

## Syllabus

CCE 4811 Construction Engineering Design

Catalog Description

Simulation of comprehensive construction project involving all phases of planning, scheduling, control and design from start to finish which involves making major decisions.

Pre-requisites and Co-requisites

CCE 4204 and CGN 4101

Course Objectives

The objective this course is for the students to develop the construction engineering project management skills and engineering practice skills required to participate in the project delivery process as an engineering manager from concept through final delivery.

Relationship of course to program outcomes:  
Skills student will develop in this course (ABET only undergraduate courses)

Students will develop skills in participating in an engineering team.  
Students will participate in a major design experience.

Instructor

Dr. Ralph Ellis

- a) Office Location
- b) Telephone
- c) E-mail address
- d) Class Website
- e) Office hours

460 Weil  
352-392-9537 x1485

[relli@ce.ufl.edu](mailto:relli@ce.ufl.edu)

<https://lss.at.ufl.edu/>

M 3, W 3, please confirm by appointment

Meeting Times

M 1-2, W 2

Teaching Assistant

TBA

- a) Office location
- b) Telephone
- c) E-mail address
- d) Class Web site
- e) Office hours

Meeting Location

238 Weil

Class/laboratory schedule, i.e., number of sessions each week and duration of each session

See meeting times.

Material and Supply Fees

\$30.00

Textbooks and Software Required

None

Instructor will provide course notes available on class Sakai site.

Students must have the use of a computer and internet access continuously throughout the course.

Student assignments will routinely involve the use of the following applications:

Word processing  
Spreadsheet  
Graphic Software for sketches (occasionally)  
Lecture slides are provided as a PowerPoint file

Students will be also working on assignments that require the use of project scheduling software. Students must acquire scheduling software for use on their personal computers.

UF students can download **MS Project** (and other applications) free of charge from the UF College of Engineering website. See:

[https://msdn.e-academy.com/ufl\\_eng/index.cfm?loc=login/login](https://msdn.e-academy.com/ufl_eng/index.cfm?loc=login/login)

#### Recommended Reading

The following references are recommended:  
Oberlender, Garold D., Project Management for Engineering and Construction, Second Edition, McGraw-Hill, New York  
Barrie, D. and Paulson, B. Professional Construction Management, McGraw-Hill, New York  
Henderson, C. and Au, T. Project Management for Construction. Prentice Hall. Englewood Cliffs, NJ

Attendance and Expectations (is attendance required, penalties for absence, tardiness, cell phone policy, etc.)

Attendance is not mandatory, however, students are responsible for in-class activities such as quizzes, work assignments and team project activities.

#### Grading – methods of evaluation

Approximate Grading Components:

|                              |     |
|------------------------------|-----|
| Quizzes                      | 20% |
| Activity Session Assignments | 10% |
| Exams                        | 20% |
| Team Design Project          | 50% |
| Presentation                 | 10% |
| Report                       | 40% |

#### Grading Scale

Course letter grades will be based upon the following grading scale. At the option of the instructor, the grading scale may be curved.

95 - 100 A  
93 - 94.99 A-  
90 - 92.99 B+  
87 - 89.99 B  
85 - 86.99 B-  
83 - 84.99 C+  
77 - 82.99 C  
75 - 76.99 C-  
70 - 74.99 D+  
67 - 69.99 D  
65 - 66.99 D-  
0 - 64.99 E

“In order to graduate, graduate students must have an overall GPA and an upper-division GPA of 3.0 or better (B or better). Note: a B- average is equivalent to a GPA of 2.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

#### Make Up Exam Policy

Class attendance is not mandatory, however, students are responsible for in-class activities such as quizzes and work assignments. Meeting deadlines is a key success factor in construction engineering. Few real life situations allow for late turn-ins. If you miss a quiz the grade will be counted as a 0. However to accommodate those rare emergencies in everyone's life, the two lowest quiz grades will be dropped. All quizzes will be open notes.

To receive a makeup test, you must notify Dr. Ellis in advance of the scheduled activity, providing an explanation of your reason for missing the class. Makeups will be granted for exceptional circumstances beyond the control of the student. Makeups that are not arranged within one week of the absence will not be permitted. The grade will stand as a 0.

#### Honesty Policy

All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.

#### Accommodation for Students with Disabilities

Students Requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

#### UF Counseling Services

Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:  
UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services.  
Career Resource Center, Reitz Union, 392-1601, career and job search services.

#### Software Use

All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal

penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Information Updates

This is a preliminary syllabus. Enrolled students should visit the class website to obtain the latest information. <https://lss.at.ufl.edu/>

### Course Schedule

This is a preliminary schedule. Students should check the schedule feature on the class website for updated schedule information.

| Week | Class Date | Subjects                             |
|------|------------|--------------------------------------|
| 1    | Aug. 22    | Course Introduction                  |
| 2    | 27         | Team Dynamics                        |
|      | 29         | Scheduling 1                         |
| 3    | Sep 3      | Scheduling 2                         |
|      | 5          | Scheduling 3                         |
| 4    | 10         | Working with Project Plans           |
|      | 12         | Working with Project Plans           |
| 5    | 17         | Earthwork Operations 1               |
|      | 19         | Earthwork Operations 2               |
| 6    | 24         | Deep Foundations                     |
|      | 26         | Test 1                               |
| 7    | 1Oct       | Concrete Construction                |
|      | 3          | Bridge Construction                  |
| 8    | 8          | Fundamentals of Lifting Equipment    |
|      | 10         | Designing a Heavy Lift Plan          |
| 9    | 15         | Introduction to Team Assignment      |
|      | 17         | Designing a Site Layout Plan         |
| 10   | 22         | Team Meeting                         |
|      | 24         | Temporary Earth Retaining Structures |

|    |       |  |
|----|-------|--|
| 11 | 29    | Dewatering Fundamentals                      |
|    | 31    | Team Meeting                                 |
| 12 | 5 Nov | Environmental Management During Construction |
|    | 7     |  |
| 13 | 12    | Test 2                                       |
|    | 14    | Industrial Process Construction              |
| 14 | 19    | Safety Management                            |
|    | 21    | Other Topics                                 |
| 15 | 26    | Team Presentations                           |
|    | 28    | Team Presentations                           |
| 16 | 3 Dec | Team Presentations                           |
|    | 5     | Course Wrap Up                               |