Fall 2020

**CE 450-101: Urban Planning**

Wassim Nader

Follow this and additional works at: [https://digitalcommons.njit.edu/ce-syllabi](https://digitalcommons.njit.edu/ce-syllabi)

**Recommended Citation**


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 450-101 Urban Planning
Fall 2020

Meeting Time:

Monday: 6:00 PM – 9:00 PM

Meeting Location:

Interactive/Online

Instructor:

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

Office Hours:

Monday: 5:00pm to 6:00pm or by appointment via Zoom or Webex

Text Book:


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 - This course will meet online during our scheduled time via Webex – a link will be posted in Canvas. Attendance is mandatory. Should you not be able to attend class, please contact me as soon as
possible. Web cameras are required to be on for the duration of the class meeting.

- Exams and Quizzes – Course quizzes and midterm exam will utilize Lockdown Browser and Respondus Monitor, which require a webcam. Information on downloading and installing this technology will be provided on our course Canvas page.
- Final Project & Presentations - You will be assigned a final project in lieu of a final exam. The project details will be given in class prior. 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 online and will require you to have a webcam and share your computer screen during our meeting.
- Assignments – All assignments and information will be posted online on our course’s Canvas page as indicated on this syllabus.

**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 / In-Class Assignments 15%
2. Midterm Exam 20%
3. Quizzes 15%
4. Group Case Study 10%
5. Final Project & Presentation 30%
6. 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](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)
<table>
<thead>
<tr>
<th>ID</th>
<th>Week of</th>
<th>Contents</th>
<th>Home Work</th>
</tr>
</thead>
</table>
| 1  | 9/08    | Introduction & Overview  
Who is involved in an urban planning job?  
In-Class Quick Group Case Study & Presentation | |
| 2  | 9/14    | Macro View of Urban Planning  
Planning, Engineering, Architecture  
In-Class Quiz | |
| 3  | 9/21    | Land Form, Maps and Slopes  
Land Surveying and Impact on Planning | Assign Group Case Study |
| 3  | 9/28    | Zoning Basics | Assign HW01 |
| 4  | 10/5    | Transportation Planning/ Street Capacity  
Parking/Transit Planning | HW01: DUE |
| 5  | 10/12   | Group Case Study Presentations | Group Case Study DUE  
Study for Midterm |
| 6  | 10/19   | Utilities  
Midterm Questions | Study for Midterm |
| 7  | 10/26   | MIDTERM EXAM | |
| 8  | 11/2    | Midterm Review  
Housing Goals & Issues | Assign HW02 |
| 9  | 11/9    | Environmental Concerns / Resiliency  
Introduction to Final Project Site | HW02: Due |
| 10 | 11/16   | Residential Density / Redevelopment | Work on Final Project |
| 11 | 11/23   | Importance of CAD and Presentation Standards  
Questions on Final Project Site | Work on Final Project |
| 12 | 11/30   | Neighborhood & City Planning | Work on Final Project |
| 13 | 12/7    | Final Project Presentations Group 1 | Final Project DUE |
## Course Outcome Matrix
### CE 450 Urban Planning

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