Fall 2024

ARCH 295: Architecture Studio III, all sections

Joseph Berlinghieri

ARCH 295: Architecture Studio III

Course Syllabus

Piscinas de Maré de Leça da Palmeira, Matosinhos, Porto, Portugal, Álvaro Siza Vieira

"The business of Architecture is to establish emotional relationships by means of raw materials.
Architecture goes beyond utilitarian needs.
Architecture is a plastic thing.
The spirit of order, a unity of intention.
The sense of relationships; architecture deals with quantities.
Passion can create drama out of inert stone."

Charles-Édouard Jeanneret
The Lesson of Rome
Towards a New Architecture

Fall 2024

Monday & Thursday 1:00 – 5:20 PM
New Jersey Institute of Technology
Hillier College of Architecture + Design

Type of Course:	Required
	Face-to-Face, Studio Format
	4 credits, 9 contact hours per week, meets twice a week
Prerequisites:	ARCH 195 & 196: Architecture Studio I & II

Faculty

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Course Description

Architecture is the art of shaping the space and experience of human inhabitation through the crafted assembly of materials. It is inherently humanist and emotional while being highly technical and precise. The successful completion of the first year studios has equipped students with the basic skills to shape materials, create space, and represent/present design intentions. In the second year students will more deeply explore the intersection of the intangible and tangible in architecture. Using the full scale handcrafting of material assemblies as a medium, students will explore the experiential and emotional consequences of design while working predominantly in collaborative teams.

During the term, students will explore how design can both define and and alter human inhabitation through 3 vignettes progressing from the human scale to the architectural and then the urban. Work will be executed at full scale and from authentic materials whenever possible. Digital fabrication techniques will only be utilized when all other methods have proved insufficient and never for the entire project. Students will confront the architectural reality of trying to create an experience while being bound by material and assembly limitations. They will also analyze the consequences of their designs in an attempt to understand the differences between architecture as a design intention versus an act of occupation.

In the final assignment, students will utilize new knowledge in combination with their first year skills to design a small scale building in an urban context for a client who is not an architect. Their earlier synthesis of experience and materiality will then confront programmatic needs and professional requirements.

Learning Objectives

Through the assignments students will engage the following opportunities to expand their architectural skills:

- Working within the limitations of authentic architectural materials and assemblies, and developing the critical thinking skills to approach similar limitations in the future.
- Utilizing materials and assemblies to evoke emotion and craft experience at multiple scales and observing how their design interventions are received by end users.
- Understanding the frequent disconnect between intended program and human occupation, and developing the skills to both predict and address those conflicts during their design process.
- Design collaboration and team project management methods critical to future success.
- Develop methods of architectural representation that are appropriate to their designs instead of mimicking others or merely falling back on convention.
- Working with basic, conventional, small scale American building assemblies and systems and beginning to question their assumptions.
- Communicating with and providing services to people outside the profession who will make up the vast majority of their future client base.

NAAB Criteria & Shared Values

The National Architectural Accrediting Board accredits NJIT's architecture program. The NAAB has Program Criteria, Student Criteria, & 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 Criteria & Shared Values:

Program Criteria (PC):

PC.2 Design: How the program instills in students the role of the design process in shaping the built environment and conveys the methods by which design processes integrate multiple factors, in different settings and scales of development, from buildings to cities.

PC.3 Ecological Knowledge and Responsibility: How the program instills in students a holistic understanding of the dynamic between built and natural environments, enabling future architects to mitigate climate change responsibly by leveraging ecological, advanced building performance, adaptation, and resilience principles in their work and advocacy activities.

PC.5 Research and Innovation: How the program prepares students to engage and participate in architectural research to test and evaluate innovations in the field.

PC.6 Leadership and Collaboration: How the program ensures that students understand approaches to leadership in multidisciplinary teams, diverse stakeholder constituents, and dynamic physical and social contexts, and learn how to apply effective collaboration skills to solve complex problems.

PC.7 Learning and Teaching Culture: How the program fosters and ensures a positive and respectful environment that encourages optimism, respect, sharing, engagement, and innovation among its faculty, students, administration, and staff.

PC.8 Social Equity and Inclusion: How the program furthers and deepens students' understanding of diverse cultural and social contexts and helps them translate that understanding into built environments that equitably support and include people of different backgrounds, resources, and abilities.

Student Criteria (SC):

SC.1 Health, Safety, and Welfare in the Built Environment: How the program ensures that students understand the impact of the built environment on human health, safety, and welfare at multiple scales, from buildings to cities.

SC.4 Technical Knowledge: How the program ensures that students understand the established and emerging systems, technologies, and assemblies of building construction, and the methods and criteria architects use to assess those technologies against the design, economics, and performance objectives of projects.

SC.5 Design Synthesis: How the program ensures that students develop the ability to make design decisions within architectural projects while demonstrating synthesis of user requirements, regulatory requirements, site conditions, and accessible design, and consideration of the measurable environmental impacts of their design decisions.

SC.6 Building Integration: How the program ensures that students develop the ability to make design decisions within architectural projects while demonstrating integration of building envelope systems and assemblies, structural systems, environmental control systems, life safety systems, and the measurable outcomes of building performance.

Shared Values of the Discipline and Profession:

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 them 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.

Equity, Diversity, and Inclusion: Architects commit to equity and inclusion in the environments we design, the policies we adopt, the words we speak, the actions we take, and the respectful learning, teaching, and working environments we create. Architects seek fairness, diversity, and social justice in the profession and in society and support a range of pathways for students seeking access to an architecture education.

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.
Leadership, Collaboration, and Community Engagement: Architects practice design as a collaborative, inclusive, creative, and empathetic enterprise with other disciplines, the communities we serve, and the clients for whom we work.
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.

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 well being, 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 NJSoA Learning and Teaching Culture Policy:
https://design.njit.edu/learning-and-teaching-culture-policy

Format

Studio classes utilize a framework of 1 on 1 mentoring by more experienced colleagues that is punctuated by public presentations and meaningful constructive critique by outsiders. Studios rely heavily on the Socratic Method, a dialectic process that stimulates critical thinking and originated in the earliest academies of the ancient world. Mentors are not tasked with dispensing knowledge through conventional lecture formats. They personally meet with each student (or team) every class and advise them on the progress of their design projects.
These meetings were traditionally called desk critiques, but contemporarily serve to prepare students for the collaboration with consultants so common place and necessary to the profession. As such these meetings will resemble the Project Consultations practicing architects engage in with each other and the allied design trades on a day to day basis. Just as in practice, Project Consultations should be wholly collaborative and characterized by shared responsibility. Students should not request (or expect) and instructors should not engage in explicit direction or design decision making.
Students should remain the lead professionals on all projects at all times.
Due to the use of the Socratic Method, Project Consultations will frequently appear to have reversed the traditional roles of student and instructor. Instructors will ask far more questions than they answer. These questions will often be open ended and left to the student(s) to explore and discover the answers between classes.

Evaluation and Grading Criteria

NJIT Undergraduate grading scale:
A 4.0 Superior
B+ 3.5 Excellent
B 3.0 Very Good
C+ 2.5 Good
C 2.0 Acceptable
D 1.0 Minimum
F 0.0 Inadequate

Incompletes are only granted in the event of a documented medical or family emergency, and must be approved by the instructor and administration.
NJIT has a policy of issuing mid-term warnings for students who are not performing at a satisfactory level. Any student issued a warning will be required to have a conference with the instructor to evaluate satisfactory completion of the work for the remainder of the semester. At any point during the semester students can arrange to meet with the instructor to inquire how their performance of the assignments is progressing and how they may improve. Final grades may be discussed in person at the end of the semester by student or instructor request.

Academic Integrity

Academic integrity and honesty are of paramount importance. Cheating and plagiarism will not be tolerated. The NJIT Honor Code will be upheld, and any violations will be brought to the immediate attention of the Dean of Students. All students are responsible for upholding the integrity of NJIT by reporting any violation of academic integrity to the Office of the Dean of Students. The identity of the student filing the report will remain anonymous. All students are expected to adhere to:
The University Code on Academic Integrity: https://www.njit.edu/dos/academic-integrity
The Code of Student Conduct: https://www.njit.edu/dos/policies/conductcode/index.php
HCAD librarian Maya Gervits has assembled excellent resources for a students use on using images, citing, and plagiarism: https://researchguides.njit.edu/c.php?g=671665&p=4727920

Use of Generative Artificial Intelligence:

This course expects students to work without artificial intelligence (AI) assistance in order to better develop their core skills in this content area. As such, AI usage is broadly not permitted throughout this course under any circumstance.
However, the course does acknowledge both that truly great architecture breaks the rules and that all rules are proven by their exceptions. Waivers permitting student use of artificial intelligence (AI) may be granted by the section instructors when all other methods have proved insufficient. Even then, AI may only be used with prior permission from the section instructor, when it benefits the work in a way that can not be otherwise replicated, and it enhances the learning experience of the student.
If and when students use AI in this course, it must be cleared with the instructor prior to the assignment submission. AI must be cited as is shown within the NJIT Library AI citation page for AI. If you have any further questions or concerns about AI technology use in this class, please reach out to your instructor.

Work Habits

One part of a designer's skill set includes the cultivation of habits of mind around production, work, and one's work environment. To get the most out of the studio, students must make progress on their projects between each and every class meeting. Design progress can not hinge on the instructor's presence.
You are the lead professionals on your projects; act accordingly.
While not explicitly quantifiable, being physically present in studio is invaluable. Students are encouraged to use the studio as a work-space for all their studies and to collaborate regularly even when not required. Instructors will not be present in the studio during non-class times. Project progress may occur when they are not present. Students should see each other and their colleagues in other years of the program as design learning resources and view all peers as potential life-long professional collaborators. Design and professional success hinge on relationships and collaboration.
Students should always have a pencil and sketchbook with them, both to record design progress during non-class time and to cultivate skills of graphical thinking and graphical conversations. Architects talk and draw simultaneously to communicate with each other. This should be practiced daily.

Studio Space

Working together in the studio is a special part of the experience of a design education. Please take responsibility for the studio environment and the people working in it. Be respectful and courteous of your colleagues and their belongings. Be aware that everyone might have different ideas of what a productive workspace might be. We are entrusting you as the stewards of the studio spaces for the coming year and ask that you inhabit the space with respect, courtesy, and common sense. Practically, this means taking care of the facilities and taking responsibility for the quality and safety of the space. For example, please maintain the cleanliness of your studio, clean up after yourself when using common areas, **do not prop doors open**, etc.

If someone or something is making you uncomfortable in the studio, please let your instructor know, the coordinators, your advisor, or another member of the NJIT community and avail yourself of on campus counseling services:
NJIT Center for Counseling and Psychological Services (C-CAPS): http://www.njit.edu/counseling/

Office Hours

Individual instructors shall inform students as to their section specific office hours.

Class Attendance Policy

Class will meet twice a week: Monday & Thursday 1:00-5:20
ON TIME attendance is required at all class meetings.
Failure to be on time may result in students not being permitted to present work and receiving a reduced or failing grade on the assignment. Habitual lateness and/or absences WILL result in such penalties. Unexcused absences can result in the lowering of final grades or failure.
Three or more unexcused absences will require a meeting with the coordinators.

Assignments

Each assignment will constitute a percentage of the overall grade as follows:
Assignment 1 Concept Pin Up: 5% of final grade
Assignment 1 Full Scale Prototype: 5% of final grade
Assignment 1 Project Review: 10% of final grade
Assignment 2 Concept & Scale Prototype Pin Up : 10% of final grade
Assignment 2 Project Review: 20% of final grade
Assignment 3 Progress Review 1: 10% of final grade
Assignment 3 Progress Review 2: 10% of final grade
Assignment 3 Final Review: 30% of final grade

Extra Credit – Storm King Field Trip: 5% maximum additional credit to final grade

Students should upload deliverables to the appropriate folders on Canvas* & Kepler*, in pdf format at the size and quality they are created/presented. Additional requirements and instructions will be forthcoming.
Canvas: https://canvas.njit.edu/

**NB: Kepler is now connected to Canvas, however, work uploaded to Canvas for grading will not automatically be uploaded to Kepler. Students should access Kepler through Canvas and upload work to the appropriate folder for archiving by HCAD.*

Preliminary Schedule (Subject to Change)

Week 1

24.09.05 Thursday
- Studio Move-In & Introductions
- **Introductions & Course Framework/Methods Discussion**
- **Assignment 1 Introduction**

Week 2

24.09.09 Monday
- **Assignment 1 Concept Pin Up** (Studio Internal)

24.09.12 Thursday
- Project Consultations (Double Scale Partial and Half Scale Complete Prototypes Due)

Week 3

24.09.16 Monday
- **Assignment 1 Full Scale Prototype Pin Up** (Studio Internal)
- **Proof of HCAD Wood Shop Certification Due**

24.09.19 Thursday
- Project Consultations

Week 4

24.09.23 Monday
- **Assignment 1 Review**

24.09.26 Thursday
- **Assignment 1 Documentation, Peer Review, & Reflection Due – 1:00 PM**
- **Assignment 2 Introduction**
- Project Consultations & Assignment 1 Debrief

24.09.28 Saturday - Storm King Field Trip

Week 5

24.09.30 Monday
- Project Consultations

24.10.03 Thursday
- **Assignment 2 Proposal, Concept & Scale Prototype Pin Up**

Week 6

24.10.07 Monday
- Project Consultations (Begin Fabrication/Installation)

24.10.10 Thursday
- Field Meetings (teams should be mid-build, consultations will occur at the installations)

Week 7

24.10.14 Monday
- **Assignment 2 Project Review** (rain or shine, walking juries)

24.10.17 Thursday
- **Assignment 2 Documentation, Peer Review, & Reflection on Occupant/User Experience Due – 1:00 PM**
- **Assignment 3 Introduction**
- Site Visit (Rain or Shine) & Assignment 2 Debrief

Week 8

24.10.21 Monday

Site Analysis Pin Up (Studio Internal)

Project Group Assignments & Additional Assignment 2 Debrief (if needed)

24.10.24 Thursday

Project Consultations

Week 9

24.10.28 Monday

Assignment 3 Progress Review 1 (Site Analysis & Concept Models Due)

SITE ANALYSIS AND CONCEPT MODELS ONLY

"BUILDINGS" & ARCHITECTURAL DRAWINGS MAY NOT BE PRESENTED

24.10.31 Thursday

Project Consultations **(Incorporation of Review Feedback Due)**

Week 10

24.11.04 Monday

Project Consultations

24.11.07 Thursday

Project Consultations

Week 11*

24.11.11* Monday

Project Consultations

24.11.14 Thursday

Assignment 3 Progress Review 2 (Board Layouts 1st Draft Due)

**NB: 24.11.11 is the last day students may withdraw from class.*

Week 12

24.11.18 Monday

Project Consultations

24.11.21 Thursday

Project Consultations

Week 13

24.11.25 Monday

Project Consultations/Final Models Project Consultations **(Board Layout 2nd Draft Due)**

24.11.26 Tuesday*

Project Consultations/Final Models Project Consultations

1:00 PM, PENCILS DOWN – FINAL BOARD PDF FILES TO PRINT ROOM

**NB: 24.11.26 Thursday classes meet Tuesday*

24.11.28-24.12.01 Thanksgiving Holiday

Week 14

23.12.02, 1:00 PM - FINAL REVIEW – FINAL MODELS DUE

Week 15

24.12.09 Monday

Assignment 3 Documentation/Reflection Due – 1:00 PM

Exit Interviews