

***New Infrastructure Engineering and Management/Best Practices***

CGN 5606/CGN 4600

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

***Academic Term:*** Fall 2020

***Instructor:***

Name: Dr. Fazil T. Najafi, Professor

Email Address: fnaja@ce.ufl.edu

Phone Number: Cell: (352) 870-2477

Office Hours: Wednesday, 3:00 – 5:00 pm,

Please call or e-mail. I will respond by phone,  
email, or zoom within 24 hours.

***Teaching Assistant:***

Suyash Bakliwal, suyashbakliwal@ufl.edu

Office Hours: Tuesday, 03:00 – 5:00 pm,

Contact: (352) 871-3135,

Please call or e-mail. I will respond by phone,  
email, or zoom within 24 hours.

**Course Description**

New Infrastructure Engineering and Management/Best Practices is a three-credit hours course. The course covers the nature of profession, duties, and administrative responsibilities. Organization and management of operating divisions with an emphasis on the role of engineer.

***Course Pre-Requisites / Co-Requisites***

No pre-requisites are required

**Course Objectives**

The objectives of this course are:

1. Learn city organizations and management.
2. Develop leadership and communication skills, which are basic requirements for any manager.
3. Learn the city's finance, budgeting, and capital management.
4. Apply knowledge gained from previous civil engineering courses to solve the city's engineering problems.
5. Learn legal aspects in the management of city infrastructure related to roadways, rail, and air transport systems, port and harbor systems, buildings, stormwater (sometimes referred to as blue infrastructure), wastewater and potable water systems, solid waste control facilities and fire Protection.
6. Generate electricity using solar energy.
7. Learn fleet management, building and grounds, and future issues in the infrastructure.
8. Learn the Florida Department of Transportation (FDOT) Drainage Design Guide (DDG): <http://www.fdot.gov/roadway/drainage/files/DrainageDesignGuide.pdf> (Links to an external site.)
9. Learn FDOT design standard (DS): <http://www.fdot.gov/roadway/DS/18/STDs.shtm> (Links to an external site.)

**Course Outcomes**

1. The course will achieve the objectives mentioned above.
2. The course meets the ABET Outcome Number 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.”

## Required Textbooks and Software

No textbooks are required, and all materials are in the files folder in CANVAS.

## Materials and Supply Fees

Not applicable

## Course Schedule

Please see the weekly schedule excel sheet located in the files folder in CANVAS.

The schedule is tentative; I reserve the right to make changes at any point in time with prior consent or notification. If there is any change in the weekly schedule, there will be an announcement made by any of the following means: email, canvas, or during zoom lectures.

## Attendance Policy, Class Expectations

In addition to the weekly Homework (HW) assignment, each group prepares a page summary of Najafi's lecture and the guest speakers' presentations submitted on CANVAS each **Thursday at 11:59 am**. The page summary is graded as part of class attendance. Homework due dates are every Thursday at 11:59 am on CANVAS. Homework will be assigned weekly and is due by the deadlines, with no exceptions. Late homework will NOT be accepted.

## Groups

Four students are on CANVAS from the combination of in-class and EDGE students assigned in one group. Each group should have a group leader. Groups are required to give member names, phone numbers, email addresses and zoom link to each other, and to Dr. Najafi, and his TA, and each group have a group number on CANVAS. Each group will have to work together with their member assigned chapters from the weekly lecture (See the Student Group weekly schedule) and submit their homework per instruction provided at the end of each chapter in the weekly homework assignment column.

## Audio PowerPoint Presentations:

Per the weekly HW schedule, each group will present the assigned HW from the homework questions at the end of each chapter according to instructions provided in the homework. Late and incomplete audio PowerPoint presentations and answers to questions within the HW submissions shall not be accepted. Per instruction, in each HW, Group Audio PowerPoint Presentation should be submitted on Canvas and uploaded before the deadline **each Thursday at 11:59 AM**. The remaining student's group prepare two questions with answers and submit their work on CANVAS and uploaded before the deadline each Thursday at 11:59 am. Grading HW for each group, and relevant questions and answers will be according to the following "Presentation Grade Sheet" as posted on CANVAS and each member of the group attach it with their audio PowerPoint.

Grading Criteria for Audio PowerPoint Presentation	Total Points
1. Title of the PowerPoint (PPT), its design, appearance, presentation of PPT and its goal, and objective of the subject matter.	20
2. Hypotheses, showing the data required and a methodology used to help you solve your research questions.	50
3. Discussing the results	10

4. Show the key points of your learning/conclusion/recommendation.	20
<b>Audio PowerPoint presentations of the above four submitted on CANVAS</b>	100

### Evaluation of Grades

Assignment	Total Points	Percentage of Final Grade (%)
Audio PowerPoint presentations submitted on CANVAS	100	40
Questions with the answer from PowerPoint Presentation Submitted on Canvas	100	20
Class attendance: Summary of lecture, and guest speaker's presentations	100	15
Final Exam	100	25

### 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

The UF grading policy found at <http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#grades>.

### Najafi's Lectures and Guest Speakers:

This course will involve Dr. Najafi's regular lectures and guest speakers. One-page lecture summaries of Najafi's and *New Infrastructure Engineering and Management/Best Practices* *Page 3*  
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guest speaker's presentations are due via Canvas each Thursday at 11:59 am. The one-page summaries should include subject title, the goal, and objective of the lectures, you're learning, and conclusions with your own opinions and thoughts concerning the lectures and guest speaker's presentations. Keep the summaries in bullet format. Dr. Najafi grade the summary as the class attendance.

### ***Assignments:***

All assignments are to be submitted to the proper tab on CANVAS before the deadline given. Late assignments will not be accepted. Include your name on all assignment documents. Save all files as Last Name(s)\_Assignment Name. Grammar and formatting considered when grading.

### ***Homework:***

Chapter questions will be assigned during the class periods and will be due, as indicated on the weekly schedule. Late homework submissions will not be accepted. Homework should be submitted as a pdf file on CANVAS and uploaded before the deadline given.

### ***Group Work:***

You will get to collaborate in groups to work on the main 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 so they may contact each other to work on the final project. Each group will be assigned a group number on CANVAS.

***Communication expectations:*** Please be mindful that the class is preparing you for your future career. Students' conduct should be professional. Read the [Netiquette guide](#) for conduct expectations when communicating with your peers, Dr. Najafi, and your TA.

### **Course lecture content**

For the content of the course chapters, refer to the weekly schedule.

### **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 requesting accommodations should first register with the Disability Resource Center (352- 392-8565, <https://www.dso.ufl.edu/drc>) by providing appropriate documentation. Once registered, students will receive an accommodation letter that must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

### **Course Evaluation**

Students 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 professionally and respectfully is available at <https://gatorevals.aa.ufl.edu/students/>. Students 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 (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies the number of behaviors violations 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. Every person in this class expected that would 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](mailto:rbielling@eng.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 criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action 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.

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/>

### ***Student Privacy***

Federal laws are protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, refer to <http://registrar.ufl.edu/catalog0910/policies/regulationferpa.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 Wellness Center. Please remember that asking for help is a sign of strength. In case of an emergency, call 911.

**Counseling and Wellness Center:** <http://www.counseling.ufl.edu/cwc> and (352) 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 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, (352) 392-1161.

**University Police Department** at (352) 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](mailto: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://www.dso.ufl.edu/documents/UF\\_Complaints\\_policy.pdf](https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf).

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

