

Spring 2022

CE 450-002: Urban Planning

Wassim Y. Nader

Follow this and additional works at: <https://digitalcommons.njit.edu/ce-syllabi>

Recommended Citation

Nader, Wassim Y., "CE 450-002: Urban Planning" (2022). *Civil and Environmental Engineering Syllabi*. 595.
<https://digitalcommons.njit.edu/ce-syllabi/595>

This Syllabus is brought to you for free and open access by the NJIT Syllabi at Digital Commons @ NJIT. It has been accepted for inclusion in Civil and Environmental Engineering Syllabi by an authorized administrator of Digital Commons @ NJIT. For more information, please contact digitalcommons@njit.edu.

Course Syllabus

CE 450-002 Urban Planning

Spring 2022

Meeting Time:

Thursday 1:00-3:50pm

Meeting Location:

Kupfrian Hall, Room 203

Instructor:

Wassim Y. Nader, PE, CFM
Email: wyn2@njit.edu

Office Hours:

Thursdays: 4:00-5:00pm or by appointment
Colton, Room 205

Text Book:

Anderson, A.T., 2000. Planning the Built Environment. Planners Press, American Planning Association, Chicago Illinois. ISBN 1-884829-43-0.

Course Objectives

This course provides an opportunity for students to acquire entry level knowledge on urban planning, its principles, techniques, and uses. Topics include Land, Utilities, Transportation, and Residential topics - the basic elements of our built environment. This course emphasizes practical knowledge and real-world observations and student will be exposed to worldwide case studies based on cities, metropolitan areas, and other built environment.

Course Format

- Class Time – Face to face.
- Exams and Quizzes – Course quizzes may be in person or will be online utilizing Lockdown Browser and Respondus Monitor, which require a webcam. Information on downloading and installing this technology will be provided on our course Canvas page.
- Midterm, pop and in-class/in- person quizzes and assignments will be part of this course, therefore attendance is mandatory.
- Final Project & Presentations - You will be assigned a final project in lieu of a final exam. The project details will be given in class. The project will require research and preliminary design for an urban

mixed-use project. You will be required to present your project in a brief presentation.

- Presentations – Presentations will be in person during class or exam hours.
- Assignments – All assignments and information will be posted online on our course's Canvas page as indicated on this syllabus.
- Discussion Board – this will be used from time to time and participation is required.

Course Contents

1. Introduction to Urban Planning
2. Land
 - a. Land Form
 - b. Maps
 - c. The Constraints of Slope on Land Development
3. Utilities
 - a. Water Supply and Distribution
 - b. Wastewater Management
 - c. Storm Drains & Stormwater Management
 - d. Other Utilities (Gas, Electric, Cable, Internet, etc.)
4. Transportation
 - a. Transportation Planning
 - b. Street Capacity & Design
 - c. Highway Access & Integration
 - d. Parking
Transit Planning
5. Residential Areas
 - a. Housing
 - b. Residential Density
 - c. Neighborhood Planning
 - d. Environmental
 - e. The Subdivision Process
 - f. Single Family Subdivisions
 - g. Multifamily Development
 - h. Community Facilities

Grade Policy:

1. Homework / In-Class Assignments	15%
2. Midterm Exam	20%
3. Quizzes	15%
3. Group Case Study	10%
4. Final Project & Presentation	30%
5. Attendance and Participation	10%

Grading Scale:

A:	100-90
B+:	89-85
B:	84-80
C+:	79-75
C:	74-70
D:	69-60
F:	Below 60

“Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at:

<http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>.

*Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. **Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.** If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu”*

Attendance Policy:

In order to receive full grade percentage for attendance, all students are required to be present during all class sessions. Unexcused class absence of 2 or more will be reported to the Dean of Students and grade will be impacted a minimum of one letter grade.

Withdrawals:

In order to insure consistency and fairness in application of the NJIT policy on withdrawals, student requests for withdrawals after the deadline will not be permitted unless extenuating circumstances (e.g., major family emergency or substantial medical difficulty) are documented. The course Professors and the Dean of Students are the principal points of contact for students considering withdrawals.

NJIT Honor Code:

The NJIT Honor Code will be upheld; any violations will be brought to the immediate attention of the Dean of Students. The Honor Code can be found at (<http://www5.njit.edu/doss/policies/honorcode/index.php>)

CE 450 Class Schedule, Spring 2022

ID	Week of	Contents	Home Work
1	1/20 (Online)	Course Introduction & Overview <i>Who is involved in an urban planning job?</i> In-Class Quick Group Case Study & Presentation	Introductions on Canvas DUE 1.20.22 Discuss Final Project In-Class
2	1/27 (Online)	Macro View of Urban Planning, Engineering, Architecture	In-Class Review and Discuss Final Project
3	2/3	Land Form, Maps and Slopes Land Surveying and Impact on Planning In-Class Quiz	Assign Group Case Study In-Class Review and Discuss Final Project
3	2/10	Zoning Basics	Assign HW01 In-Class Review and Discuss Final Project
4	2/17	Transportation Planning/ Street Capacity Parking/Transit Planning	HW01: DUE In-Class Review and Discuss Final Project
5	2/24	Group Case Study Presentations	Group Case Study DUE Study for Midterm
6	3/3	Utilities / Midterm Q&A	Study for Midterm
7	3/10	MIDTERM EXAM	
9	3/17	<i>SPRING BREAK</i>	<i>NO CLASS</i>
10	3/24	Midterm Review / Overview for Second Half of Class	Assign HW02 In-Class Review and Discuss Final Project
11	3/31	Environmental Concerns / Resiliency Introduction to Final Project Site	HW02: Due In-Class Review and Discuss Final Project
12	4/7	Neighborhood & City Planning / Housing Development In-Class Case Study 2	Work on Final Project
13	4/14	Importance of CAD and Presentation Standards Questions on Final Project Site	Work on Final Project Quiz 2 DUE
14	4/21	Pre-Final Project Discussion and Presentation	Work on Final Project
15	4/28	Final Project Presentations – Part 1	Final Project DUE
16	5/4	<i>READING DAY – NO CLASS</i>	
17	Final Class TBD	Final Project Presentations – Part 2	

Course Outcome Matrix CE 450 Urban Planning

Strategies, Actions and Assignments	ABET Student Outcomes (1-7)	Program Educational Objectives	Assessment Measures
Student Learning Outcome 1: Acquire entry level knowledge on urban planning, its principles, techniques, and uses.			
Attend lectures on land, utility, transportation residential development	1, 2, 6 and 7	1, 2	Attending classes Homework
Student Learning Outcome 2: Gain exposure to worldwide case studies based on cities, metropolitan areas, and other built environment.			
Conduct case studies and perform analysis	2, 4, 5 and 6	1, 3	Class Project Homework
Student Learning Outcome 3: Gain practical Knowledge and real world observations of city development			
Participate in field trips to public planning agencies or transportation service providers	1, 3, 5 and 6	2, 3	Field trips
Role play in debating and game teams	2, 3, 4, and 5	1, 3	Game play debate

CEE Mission, Program Educational Objectives and Student Outcomes

The mission of the Department of Civil and Environmental Engineering is:

- to educate a diverse student body to be employed in the engineering profession
- to encourage research and scholarship among our faculty and students
- to promote service to the engineering profession and society

Our program educational objectives are reflected in the achievements of our recent alumni:

1 – Engineering Practice: Alumni will successfully engage in the practice of civil engineering within industry, government, and private practice, working toward sustainable solutions in a wide array of technical specialties including construction, environmental, geotechnical, structural, transportation, and water resources.

2 – Professional Growth: Alumni will advance their skills through professional growth and development activities such as graduate study in engineering, research and development, professional registration and continuing education; some graduates will transition into other professional fields such as business and law through further education.

3 – Service: Alumni will perform service to society and the engineering profession through membership and participation in professional societies, government, educational institutions, civic organizations, charitable giving and other humanitarian endeavors.

Our Student Outcomes are what students are expected to know and be able to do by the time of their graduation:

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
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
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
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

Revised: 2/13/18