New Jersey Institute of Technology

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Spring 2024

Arch 361-002: Adaptive Paradigms in Architecture

Vera Parlac

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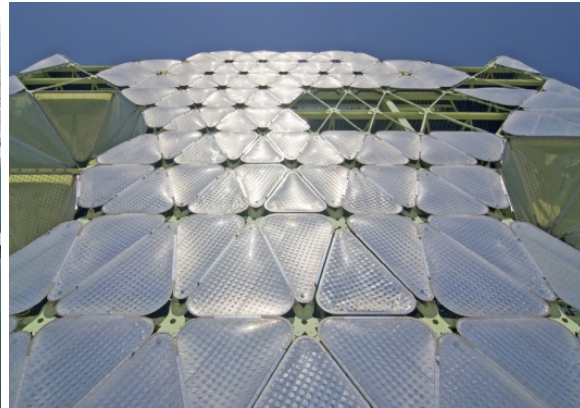## ARCH 361 Adaptive Paradigms in Architecture

Instructor: Vera Parlac, Associate Professor, parlac@njit.edu
                              Office: 331
                              Office Hours: Tuesday 11:30 am – 12:30 pm or by appointment

Course Hours: Tuesday | Thursday 10:00 – 11:20 am
Location: FMH 309

Lewis Tsurumaki Lewis, Water Proving Ground

Enric Ruiz Geli, Media TIC building, Barcelona

Introduction

This course focuses of the paradigms of adaptation in architecture and urbanism. It will introduce students to various scales of adaptation and provide an overview of visionary proposals as well as built projects. Through a series of lectures, discussions, self-directed research, and a class project the course will equip students with a critical overview of the challenges and opportunities of adaptation within the built environment.

Students will be encouraged to formulate their own position towards adaptation that will be expressed in the class project (groups of two or three).

Course Learning Outcomes

This course will lead students to achieve the following competencies:
1. Learn about the scale and range of adaptive projects
2. Understand key adaptation concepts
3. Understand the approaches to adaptive projects and their social, economic, and political context.
4. Engage issues of resilient design, planetary ecology, and climate change.

NAAB Shared Values
The National Architectural Accrediting Board accredits NJIT's architecture program. The NAAB has Shared Values of the Discipline and the Profession that must be covered by any architectural curriculum to attain their approval. This course satisfies the following shared values:

Design: Architects design better, safer, more equitable, resilient, and sustainable built environments. Design thinking and integrated design solutions are hallmarks of architecture education, the discipline, and the profession.

Environmental Stewardship and Professional Responsibility: Architects are responsible for the impact of their work on the natural world and on public health, safety, and welfare. As professionals and designers of the built environment, we embrace these responsibilities and act ethically to accomplish them.

Knowledge and Innovation: Architects create and disseminate knowledge focused on design and the built environment in response to ever-changing conditions. New knowledge advances architecture as a cultural force, drives innovation, and prompts the continuous improvement of the discipline.

Lifelong Learning: Architects value educational breadth and depth, including a thorough understanding of the discipline's body of knowledge, histories and theories, and architecture's role in cultural, social, environmental, economic, and built contexts. The practice of architecture demands lifelong learning, which is a shared responsibility between academic and practice settings.

Course Schedule

The course calendar is subject to change and may be updated as the semester progresses with additional readings. Assignments must be uploaded on the date that they are due (before class) and must be placed in the proper Google drive folder. For each consultation have all necessary materials organized and ready for review or discussion.

Week_01
T Jan 16	Introductory lecture
F Jan 19	Discussion: Reading 1 + Assignment 1/Research

Week_02
T Jan 23	Surface: Envelope, Coatings, and Panels
F Jan 26	Discussion: Reading 2 + Research

Week_03
T Jan 30	Structure: Scissors, and Inflatables
F Feb 2	Discussion: Reading 3 + Research

Week_04
T Feb 6	Space: Deployable and Mobile
F Feb 9	Discussion: Reading 4 + Research

Week_05
T Feb 13	Course Project assignment
F Feb 16	Discussion: Reading 5 + Research

Week_06
T Feb 20	Course project discussions
F Feb 23	Space: Flexible + Discussion: Reading 6

Week_07
T Feb 27	Course project progress presentations
F Mar 1	Landscape: Flood prevention

Week_08
T Mar 5	Course project proposal presentation
F Mar 8	Landscape: Extreme weather

Week_09
T Mar 12	Spring Recess Begins - No Classes
F Mar 15	Spring Recess Begins - No Classes

Week_10
T Mar 19	Course project progress review and discussions
F Mar 22	Lecture + Discussion

Week_11
Mo Mar 26	Course project progress review and discussions
F Mar 29	Good Friday - No Classes

Week_12
T Apr 2	Course project progress review and discussions
F Apr 5	Course project progress review and discussions

Week_13

| T Apr 9 | Course project progress review and discussions |
| F Apr 12 | Course project progress review and discussions |

Week_14

| T Apr 16 | Course project progress review and discussions |
| F Apr 19 | Course project review |

Week_15

| T Apr 23 | Course project research booklet development |
| F Apr 26 | Course project research booklet development |

Week_15

| T Apr 30 | Discussion |

Reading List

Living Dialogs, https://open.spotify.com/show/2jxKkKGnc7nByd6KK2aGMA
Friedman, Avi. 2002. "Chapter 1: What is adaptability." The adaptable House: Designing Homes for Change. New York, NY:McGraw-Hill.
Ehrenkrantz, Ezra, and John D. Kay. 1957. "Flexibility through Standardization." Progressive Architecture 38:105-115.
Brand, Stewart. 1994. "Chapter 2: Shearing Layers" in How Buildings Learn: What Happens after They're Built. New York, NY: Viking.
Kurokawa, Kisho. 1977. Metabolism in Architecture in Jenks, Charles and Karl Kopf (ed.).
2002. Theories and Manifestoes of Contemporary Architcture. West Sussex, UK: Wiley-Academy.

Grading and Means of Evaluation

Students are expected to complete all assignments, attend and be active in all classes and reviews. Students will also be expected to read any assigned readings. The course evaluation will be based on (1) written observations/questions on the assigned readings, (2) a course research/Assignment 1, (3) course project, and a (4) project portfolio. Students are expected to present weekly progress of the class project (see schedule).

Observations/questions on readings	20%
Assignment 1	15%
Course project proposal	15%
Course project	40%
Course Research Report/portfolio	10%

Make-up policy: All assignments are to be completed/submitted on a day listed in the schedule. New schedule/dates might be permitted in the case that extenuating circumstances are documented through the Office of the Dean of Students.

It is required that students complete all assignments, complete all assigned readings, and participate in class discussions. In addition to technical competency, all submitted work will be evaluated for graphic quality and notational thoroughness.

The following grades scale is used in this course:

A (4.0) Superior work, presented complete and on time, and accomplished through enthusiastic, intense and focused investigation. Willing to take risks and explore innovation. Exceptional graphics and communication skills are evident.
B+(3.5) Excellent. Above average work thoughtfully developed with a excellent understanding of issues and concerns. Excellent presentation skills, with work completed and submitted on time.
B (3.0) Very Good. Competent and well developed assignments that meet project requirements. Presentation skills are very good, and work is submitted on time.
C+ (2.5) Good. Assignments meet project requirements. Presentation skills are good, and work is submitted on time.
C (2.0) Acceptable. Assignments meet the minimum project requirements. Presentation skills are adequate, and work is submitted on time.

D (1.0) Minimum performance. Underdeveloped work is passable but is not addressing all issues of the project. Work is late or incomplete, and graphics and communication skills are lacking.
F (0.0) Inadequate. Unacceptable work, lacking understanding of project scope, showing little interest in the assignment, and submitting late or incomplete work.

Learning and Teaching Culture Policy
In addition to the overarching values and ethics of the university, the New Jersey School of Architecture (NJSoA) is dedicated to optimism, diversity and solidarity, professional conduct, constructive evaluation and instruction, collaborative community, health and wellbeing, time management and school-life-work balance, respectful stewardship and space management, and well-rounded enrichment. The pedagogy of architecture and design is as complex as it is rewarding, and as dynamically evolving as the people who learn and teach it. This understanding resides at the core of the NJIT Learning and Teaching Culture Policy: https://design.njit.edu/learning-and-teaching-culture-policy

This class culture depends on students being willing to discuss issues raised in the class. It is important that all of us make a class atmosphere conductive to discussion and exchange of thoughts and ideas and formulation of new individual positions. Questions and questioning of assumptions are welcome.

Archiving the Student Work
Google Drive: I will share a google drive folder where you will submit your work. This is where entire class production will be shared. Students are required to be careful: DO NOT delete files that have not been posted by you.
All the general course information (syllabus, handouts, readings, etc) will be shared on Canvas.
Kepler Posting: Kepler is now part of Canvas. Students should upload to folders that parallel the Assignments page of Canvas in pdf format at the file size used for presentation. Please login at: canvas.njit.edu/ Additional Instructions will follow.

Absences
The NJIT office of the Dean of Students (DOS) maintains a way for students to explain absences that instructors can use to regulate absenteeism. By providing verifiable documentation through filing an online Student Absence Excuse Request form related to the absences within 14 days, a student can ask for accommodation and that their absences not affect their grade. Once the absence has been verified, the DOS will communicate with the instructor. Nonetheless, the DOS only verifies documentation, and it remains the instructor's discretion to provide any accommodation and the student's responsibility to follow up with the instructor. Accepted reasons for absence include bereavement, medical concerns, military activity, legal obligations, or university-sponsored events. Additional DOS information outlined here: https://www.njit.edu/dos/student-excusals

Students are expected to notify their instructor by email before missing class and provide sufficient cause for nonattendance. Instructors will keep an accurate attendance log. Frequent absenteeism can significantly affect student's grade or result in failing the course. Even though instructors will make every effort to accommodate students in the case of excused absence, it remains the responsibility of the student to learn the material presented.

Academic Integrity
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 University Code on Academic Integrity: https://www.njit.edu/dos/academic-integrity
and the Code of Student Conduct: https://www.njit.edu/dos/policies/conductcode/index.php

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

Plagiarism

It is extremely important that students and faculty familiarize themselves with a proper way to cite visual and intellectual sources. Plagiarism, whether deliberate or inadvertent, will not be tolerated. Simply put, plagiarism is the use of visual or intellectual material created by others without proper attribution. Even the use of one's own material for more than one assignment can also be considered plagiarism. Students should not do so without the expressed consent of all instructors involved.

Our librarian Maya Gervits has assembled excellent resources on copyright, plagiarism citing, and avoiding plagiarism: https://researchguides.njit.edu/c.php?g=671665&p=4727920

Students with Disabilities

It is the school's moral, ethical, and legal obligation to provide appropriate accommodations for all students with physical and/ or learning disabilities. If students need an accommodation related to disabilities, all official documentation must be filed with the Dean of Students and the Disability Support Service Office. It is the responsibility of the student to notify the instructor at the beginning of the semester if accommodations are warranted.
Dean of Students: https://www.njit.edu/dos/contact.php
Disability Support Service: https://www.njit.edu/studentsuccess/support-services-and-accommodations