

## ***Construction Planning and Scheduling***

CCE 5035/CGN 4905

Section: 1FE2, 2FED, OVER /CAMP

***Class Periods:*** Tuesday 7-9 (1:55- 4:55pm)

Face-to-face classroom Location: CSE 122

***Academic Term:*** Fall 2023

### ***Instructor:***

Name: Dr. Fazil T. Najafi, Professor Email

Address: fnaja@ce.ufl.edu

Phone Number: Cell: (352) 870-2477

Office Hrs.: Tuesday, 5:00 – 7:00 pm

Please call or email. I prefer you call me at your best time. And leave your phone number to call you back.

### ***Teaching Assistant:***

***Eeshan Bender***

Email: [eeshanbendre@ufl.edu](mailto:eeshanbendre@ufl.edu)

Phone: +1 (352) 888-9107

Please call or email

office hours: By Email Appointment

## **Course Description**

The course covers the basic concept of construction planning and Scheduling, using computer-based software Primavera P6 for controlling, optimizing, and organizing tasks involved in construction projects.

Construction Planning and Scheduling is a three-credit hours course. The course covers precedence diagrams and the application of a computer-based scheduling Primavera P6.

**Prerequisite: With an option, you may not have taken or taken construction cost estimates and construction equipment utilization and operation.**

## **Course Objectives**

The objectives of this course are to learn:

1. To understand the basic concepts of construction planning and Scheduling and developing a network model.
2. Schedule projects using deterministic and probabilistic approaches.
3. Use computer-based software Primavera for Resource Allocation and Resource leveling.
4. Use Primavera P6 for Project monitoring and control.
5. Linear Scheduling and its impact on productivity
6. Project coordination and progress payments
7. Short interval schedules

## **Course Outcomes**

1. The course will achieve the objectives mentioned above.
2. The course meets ABET Outcome Number 1: "An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics."

**Required Textbooks and Software**

Construction Planning and Scheduling (Fourth Edition). Jimmie W. Hinze, ISBN-13: 978-0-13-247398-9  
Application of software: Primavera P6, Excel, and AutoCAD.

***Materials and Supply Fees***

Not applicable

## Course Schedule

Please see the **weekly schedule** excel sheet in CANVAS's files folder.

The schedule is tentative; I reserve the right to make changes at any point with prior consent or notification, and I put an announcement in Canvas for any change in the weekly schedule.

## Attendance Policy, Class Expectations

Refer to the Evaluation of Grades. A one-page typed summary of Najafi's and guest speaker's presentations (15% of the final grades) as a means of scoring attendance. For further information, refer to the Assignments section.

## Evaluation of Grades

Assignment	Total Points	Percentage (%) of Final Grade
Attendance policy. A page typed summary of Dr. Najafi and guest speaker's Lectures.	100	15
7 Assignments	100	40
Term Project	100	30
Final Exam	100	15

## Grading Policy

Percent	Grade	Grade Points
90.0 – 100.0	A	4.00
87.0 – 89.9	A-	3.67
84.0 – 86.9	B+	3.33
81.0 – 83.9	B	3.00
78.0 – 80.9	B-	2.67
75.0 – 79.9	C+	2.33
72.0 – 74.9	C	2.00
69.0 – 71.9	C-	1.67
66.0 – 68.9	D+	1.33
63.0 – 65.9	D	1.00
60.0 – 62.9	D-	0.67
0 - 59.9	E	0.00

For more information on the UF grading policy, refer to the following link.

<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#grades>.

## Najafi's and Guest Speakers' Lectures:

Each student prepares a one-page, typed summary of Dr. Najafi's and guest speaker's presentations and uploads it on Canvas before the deadline shown on the weekly schedule. The one-page summaries should include the subject title, the lecture's goal, objective, highlights of your learning, and conclusions with your opinions and thoughts concerning the lectures and guest speaker's presentations.

Keep the summaries in bullet format. We will grade the summaries as class attendance.

## **Assignments:**

All assignments must be submitted to the appropriate tab on CANVAS before the deadline, as indicated on the weekly schedule. We will not accept late homework. Include your name, assignment number, and submission date on all assignment documents. Save all files as Last Name(s)\_Assignment Name, and date. Please allow one week for grading.

## **Group Work:**

You will get to collaborate in groups to work **on the primary Project**. Each group should have a group leader. Group members are required to give member names, contact numbers, email addresses, and Zoom links to each other to contact each other to work on the final Project with full cooperation, understanding, and harmony. Each group will be assigned a group number on CANVAS.

**Communication expectations:** Please remember that this class prepares you for your future career. Students conduct themselves professionally. Read the [Netiquette guide](#) for conduct expectations when communicating with your peers, Dr. Najafi, and your TA.

## **Textbook Chapters:**

NOTE: Chapters are lectured based on the weekly schedule.

1. Introduction
2. Developing a network model
3. Precedence diagrams
4. Determining activity durations
5. Resource allocation and resource leveling
6. Money and network schedules
7. Project monitoring and control
8. Computer scheduling
9. Earned Value: A means for integrating costs and schedule
10. The impact of scheduling decisions on productivity
11. Short interval schedules
12. Linear Scheduling
13. PERT: Program evaluation and review technique
14. Arrow diagrams.

### **Technology Tip:**

Make sure you are on the UF network. If not, make sure you have the Gator VPN.

## **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/>. Students must share their accommodation letters with their instructor and discuss their access needs as early as possible in the semester.

## **Course Evaluation**

I expect you 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 input professionally and respectfully is available at <https://gatorevals.aa.ufl.edu/students/>. University notifies when the evaluation period opens and can complete assessments 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/>

## **In-Class Recording**

Students are allowed to record video or audio of class lectures—however, the purposes for which these recordings are used and strictly controlled. The only allowable goals 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.

The "class lecture" teaches students about the subject matter, including instructor-led discussions. And delivered by the University hired, 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 student participation solely, 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 discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

### ***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 Conduct Code (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. 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
- Jennifer Nappo, Director of Human Resources, 352-392-0904, [jpennacc@ufl.edu](mailto:jpennacc@ufl.edu)
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, [taylor@eng.ufl.edu](mailto:taylor@eng.ufl.edu)
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, [nishida@eng.ufl.edu](mailto:nishida@eng.ufl.edu)

### ***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***

Federal laws protect your privacy concerning 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](mailto: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:** <https://counseling.ufl.edu>, 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](mailto: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 email [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu).  
<https://lss.at.ufl.edu/help.shtml>.

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

**Library Support**, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance concerning 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://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>; <https://care.dso.ufl.edu>.

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

## **Health and Wellness:**

- **You are expected to wear approved face coverings during class and within buildings, even if you are vaccinated. Please follow healthy habits, including best practices like frequent hand washing. Following these practices is our responsibility as Gators.**
- **If you are sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about the next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms begin. 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](mailto:covid@shcc.ufl.edu)) to be evaluated for testing and receive further instructions about returning to campus. UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive, or has tested yourself. Visit the [UF Health Screen, Test & Protect website](#) for more information.**

For Technology help:

**UF Computing Help Desk**

- Available 24 hours a day, seven days a week
- Phone: (352) 392-HELP (4357)
- Email: [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu)
- Web: <https://helpdesk.ufl.edu/>

