

# BCN 1251C Construction Drawing

Section: 5889

3 Credits Spring 2016

**Meeting Location:** RNK210

**Meeting Time:** T, R 8-9 Periods

**Instructor:**

Yuanxin 'Alex' Zhang

Ph.D. Candidate

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Office Hours:

T,R 12:40 - 1:55 pm

**TA:**

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Office Hours:

T, W, R 12 :40 :40 pm

**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 SketchUp.

**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>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.

## Textbook

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

## Suggested Text

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** Arrangements have been made with Magnum Wood to create a course package with the following supplies.

Magnum Wood: 6210 NW 124 Place 32653 352.335.5538

- 12"x18" drafting board w/ parallel gliding edge
- Scales: architects and engineers
- Drafting tape
- Circle template (general use 3" max circle)
- 45° Triangle
- 0.3mm Mechanical pencil
- White eraser
- Sketchbook

**Portfolios** You will be responsible for compiling two portfolios during the semester:

- 1) 11 x 17 Plan Portfolio
- 2) 8.5 x 11 Sketch Portfolio

**Paper Policy** Standard 11x17 and 8.5 x 11 paper will be provided.

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

In-class exercise	10%
Homework	5%
Sketch portfolio	15%
Plan portfolio	20%
SketchUp	10%
Midterm Exam	15%
Final_Exam	20%
Attendance	5%

Most of the work will be completed in-class throughout the semester, therefore attendance is critical. Attendance points will be calculated at the end of the semester.

## BCN Standard Grading Scale:

A 93 – 100	B- 80 – 82.9	D+ 67 – 69.9
A- 90 – 92.9	C+ 77 – 79.9	D 63 – 66.9
B+ 87 – 89.9	C 73 – 76.9	D- 60 – 62.9
B 83 – 86.9	C- 70 – 72.9	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. Although joint work on assignments may be acceptable in some cases, duplication of an assignment, either manually or by computer will be considered an act of academic dishonesty and dealt with accordingly. 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 Class Schedule

DATE	LECTURE	CONTENT
Tuesday, January 5, 2016	1	Introduction
Thursday, January 7, 2016	2	Line Types
Tuesday, January 12, 2016	3	Multi-view drawings
Thursday, January 14, 2016	4	Axonometric drawings
Tuesday, January 19, 2016	5	Floor Plan
Thursday, January 21, 2016	6	Elevation
Tuesday, January 26, 2016	7	Section
Thursday, January 28, 2016	8	Site Plan
Tuesday, February 2, 2016	9	Dimensioning
Thursday, February 4, 2016	10	<b>Midterm Exam</b>
Tuesday, February 9, 2016	11	Stairs and Wood Framing
Thursday, February 11, 2016	12	Site Plan
Tuesday, February 16, 2016	13	<b>BCN Career Fair- No Classes</b>
Thursday, February 18, 2016	14	Doors and Windows
Tuesday, February 23, 2016	15	Trusses and Roof Types
Thursday, February 25, 2016	16	Wall Coverings and Finishes;
Tuesday, March 1, 2016	17	<b>Spring Break</b>
Thursday, March 3, 2016	18	<b>Spring Break</b>
Tuesday, March 8, 2016	19	Plan Portfolio: Floor Plan; <b>Sketch Book Due</b>
Thursday, March 10, 2016	20	Plan Portfolio: Elev.
Tuesday, March 15, 2016	21	Plan Portfolio: Sections

Thursday, March 17, 2016	22	Plan Portfolio: Door and Window Schedules
Tuesday, March 22, 2016	23	Plan Portfolio: Cover Sheets
Thursday, March 24, 2016	24	Plan Portfolio: Final Touches
Tuesday, March 29, 2016	25	Plan Reading Practice
Thursday, March 31, 2016	26	Plan Reading Practice
Tuesday, April 5, 2016	27	Sketchup Basics
Thursday, April 7, 2016	28	Sketchup
Tuesday, April 12, 2016	29	SketchUp
Thursday, April 14, 2016	30	SketchUp
Tuesday, April 19, 2016		<b>Sketchup Model Due; Plan Portfolio Due</b>
Thursday, April 28, 2016		<b>FINAL EXAM</b>

**\*The syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity.**