

University of Florida  
M.E. RINKER, Sr. SCHOOL OF CONSTRUCTION MANAGEMENT  
**BCN 4423 TEMPORARY STRUCTURES**  
Summer 2021 | Syllabus

**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.”

**Instructor:** Eileen Pesantes-Tavares, PhD  
**Office:** 340 Rinker Hall  
**Email:** Mail tool in e-Learning in Canvas (preferred method)  
**Website:** UF e-Learning in Canvas <https://ufl.instructure.com/courses/430605>  
**Office Hours:** By appointment

**COURSE DESCRIPTION:** To study the temporary structures that contractors have to build in order to construct the primary structure. This includes form work, scaffolding, support excavation systems, and equipment for hoisting materials, personnel, and erecting structures.

**INSTRUCTIONAL METHODS:** Class lectures, videos, homeworks, and tests.

**PURPOSE OF COURSE:** This course is intended to teach temporary construction methods and design principles to ensure stability of structures during all phases of the construction process. This includes: concrete form work, scaffolding, hoisting personnel and materials, and erecting structures.

**COURSE LEARNING OUTCOMES (CLOs):**

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

1. Recognize that temporary structures (TS) have a major impact on schedule, cost and quality of construction projects and have been responsible for hundreds of deaths on construction sites.
2. Analyze and design wood beams, and columns using NDS for Wood Construction.
3. Analyze and design formwork for concrete walls and slabs.
4. Review alternative scaffolding systems and discuss their standard of practice.
5. Discuss options for the support of excavation systems.
6. Identify erection equipment to select the most suitable equipment for hoisting materials, personnel, and erecting structures.

**Table 1: Assessment Matrix**

Course Learning Outcomes (CLO)	Assignments	Student Learning Outcomes (SLO)		Percent students passing with a 70% or higher
		SACS	ACCE	
1. Recognize impact of temporary structures	Class Discussion (or equivalent)	1	3	80%
2. Use the NDS for Wood Construction	Test and homework	1	19	80%
3. Design form work for walls and slabs	Test and homework	1	19	80%
4. Review scaffolding systems	Test	1	8	80%
5. Discuss excavation systems	Test	1	8	80%
6. Identify erection equipment	Test and homework	1	8	80%

ACCE - American Council for Construction Education

SACS - Southern Association of Colleges and Schools

ACCE SLO 3. Create construction safety plan

ACCE SLO 8. Analyze methods, materials, and equipment used into construct projects

ACCE SLO 19. Understand the basic principles of structural behavior.

- Reinforce

- Direct Assessment

- Direct Assessment

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

### REQUIRED TEXTBOOKS

1. National Design Specifications for Wood Construction (NDS), by American Forest and Paper Association (2018 edition). The NDS and Supplement are available as free view only pdf downloads at <https://awc.org/codes-standards/publications/nds-2018>
2. APA The Engineered Wood Association, Design/Construction Guide: Concrete Forming <https://www.apawood.org/publication-search?q=V345>

### SUPPLEMENTAL READINGS

1. Johnston, David W. Formwork for Concrete 8th edition: ISBN: 9780870319129 There may be paperback versions available that may be cheaper.
2. [Temporary Structure Design](#) by Chris Souder, ISBN-13: 978-1118905586
3. Design of Wood Structures 6th edition, ISBN: 0071379320
4. Forest Products Laboratory, Wood Handbook: Wood as an Engineering Material [http://www.fpl.fs.fed.us/documnts/fplgtr/fpl\\_gtr190.pdf](http://www.fpl.fs.fed.us/documnts/fplgtr/fpl_gtr190.pdf) (509 pages)
5. APA The Engineered Wood Association, Plywood Design Specification

**STUDENT REQUIREMENTS:** Student grades will be based on tests and assignments. There are **no make-ups** for missed tests or assignments.

**HOMEWORK POLICY:** Assignments will be accepted up to the established time (two days after due date). Any Assignment turned in after the deadline will be graded at 50% of the original credit. Any assignment turned in more than 48 hours late will not be accepted and the student will receive a 0 (zero) on

the assignment. All work turned in for this course is expected to be of professional quality in content and presentation.

**COURSE GRADING:**

▪ <b>Tests:</b> 4 tests @ 100 points each	400
▪ <b>Assignments:</b> 6 or 7 @ 50 points	<u>300 to 350</u>
▪ <b>Total</b>	<b>700 to 750</b>

**Grading Scale**

- A: 90 – 100
- B+: 87 – 89
- B: 80 – 86
- C+: 77 – 79
- C: 70 – 76
- D+: 67 – 69
- D: 60 – 66
- E: Below 60

**COURSE TOPICS:**

1. **Module 1**
  - a. **Review of Structures**
  - b. **Timber design**
    - i. **Beams**
    - ii. **Columns**
2. **Module 2**
  - a. **Wall Formwork**
  - b. **Slab Formwork**
3. **Module 3**
  - a. **Re-shoring**
  - b. **Scaffolding**
  - c. **Excavation supports**
4. **Module 4**
  - a. **Equipment (lifting equipment, cranes)**

**UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES:** Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments (discussion, term paper, extra credit) or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

**UNIVERSITY POLICY ON ACADEMIC MISCONDUCT:** Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>. The Honor Code will be applied in the class. We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. On all work submitted for credit by students at the university, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." It is Rinker School policy that any incident of cheating, copying, or other attempts to deceive will be penalized by course failure.

**NETIQUETTE, COMMUNICATION COURTESY POLICY:** All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. Detailed guide is available at <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

**GETTING HELP WITH E-LEARNING WEBSITE:** In the case you have technical difficulties with e-Learning in Canvas, please contact the UF Help Desk at: [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu); (352) 392-HELP - select option 2; <https://lss.at.ufl.edu/help.shtml>. If your technical difficulties will cause you to miss a due date/time, you MUST report the problem to the UF Help Desk **before** the due date/time.

**CELLPHONES.** Cellphone use is not allowed in classrooms. Use of cellphones during class will discount attendance. Use of cellphones during an exam will result in failing the exam.

**LAPTOPS & TABLETS.** These devices should only be used to take notes related to lectures. Use of these devices for social media or any other unrelated purposes during class hours will result in a penalty of 10 points for every incident.

#### **COMMUNICATION**

- Use the e-Learning in Canvas environment to send an email to the instructor and teaching assistant. Do not e-mail the course instructor and teaching assistant outside of the e-Learning in Canvas system because emails received outside of e-Learning will not receive a response. Please allow 36 hours for a response to your email. The instructor and teaching assistant reserve the right not to respond to course inquiries on the weekend.
- You are responsible for addressing grades/omissions within one week of the grade being posted on e-Learning in Canvas. After one week, the grade/input stands for the class regardless of cause or circumstance.

**Note from the instructor:** *The syllabus represents my current plans and objectives. As we go through the term, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.*