following:

In-class exercises & Homework	30%
Midterm Exam	20%
Final Project (Includes Plan	50%
Attendance	

Most of the work will be completed in-class throughout the semester, therefore attendance is critical.

## **BCN Standard Grading Scale:**

A	93 – 100
A-	90 – 92.9
B+	87 – 89.9
B	83 – 86.9
B-	80 – 82.9
C+	77 – 79.9
C	73 – 76.9
C-	70 – 72.9
D+	67 – 69.9
D	63 – 66.9
D-	60 – 62.9
E	< 60

## **Honor Code**

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. Any violation of the Honor code will not be tolerated. A student that is found guilty of Academic Dishonesty will be given a failing grade for the course.

## **Disabled Students**

Any student that needs accommodation regarding physical access, class attendance, notes, or lectures, please contact instructor. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

## **College of Design, Construction and Planning Spray Painting Policy**

Spray painting, or the use of any other sort of aerosol spray, is not allowed in the Architecture Building, Rinker Hall and in Fine Arts C, except within the spray booth found in Room 211 of Fine Arts C. Students found in violation of this policy will be referred to the Dean of Students for disciplinary action.

TENTATIVE SCHEDULE				
Week 1	Tuesday	August	22	Introduction
	Thursday	August	24	Line Types
Week 2	Tuesday	August	29	Multi-view Drawings Overview
	Thursday	August	31	Axonometric Drawings
Week 3	Tuesday	September	5	Floor Plan
	Thursday	September	7	Elevation
Week 4	Tuesday	September	12	Section
	Thursday	September	14	Site Plan & Dimensioning
Week 5	Tuesday	September	19	Stairs & Wood Framing
	Thursday	September	21	Doors & Windows
Week 6	Tuesday	September	26	Trusses & Roof Types
	Thursday	September	28	Plan Reading Practice
Week 7	Tuesday	October	3	Wall Coverings & Finishes
	Thursday	October	5	Midterm Review
Week 8	Tuesday	October	10	<b><u>Midterm Exam</u></b>
	Thursday	October	12	Plan Portfolio: Intro; <b><u>Sketch Book Due</u></b>
Week 9	Tuesday	October	17	Plan Portfolio: Floor Plan
	Thursday	October	19	Plan Portfolio: Floor Plan (cont.)
Week 10	Tuesday	October	24	Plan Portfolio: Elevations
	Thursday	October	26	Plan Portfolio: Elevations (cont.)
Week 11	Tuesday	October	31	Plan Portfolio: <b><u>Elevations &amp; Plan Critiques</u></b>
	Thursday	November	2	Plan Portfolio: Door & Window Schedules
Week 12	Tuesday	November	7	Plan Portfolio: Cover
	Thursday	November	9	<b><u>Mid-point Review</u></b>
Week 13	Tuesday	November	14	Sketch Up Introduction
	Thursday	November	16	Refinements & Production
Week 14	Tuesday	November	21	Refinements & Production
	Thursday	November	23	<b><u>Poultry-based Holiday Break</u></b>
Week 15	Tuesday	November	28	Refinements & Production
	Thursday	November	30	Refinements & Production
Week 16	Tuesday	December	5	<b><u>FINAL PROJECT DUE – START OF CLASS</u></b>
		Reading Days 7-8		NO CLASS
FINALS WEEK		Exams 9-15		NO CLASS