

CGN 4160 Civil Engineering Practice

Section: 11178

Class Periods: T,R | Period 5 - 6 (11:45 AM - 1:00 PM)

Location: Florida Gym, Room 270

Attendance Policy, Class Expectations, and Make-Up Policy

This is a registered in-person class that will be taught primarily in the face-to-face mode at the regularly scheduled class times. The class will employ Canvas Zoom web conferencing to provide synchronous remote access to face-to-face lectures. Recordings will be made available through Canvas shortly after the live classes. Students may elect to attend class either face-to-face or virtually at the regularly scheduled class time over Zoom. Full credit for participation and assignments is available either way.

Academic Term: Fall 2021

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:

Option 1 - I am available to meet with students (in-person and via Zoom) on Tuesdays and Thursdays after class in the classroom. Class ends at 1pm and we have the classroom until 1:40pm.

Option 2 - I am available by appointment to meet with students in my office or via Zoom on Mondays, Wednesdays and Fridays. You can contact me through Canvas or email to set up an appointment.

Teaching Assistant/Peer Mentor/Supervised Teaching Student:

Please contact through the Canvas website

- Mariana Lopez mariana.lopez@ufl.edu
 - Office Hours: Thursday 3-3:50 p.m. or by appointment on Zoom <https://ufl.zoom.us/j/92506993191>
- Katherine Feeney kfeeney@ufl.edu

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

Course Description

Fundamentals of civil engineering professional practice: project management, construction delivery processes, business concepts, public policy, administration, and leadership. Credits: 3

Course Pre-Requisites / Co-Requisites

EGM2511 (Statics) or equivalent. Coreq: CGN 2328 (Technical Drawing).

Course Objectives

- 1-1: Students will be able to recognize and explain the role of the engineering and construction industry in our society and the various roles of individuals and organizations involved in the design, construction, and activation of civil engineering projects
- 1-2: Students will be able to recognize and compare the basic features of the various project delivery methods and be able to select the appropriate delivery method for a situation
- 2-1: Students will be able to apply soft skills necessary to collaborate in a team environment
- 2-2: Students will be able to produce and execute a group report and presentation
- 3-1: Students will recognize the basic components of the standard design-bid-build construction contract
- 3-2: Students will understand the rolls of various participants in the construction contract
- 3-3: Students will know where to look in a standard contract for key information
- 3-4: Students will be able to use the contract to resolve questions and disputes
- 3-5: Students will recognize features of qualifications-based selection
- 4-1: Students will be able to recognize basic features of construction plans
- 4-2: Students will be able to visualize the intended work using construction plans
- 4-3: Students will be able to determine construction quantities using construction plans
- 4-4: Students will be able to interpret construction drawings for information necessary to construct projects
- 5-1: Students will be able to recognize and differentiate between the different types and stages of construction cost estimates
- 5-2: Students will be able to recognize and explain the basic features of a construction cost estimate
- 5-3: Students will be able to produce a basic construction cost estimate for a civil engineering project
- 6-1: Students will be able to explain the basic concepts and functions of critical path method (CPM) scheduling
- 6-2: Students will be able to produce a CPM schedule for a civil engineering design and construction project using manual methods
- 6-3: Students will be able to produce a CPM schedule for a civil engineering design and construction project using commercially available software

- 7-1: Students will be able to explain why licensing of engineers is required and the process for obtaining a license
- 7-2: Students will be able to explain the basic responsibilities and restrictions placed on professional engineers by their professional society and licensing board
- 7-3: Students will be able to interpret these requirements and restrictions as they apply to real life situations

Materials and Supply Fees

None

Professional Component (ABET):

This course is a required class in the BS civil engineering curriculum.

Relation to Program Outcomes (ABET):

Outcome	Coverage*
1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	
3. An ability to communicate effectively with a range of audiences	High

4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts Medium

5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives High

6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions

7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies High

*Coverage is given as high, medium, or low. An empty box indicates that this outcome is not covered or assessed in the course.

Required Textbooks and Software

- Materials provided by instructor
- MS Project (UF Apps)

Course Schedule

Class #	Date	Topic
1	Tue, Aug 24, 2021	E&C Industry

2	Thu, Aug 26, 2021	Project Teams
3	Tue, Aug 31, 2021	Project Delivery Methods
4	Thu, Sep 2, 2021	Guest Speaker - Ryan Hagaman, CDM Smith
5	Tue, Sep 7, 2021	Teamwork & Soft Skills
6	Thu, Sep 9, 2021	Guest Lecture - Kelly Roberts, Director, Dial Center for for Written & Oral Communication
7	Tue, Sep 14, 2021	Selecting the Project Team
8	Thu, Sep 16, 2021	Construction Contracts
9	Tue, Sep 21, 2021	Construction Contracts
10	Thu, Sep 23, 2021	Construction Contracts
11	Tue, Sep 28, 2021	Construction Contracts
12	Thu, Sep 30, 2021	Guest Lecture - Kevin Thibault, Secretary, Florida Department of Transportation
13	Tue, Oct 5, 2021	Exam 1
14	Thu, Oct 7, 2021	Guest Lecture - Rick Ferreira, President & CEO, Jones Edmunds
15	Tue, Oct 12, 2021	Plans Reading
16	Thu, Oct 14, 2021	Plans Reading
17	Tue, Oct 19, 2021	Plans Reading
18	Thu, Oct 21, 2021	Plans Reading
19	Tue, Oct 26, 2021	Guest Lecture - John Giles, NASA-KSC
20	Thu, Oct 28, 2021	Exam 2
21	Tue, Nov 2, 2021	Cost Estimating
22	Thu, Nov 4, 2021	Cost Estimating
23	Tue, Nov 9, 2021	Cost Estimating

24	Thu, Nov 11, 2021	Veteran's Day (no class)
25	Tue, Nov 16, 2021	Scheduling
26	Thu, Nov 18, 2021	Scheduling
27	Tue, Nov 23, 2021	Scheduling
28	Thu, Nov 25, 2021	Thanksgiving (no class)
29	Tue, Nov 30, 2021	Guest Lecture (Zana Raybon, Exec. Director FBPE)
29	Thu, Dec 2, 2021	Ethics and Professional Practice
28	Tue, Dec 7, 2021	Exam 3

Online Course Recording

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

In-Class Recording

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Evaluation of Grades

Assignment	Percentage of Final Grade
Quizzes	20%
In Class Assignments	20%
Homework Assignments	25%
Exams	25%
Presentation	10%
	100%

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>.