

**University of Florida  
Herbert Wertheim College of Engineering  
Department of Civil and Coastal Engineering**

**CGN 4905 (11402)  
CONSTRUCTION PROJECT MANAGEMENT  
Spring Semester 2019**

**SYLLABUS**

Instructor:

**Prof. Denise R. Simmons, PhD, PE, M.ASCE, PMP**

**Lectures: Tue & Thu, (7:25AM) 8 AM – 9:20 AM**

**234 Weil Hall**

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## I. Contact Information

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**Office hours:** 9:30-11am Tuesdays and Thursdays. At all other times by appointment.

## II. Course Description

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The following sections detail the objectives of the course, instructional approach as well as the particular character of this course and how it is different from many other engineering courses.

The course is designed to allow students to develop an understanding of the construction “**project lifecycle**” process from the initial conception phase of a project through the completion of construction. Emphasis is placed upon the management aspects of the lifecycle.

**Course Learning**        Upon completion of the course, students will be able to:

- Objectives**
1. Enumerate and understand the **total lifecycle project process**, from early conceptual design through decommissioning.
  2. Define and apply principles of **social responsibility** to managing construction project
  3. Trace the steps needed to **prepare the documentation used to call for bids** and enter into a construction contract.
  4. Determine the **field productivity** of relatively simple cyclical field operations and understand the techniques that are used to analyze and improve them.
  5. Prepare a **construction cost estimate** for a relatively simple operation and understand how this estimate is carried forward into the bidding and cost control processes.
  6. Explain the relationship between the **skill of the project manager** and project performance (delivering a project on time, on budget and within scope).
  7. Construct a **project schedule** using appropriate methodologies and understand how this is used as a basis for control.

In addition to the learning objectives, students completing the course will develop skills in **collaboration, preparing a written report and giving an oral/visual presentation.**

**Instructional Approach**    Learning is expected to occur by four processes:

1. Lectures/exercises in the classroom;
2. Assignments from an integrated case studies on management and a project’s lifecycle;
3. Professional seminars (includes those offered for extra credit);
4. Reading assignments from the text and supplementary materials.

Classes will be divided into three parts:

- 1) Lecture
- 2) Activity
- 3) Facilitation of Discussion or Debriefing

The instructor is conscious of the fact that all students are either involved in a professional career or will soon embark on a professional career. Interactions between students and the instructor are, thus, expected to be maintained at a professional level. This applies to the quality and timeliness of all work products as well as the friendship, collegiality, and ethical behavior expected between professional colleagues.

You should attempt to complete the reading materials assigned for a particular class session prior to that session. Please note whether an on-line quiz is administered for a particular reading assignment as indicated in the Course Schedule (See Canvas). Assignments reinforce all of the material covered, and are required to be submitted by the due date indicated on the Schedule of Sessions.

**Here are some recommendations for good quality homework and in-class work:**

1. Provide a logical presentation, such as each paragraph discussing a single topic with a few supporting sentences, checking for grammar and punctuation errors, including citations and a reference list, etc.
2. Prepare graphs and/or figures where appropriate.
3. Use engineering computation paper for your in-class calculations. Staple the pages together with your memorandum (only applies to in-class work).
4. Work neatly and provide enough space on the page so that your homework is easy to read.
5. Show your work. Use an appropriate number of significant figures so that your answers do not imply more accuracy than your data.
6. Exemplary submissions will be those that reflect deep thinking of the concepts covered in the course and integration of supporting material you find on your own.

Self-formed teams of **2 students** will be responsible to complete mostly in-class and homework (out-of-class) team assignments. Teams **must avoid** splitting the assignments in pieces whereby each student is responsible for only one aspect of the assignment and then copy-and-paste all the pieces for a single submission. When teams operate like this, team members are placed at a serious disadvantage during the mid-term and final exams.

**Character of the Course** Unlike many engineering courses, you will likely find the quantitative aspects of this course to be only marginally challenging. In fact, most of the quantitative work requires only the use of algebra and geometry. However, the instructor believes that you will find that this course will present a number of new and interesting concepts, so most of the challenge associated with the course will be in grasping the concepts presented and applying to a project of your choosing. Moreover, the course has a very practical nature to it. You will likely find that much of the material is directly related to the “**practice**” of engineering and construction as opposed to the “**science**” of engineering. In essence, in this course you will learn the vocabulary of the A/E/C industry.

### III. Course Organization

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The following paragraphs detail the organization of the lectures, readings as well as the evaluation of the students' work and involvement in the class.

**Lectures** The course materials will be taught through a series of lectures and discussions. Lectures are scheduled for Tuesdays and Thursdays from 8 AM to 9:20 AM. Lecture time will be used for teaching course materials and class discussions.

**On-Line Quizzes** On-line quizzes will be administered through Canvas and will relate to the reading assignments. On-line quizzes occur for readings with a “Q#” in the “On-line Quiz” column of the Schedule of Sessions (See Canvas). These quizzes will be available from 8am the day prior to the scheduled session until 12:00 noon the day of the scheduled session. For example, an on-line quiz is associated with the readings for Session 4, which is on Thursday, January 17. The on-line quiz will be available starting at 8am on January 16 and will remain available until noon on January 17. These quizzes should take no more than 5- 10 minutes to complete if you have done the assigned readings.

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**Required and Supplemental Readings** For most lectures there will be a set of **required** readings. All required reading materials are listed on Canvas. Additional readings may be added (i.e., assigned during class or communicated through Canvas).

You should read the reading materials assigned thoughtfully and carefully. The instructor may not discuss all aspects of the text directly during the course, but the readings reinforce the discussions in class.

**Textbook** The required textbook is: **Construction Management, by Daniel W. Halpin, Bolivar A. Senior and Gunnar Lucko** published by John Wiley & Sons, 5<sup>th</sup> Edition. An electronic downloadable version of this textbook is available: <https://www.wiley.com/en-us/Construction+Management%2C+5th+Edition-p-9781119365020>.

#### IV. Course Evaluation

**Grading Policy** All work will be evaluated and assigned a grade on the “A” to “F” scale with final grades computed on a plus and minus scale. No rounding of final grades will occur in this course. An explanation of the grade ranges follows:

A: 94-100	B-: 80-83.9	D+: 67-69.9
A-: 90-93.9	C+: 77-79.9	D: 64-66.9
B+: 87-89.9	C: 74-76.9	D-: 61-63.9
B: 84-86.9	C-: 70-73.9	F: 0-60.9

The final course grade will be a weighted aggregation based on the following:

- 10%** Participation grade for
  - Unannounced “timeliness” quizzes
  - Class participation (Class attendance and involvement via the questions posted on Canvas Discussion Section)
- 5%** On-line quizzes (lowest grade will be dropped)
- 30%** Assignment grade; i.e., the average of grade for written assignments
- 35%** Mid-term exam grade for two mid-term exams at 17.5% each
- 20%** Final project

**Electronic submission of Assignments** You should electronically turn-in assignments when they are due. We will use Canvas for electronic submission of assignments. Late assignments will be penalized according to the following system:

- 0-24 hours late – deduct 50%.
- More than 24 hours late – deduct 100%.

**Participation Grade** Participation will constitute 10% of your grade and mainly fall into two categories:

**a. Class attendance & involvement**

I will always take attendance in the class. There will be a signup sheet which will be circulated in the class in every session. Please sign in front of your name. **YOU SHALL NOT SIGN FOR ANYONE ELSE.** Doing so would be a violation of the honor code. Involvement in class is highly encouraged and is considered towards the grade for participation.

**b. Unannounced “timeliness” quizzes**

There will be several unannounced “timeliness” 5-minute quizzes. These will be given at the start of a session; the questions posed will be quite simple; these quizzes are designed to encourage 100% attendance and on-time arrival.

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<b>Attendance in Exam Sessions</b>	You must attend exam sessions; if you have a conflict with an exam session or miss an exam session, then you must provide me with an official document indicating why you have a conflict or why you missed the session. Missing the session without a valid reason will result in a "0" for the exam.
<b>Final Exam</b>	The final project will allow you to apply a number of the skills and concepts learned throughout the semester. The project will be your responsibility to identify and then describe and perhaps require that you meet with others (e.g. your former internship employer, university personnel). Additional information will be provided during the final project briefing.
<b>Evaluation of Assignments</b>	I will endeavor to return all assignments and all exams within one week. If you have questions about assignments, you should contact the instructor. However, you should not consult the instructor until you have made a reasonable effort to address the assignment and you have already checked the Canvas Discussion Section for interpretation and suggestions on how to address the assignment. By doing so, the interactions between us will be more efficient and productive.
<b>Extra Credit</b>	You have the opportunity to earn credit that will count towards your <b>Assignment</b> grade. While additional opportunities for extra credit may be announced, no extra credit will be negotiated with students individually or collectively. The extra credit involves attending up to three webinars sponsored this semester by the National Academy of Construction on Feb 12, March 12 and April 9 each time at 7pm. Be sure you review the additional details provided in Canvas. I have no control over date and time changes and cancellation.

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**V. Other Course Policies**

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<b>Honor Code</b>	The honor code [ <a href="https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/">https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/</a> ] will be strictly enforced in this course. All assignments submitted shall be considered graded work, unless otherwise noted. All aspects of your coursework are covered by the honor system. All assignments, all exams, as well as the in-class, and on-line quizzes are measures of individual performance. For group assignments, group performance is expected with uniform participation across team members. Team members will provide feedback about self and team member involvement. Differential grades are possible. Any suspected violations of the honor code will be promptly reported. Honesty in your academic work is a reflection of your professional integrity. The faculty and students of the University will not tolerate any form of academic dishonesty. Class attendance will be taken as input to the class participation grade and thus, the student is expected to sign for himself/herself. Signing in and leaving class prematurely is considered a violation.
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Assignments serve the following two purposes:

- Assignments are seen as educational devices to help students master the course material. This includes the concepts, theories, methodologies, and tools presented in class and recitation as well as such skills as working in teams.
- Assignments help the faculty evaluate how well each student has mastered the course material.

Thus, the Honor System is intended to balance these two purposes and, unless otherwise stated, apply to all assignments.

Students currently taking this class can work together to conceptualize general approaches to assignments. However, unless otherwise specified for a particular assignment (e.g., for group assignments), the work you submit must be done completely on your own. This includes text, numerical calculations, mathematical derivations, diagrams, graphs, computer programs and output. You are also expected to properly reference the source of any information used in a submission that is not your own. This includes any book, article, web page, MS PowerPoint presentation or personal correspondence from someone else that you used to create your work.

It is also **inappropriate to use assignments, problem sets, examinations or projects submitted in previous years** (e.g., Koofers) as a source, unless otherwise authorized. If you have any questions about how these policies relate to a specific situation, please speak to the teaching staff of this course for clarification. Just remember, when you have doubts, ask the instructor for assistance.

## Syllabus

**Commitment to a Safe and Inclusive Learning Environment** The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination.

It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@ufl.edu

*Sexual Discrimination, Harassment, Assault, or Violence*

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the Office of Title IX Compliance, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu.

**University-Sponsored Athletic and Scholarly Activities** If you participate in university sponsored athletic and/or scholarly activities and will or may possibly miss any class meetings, please contact the instructor in writing by the end of the second week of classes with the 1) name of the activity for each date missed or anticipated to miss and 2) your plan for how you will be sure you submit assignments on time and gain notes for missed classes.

## VI. Special Needs

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If you need adaptations or accommodations because of a disability (e.g. learning, attention deficit disorder, psychological, physical, etc.), or if you have emergency medical information to share, or if you need special arrangements in case the building must be evacuated, you must identify this need to the instructor by the end of the first week of classes.

## VII. Supplemental Readings

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Below is a list of supplemental reading material according to lecture subjects:

**Required Readings**

- **H1** – Hendrickson, Chris, Project Management for Construction, 2<sup>nd</sup> Edition, 2008, prepared for WWW publication, Sections 2.3, 3.1 and 3.4.
- **H2** – Hendrickson, Chris, Project Management for Construction, 2<sup>nd</sup> Edition, 2008, prepared for WWW publication, Chapter 5.
- **H3** – Commonwealth of Virginia Department of Transportation's Form C- 7/A. Examples of bid forms that might be included in a unit price contract between an owner and a builder/contractor.
- **H4** – Notice of Invitation for Prequalification of Bids. Sample document showing general conditions, supplementary conditions and two technical specifications. The general conditions shown are those used on all projects that the State of Virginia funds.
- **H5** – Equipment Costs.
- **H6** – Contractor EDGE Development Goes Over Financial Cliff

Additional readings will be added.