

Spring 2020

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" (2020). *Civil and Environmental Engineering Syllabi*. 343.
<https://digitalcommons.njit.edu/ce-syllabi/343>

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.

Syllabus: CE 450-002 Urban Planning Spring 2020

Meeting Time:

1:00 PM – 3:50 PM, Thursday

Meeting Location:

Central King, 217

Instructor:

Wassim Y. Nader, PE, CFM

Email: wyn2@njit.edu

Office: Colton 205

Office Hours:

12:00 PM – 1:00 PM, Thursday

Prerequisite: junior engineering standing. Introduction to urban planning, its principles, techniques, and use. Topics include development of cities, planning of new towns, redevelopment of central cities, and land use and transportation planning.

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 areas - the basic elements of our built environment. This course emphasize 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 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
 - e. 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	10%
2. Midterm Exam	25%
3. Case Study 1 (Group Presentation)	10%
4. Case Study 2	20%
5. Final Project & Presentation	25%
6. Attendance and Participation	10%

“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”*

CE 450 Class Schedule, Spring 2020

ID	Week of	Contents	Home Work
1	1/23	Introduction & Overview	Homework 1
2	1/30	Land Form, Maps and Slopes	HW01: DUE Work on Case Study 1
3	2/6	Utilities	Work on Case Study 1
4	2/13	Case Study 1 Presentations & Discussions	Case Study 1 DUE
5	2/20	Transportation Planning/ Street Capacity	Homework 2
6	2/27	Parking/Transit Planning	HW02: Due Study for Midterm
7	3/5	Housing Goals & Issues	Study for Midterm
8	3/12	MIDTERM EXAM	
	3/19	SPRING BREAK	
9	3/26	CAD Planning	Work on Case Study 2
10	4/2	Residential Density	Work on Case Study 2
11	4/9	Case Study 2 Presentations	Case Study 2 DUE
12	4/16	Neighborhood Planning	
13	4/23	Environmental Concerns	Final Project
14	4/30	Building vs. Site	Final Project
15	5/7	Final Presentations (Part 1)	Final Project DUE
16	5/14	Final Presentations (Part 2)	
	5/16	Final Grades Due	

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