

M.E. Rinker, Sr.
School of Building Construction
University of Florida
Semester Course Outline

BCN 3224 – Construction Techniques

3 Credits

Honor Code: Students are expected to comply with the spirit and intent of the University of Florida Honor Code, which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.” Students are required to bring a photo ID to all tests to be presented to the proctor upon completion of the exam.

Instructor: Jim Sullivan, Ph.D., CGC 1516549, LEED A.P.
sullj@ufl.edu

Office Location: 309 Rinker Hall

Meeting Periods:

Section(s)	Days	Hour	Room
All	M -W	2	110
0181	F – lab	2 – 3	225/Perry
0182		4 – 5	225/Perry
0192		6 – 7	225/Perry

Prerequisites: Acceptance in UF BCN program.

Objectives: Students will learn elements relating to the principles of construction methods and techniques. Basic understanding of the built world that surrounds us and how it is constructed.

Description: Study of vertical construction process to include wooden platform frame construction, cast-in-place and pre-cast concrete construction, and steel erection. Included are masonry construction, interior and exterior finishes, vertical transportation, roofing, and other building components.

Method: Two one-hour lecture/discussion periods per week with corresponding reading assignments from the text and one two hour lab. Text assignments should be done before the class in which they are discussed. Students are responsible for the content of all reading materials whether or not the material is covered in class. We will also discuss current issues, and articles may be posted to the class website for review. Although class is scheduled for two meetings per week, several lab class meetings will be substituted with construction site visits or individual/group projects. Perry Yard demonstrations will be scheduled whenever possible on Fridays during lab time. Other times may be scheduled for the convenience of the presenters.

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- Text Required: Mehta, Madan, Scarborough, Walter, and Amrpreist, Diane. Building Construction – Principles, Materials, and Systems (Current). ISBN – 10:0-13-506476-7.
- Florida Building Code, Southern Building Code Congress International, Inc. Latest edition – obtained directly from – Affordable Housing (2nd Floor of Rinker). Check with me regarding pickup date.
- Text Optional / Suggested for Grad Section: Simmons, H. Leslie: Construction Principles, Materials and Methods; John Wiley & Sons, 2001 Six Edition or later (UF Bookstore Price \$99 new / \$79 used).
- Extra Credit Book: Crawford, Matthew B.: Shop Class as Soulcraft; Penguin Books, 2009.
- Reading Assignments: Reading assignments will be posted on class website as semester progresses.
- Tests: Three exams will be given during the semester. The format may include short answer, essay, multiple choice, and/or sketches. Make-up tests must occur within three days of previous exam. Only one make-up exam allowed per semester.
- Final Exam: Final exam will be given during finals week as scheduled by the BCN office – it does NOT match the University schedule. The final will be comprehensive.
- Attendance: Attendance is required. You are allowed three personal drops throughout the semester for any reason – no documentation required. Regardless of circumstance, the fourth missed class will result in a 25% reduction, the fifth missed class will result in a 50% reduction, and a sixth missed class will result in a 100% reduction of attendance points. Being late for class counts as an absence at the discretion of the instructor.
- Field Trip Reports: Individual Field Trip Reports will be submitted the following class day after a field trip has taken place. Reports will be graded for completeness. Blank Field Trip Reports are found on the class website.
- Digital photo reports may be substituted for written reports with approval from instructor. Minimum 20 photos may be submitted (labeled by Division Number and brief description). A word document containing site information must also be submitted. Each submission must be submitted in a CD format which will be returned. Same timeline as written progress reports apply.

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Undergraduate Volunteer Hours: It is expected that you will participate with a construction project during the semester. Rebuild Gainesville will coordinate your time. Groups of 10 students will take on individual projects. You will be responsible supporting estimate, build, and close-out of paperwork. Teams will receive a team grade as well as an individual grade based on team member's self-evaluation and group evaluations.

NCCER Web Learning: NCCER Web Learning is an online course of Nine Core Areas that parallel the course materials. Individuals will be required to sign up and complete modules. Performance evaluations will take place on Friday labs as required. You will sign up for this course and pay online fee.
*This is pending for Fall 2012

Grade Makeup: Final grades will be on a similar scale as follows depending on work covered during the semester:

Three in-term exam grades @ 100 points	300
Final exam	100
Attendance	50
Team Project Reports	50
Volunteer Hours	50
*NCCER Core	100
Quizzes/Code Book Assignments	50
Code Book Assignments	50

Grade Scale: Grades will be given according to the following scale. Divide the total points you earn by total possible points. Decimal points will not be rounded.

A	93.0-100
A-	90.0-92.99
B+	87.0-89.99
B	83.0-86.99
B-	80.0-82.99
C+	77.0-79.99
C	73.0-76.99
C-	70.0-72.99
D+	67.0-69.99
D	63.0-66.99
D-	60.0-62.99
E	Less than 60

Extra Credit: Shop Class for Soulcraft book report. 15 bonus points. Due March 21st. Max four pages single spaced. Paper should cover your reasons for choosing construction.

Class website: E-learning/webct/Sokai : lss.at.ufl.edu

Quality: It is expected that everything submitted for a grade will be professional with correct spelling and grammar. With regard to

homework/quizzes – 10 points is for going above what is asked, 8-9 points for meeting the minimum of what is expected, 5-7 points for quality work that may not be correct in scope. When available use software to produce your work. The goal is for all work to represent what you would fax/submit to your immediate boss in a job scenario. There is no credit for submitting late work. I will drop the lowest score for each type of assignment (i.e., quizzes, homework, codebook quizzes)

Communication: No work will be accepted via an e-mail submission unless structured submittal via e-learning as an upload. Please try to communicate with me during office hours or before/after class periods. You are important to me as a student - I am simply overwhelmed with electronic communication. Please feel free to keep me in the loop with regard to your situation but I am limited to respond. I will respond to e-mails/texts at my discretion. You are responsible for addressing grades/omissions within one week of the grade being posted on e-learning. After one week the grade/input stands for the class regardless of cause or circumstance.

Cell Phones: Cell phone use is not allowed in classrooms/Perry Yard. Use of a cell phone during class will discount attendance. Use of cell phones during an exam will result in failing the exam.

Late Work: Late Work will be accepted at 50% of potential points no later than the start of the next scheduled class. Any exams missed must have documentation regarding cause and must be taken prior to the start of the second scheduled class from the time of the missed exam.

Course Learning Objectives :

- ❶ Relate basic construction vocabulary and terminology of construction for various building elements/components.
- ❷ Develop a construction logistics plan (parking and access routes, storage areas, project limit fencing, etc).
- ❸ Possess knowledge of construction techniques associated with wood, steel and reinforced concrete framing; floor systems; roof systems; masonry construction; curtain walls; building insulation; and interior and exterior finishes.
- ❹ Recognize the sequence of construction activities and importance of safety and constructability issues.
- ❺ Interpret and extract information from Florida Building Code.

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- ⑥ Know the latest available construction materials and techniques, and be familiar with current issues such as mold and mildew.

AIC Exam Referenced Topics for this Course:

II. Engineering Concepts

- Engineering Material Properties (agg, concrete, masonry, steel, wood)

III. Management Concepts

- Contract types
- Business ethics

IV. CSI Materials, Methods, Plans/Specs

- Construction equipment

VII. Planning, Scheduling, and Control

- Logical Sequence of Design, Procurement, and Construction.

VIII. Construction Safety

- Tool box talks covering all topics

IX. Surveying and Project Layout

- Equipment
- Topography

X. Project Administration

- Procurement of Resources
- Duties/Responsibilities
- Organizational Chart
- Design, Procurement, and Construction Team
- Craft Trade Descriptions
- Jobsite Administration
- Project Closeout (punchlist/completion/occupancy)