CE 450 – 002: Urban Planning

(3.0 credits)

Lectures Tuesday, Thursday 1:00pm-2:20pm
FMH, Room 203

Instructor Wassim Y. Nader, PE
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Office Hours: By Appointment

Prerequisite None

Required Textbook

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

Other Recommended Texts & Reading

None

Course Description

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.

Course Objectives (General)

By the end of this course, the student will be able to:

Course Topic 1: To understand land use as it pertains to Urban Planning projects from an engineering perspective. This includes survey, environmental, zoning, and transportation issues.

Course Topic 2: To enable students to be prepared for public presentations before clients, boards and agencies.

Course Topic 3: To evaluate an urban site for development - identifying mitigating factors and preparing concept plans for a new low impact development based on known constraints.

POLICIES & PROCEDURES

Academic Integrity: It is expected that NJIT's University Code on Academic Integrity will be followed in all matters related to this course. Refer to NJIT's Dean of Students website to become familiar with the Code on Academic Integrity and how to avoid Code violations.

https://www.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf

Communication: You can reach me via email or canvas outside of class. Email is preferred.

Lectures/Class: Attendance at class is mandatory. Missing more than two classes can result in a loss in attendance grade. You are also expected to be actively engaged during class with discussions and group assignments.

Handouts: All handouts will be available on Canvas.

Homework: Homework will be assigned as per the syllabus. Homework is a mix of individual and group assignments. You will have the same group for all group assignments.

Homework Format: Homework should always include the title of the assignment, the student(s) name and date.

Late Homework: Unexcused late homework will be reduced by one whole letter grade.

Homework Solutions: Homework and other assignments will be discussed in class after the due date.

Exams: You will have two quizzes and one midterm exam. These are closed books and not use of electronics is allowed during quizzes or exams.

Calculation of Course Grade: A weighted average grade will be calculated as follows:

Homework/Assignments	15%
Midterm Exam	20%
Quizzes	15%
Group Case Study	10%
Final Project	30%
Attendance & Participation	10%

The minimum requirements for final letter grades are as follows:

A = 90%, B+ = 85%, B = 80%, C+ = 75%, C = 70%, D = 60%, F < 60%

Instructor Commitment: You can expect the Instructor to be courteous, punctual, organized, and prepared for lecture and other class activities; to answer questions clearly; to be available during office hours or to notify you beforehand if office hours are moved; to provide a suitable guest lecturer or pre-recorded lecture when they are traveling or unavailable; and to grade uniformly and consistently.

Students with Documented Disabilities: NJIT is committed to providing students with documented disabilities equal access to programs and activities. If you have, or believe that you may have, a physical, medical, psychological, or learning disability that may require accommodations, please contact the Coordinator of Student Disability Services located in the Center for Counseling and Psychological Services, in Campbell Hall, Room 205, (973) 596-3414. Further information on disability services related to the self-identification, documentation and accommodation processes can be found on the webpage at: (http://www.njit.edu/counseling/services/disabilities.php)

Course Schedule: See next page. Items in **RED** are graded assignments.

Wk	Date	Contents	Home Work / Assigments Due
1	1/16	Course Introduction & Overview *Who is involved in an urban planning*	**Introductions on Canvas DUE 1.18.24**
	1/18	Macro View of Urban Planning, Engineering & Architecture	
2	1/23	**In-Class Quick Group Presentations**	
	1/25	**In-Class Quick Group Presentations Continued**	
3	1/30	Land Form, Maps and Slopes	**Quiz 01 DUE (Canvas)**
	2/1	Zoning Basics	
4	2/6	Land Surveying for Urban Development	Assign HW01
	2/8	Case study and precedent review	
5	2/13	**In-Class Group Zoning Presentation**	**HW01: DUE (Canvas)**
	2/15	**In-Class Group Zoning Presentation**	
6	2/20	Street CapacityParking/Transit Planning	
	2/22	Transportation Planning/	Study for Midterm
7	2/27	Utilities	
	2/29	Midterm Prep	
8	3/6	**MIDTERM EXAM - TBD**	Study for Midterm
	3/8	**No Class – Exam Online**	
9	3/12	*SPRING BREAK*	*NO CLASS*
	3/14	*SPRING BREAK*	*NO CLASS*
10	3/19	Midterm Review / Overview for Second Half of Class ------	Assign HW02 Final Project

		Assign Group Case Study	
	3/21	Introduction to Final Project Site	
11	3/26	Environmental Concerns / Resiliency	**HW02: Due**
	3/28	Neighborhood & City Planning / Housing Development	
12	4/2	**Group Case Study Presentations**	**Group Case Study Due**
	4/4	**Group Case Study Presentations**	
13	4/9	NEPA Process Questions on Final Project Site	Work on Final Project **Quiz 2 DUE (Canvas)**
	4/11	Importance of CAD	Work on Final Project
14	4/16	Pre-Final Project Discussion and Presentation	Work on Final Project
	4/18	Pre-Final Project Discussion and Presentation	Work on Final Project
15	4/23	**Final Project Presentations – Part 1**	**Final Project DUE (Canvas)**
	4/25	**Final Project Presentations – Part 2**	
16	4/30	*FRIDAY CLASSES MEET – NO CLASS*	
	5/2	*READING DAY – NO CLASSES*	
17	TBD	**Final Project Presentations TBD, If needed**	

Course Objectives Matrix – CE450 – 101

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 safe, practical, resilient, 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 technical and interpersonal skills through professional growth and development activities such a 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