

CCE4811 Construction Engineering Design

Section: 29696

Class Location & Periods:

Tuesday | Larson Hall, Room 310 | Period 5 - 6 (11:45 AM - 1:40 PM)

Thursday | Rinker Hall, Room 210 | Period 6 (12:50 PM - 1:40 PM)

Attendance Policy, Class Expectations, and Make-Up Policy

This is a registered in-person class that will be taught in the face-to-face mode at the regularly scheduled class times. The class will employ Canvas Zoom web conferencing on an as-needed basis to provide synchronous remote access to face-to-face class access for students in cases where students have excused absences or must stay home to quarantine.

Academic Term: Spring 2022

Instructor:

Steven Laux, P.E., ENV SP

Steven.laux@essie.ufl.edu

Office: Sustainable Materials Management Research Laboratory (SMMRL), Room 105. The SMMRL is located in Bldg. 226 at 2320 Surge Area Drive ([location map](#))

Office Hours: I am available by appointment to meet with students in my office or via Zoom. You can contact me through Canvas or email to set up an appointment.

Teaching Assistant/Peer Mentor/Supervised Teaching Student:

Katherine Feeney kfeeney@ufl.edu

- Office Hours: Monday & Tuesday 1:55-2:45 p.m. or by appointment on Zoom
- Please contact through the Canvas website
- Meetings can be found in the Zoom Conferences Tab

Course Description

Simulation of comprehensive construction project involving all phases of planning, scheduling, and control from start to finish, which involves making major decisions. Oral presentation at the end of course. 3 Credits.

Course Pre-Requisites

- CGN4160 (Civil Engineering Practice)
- CGN4101(Civil Engineering Cost Analysis) or EIN3354 (Engineering Economy)

Course Objectives

Upon completion of the course students will be able to:

- Work in a team environment on a construction project
- Interpret construction drawings such that they can visualize the work and obtain dimensions and quantities necessary to construct the work
- Design temporary facilities, such as excavations, shoring and dewatering systems, that are typically the responsibility of the construction contractor
- Apply the fundamentals of rigging and lifting, and prepare a lift plan
- Prepare a construction schedule from a set of construction documents
- Prepare a construction cost estimate from a set of construction documents
- Prepare and deliver a team presentation

Materials and Supply Fees

Required Textbooks and Software

- R.S. Means Cost Database Student Subscription or purchase older paperback version of R.S. Means Heavy Construction Cost. Will discuss in class.
- MS Project (UF Apps)
- Other materials provided by instructor

Course Schedule

Class	Date	Description	Details
1	Thursday, January 6, 2022	Introduction	
2	Tuesday, January 11, 2022	Team Dynamics	
3	Thursday, January 13, 2022	Project Development	
4	Tuesday, January 18, 2022	Project document review	
5	Thursday, January 20, 2022	Construction Sequencing	Darren Vogel - Vice President, Vogel Brothers Construction
6	Tuesday, January 25, 2022	Construction Sequencing	
7	Thursday, January 27, 2022	Earthmoving	
8	Tuesday, February 1, 2022	Trench Safety	
9	Thursday, February 3, 2022	Excavation Shoring	
10	Tuesday, February 8, 2022	Excavation Shoring	
11	Thursday, February 10, 2022	Excavation Shoring	Jeremiah Filjones - Branch Manager, Keller North America
12	Tuesday, February 15, 2022	Dewatering	
13	Thursday, February 17, 2022	Dewatering	
14	Tuesday, February 22, 2022	Dewatering	
15	Thursday, February 24, 2022	Rigging & Lifting	
16	Tuesday, March 1, 2022	Rigging & Lifting	Yael Rivera - Project Engineer Intern II, Protean
17	Thursday, March 3, 2022	Rigging & Lifting	
	Tuesday, March 8, 2022	No class	Spring Break
	Thursday, March 10, 2022	No class	
18	Tuesday, March 15, 2022	Project Management & Scheduling	
19	Thursday, March 17, 2022	Scheduling	Ryan Barry - Project Manager, Whiting Turner
20	Tuesday, March 22, 2022	Scheduling	
21	Thursday, March 24, 2022	Presentation Planning / Cost Estimating	
22	Tuesday, March 29, 2022	Project Construction Estimate	
23	Thursday, March 31, 2022	Project Construction Estimate	
24	Tuesday, April 5, 2022	Project Construction Estimate	
25	Thursday, April 7, 2022	Field Trip	
26	Tuesday, April 12, 2022	Presentations	
27	Thursday, April 14, 2022	Presentations	
28	Tuesday, April 19, 2022	Presentations	

Evaluation of Grades

Assignment	Percentage of Final Grade
In Class Assignments	25%
Individual Homework	30%
Team Submittals	30%
Presentation	15%

Grading Policy

Percent	Grade	Grade Points
94 - 100	A	4.00
90 - <94	A-	3.67
87 - <90	B+	3.33
84 - <87	B	3.00
80 - <84	B-	2.67
77 - <80	C+	2.33
74 - <77	C	2.00
70 - <74	C-	1.67
67 - <70	D+	1.33
64 - <67	D	1.00
60 - <64	D-	0.67
<60	E	0.00

More information on UF grading policy may be found at:
<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Students Requiring Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the

University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

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@eng.ufl.edu

COVID-19 Protocols

- You are expected to wear approved face coverings at all times during class and within buildings even if you are vaccinated.
- If you are sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 (or email covid@shcc.ufl.edu) to be evaluated for testing and to receive further instructions about returning to campus.
- If you are withheld from campus by the Department of Health through Screen, Test & Protect, you are not permitted to use any on campus facilities. Students attempting to attend campus activities when withheld from campus will be referred to the Dean of Students Office.
- UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the [UF Health Screen, Test & Protect website](#) for more information.
- Please continue to follow healthy habits, including best practices like frequent hand washing. Following these practices is our responsibility as Gators.

Software Use

All faculty, staff, and students 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.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <https://registrar.ufl.edu/ferpa.html>

Campus Resources:

Health and Wellness

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

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

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <https://www.crc.ufl.edu/>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus: <https://care.dso.ufl.edu>.

On-Line Students Complaints: <http://www.distance.ufl.edu/student-complaint-process>.