

Department of Architectural Technology

ARCH 3612 ARCHITECTURAL DESIGN VI

1 lecture hour, 8 lab/9 studio hours, 5 credits

Course Description: This is an advanced design studio where the significance of public housing will be examined. The studio will research, evaluate analyze and investigate multi-family housing and urban redevelopment, and propose an exploratory approach to the planning and delivery of housing. The final project will consist of designing high density mixed –use housing and public space with community amenities.

Course Content:

This is a sixth semester design studio that focuses on housing and the community. This studio will build on the relationship between all of the various systems involved in the assembly and design of buildings, while responding to their environmental contexts. Housing will be explored as a set of building typology with social and historical implications.

Prerequisites: ARCH 3512 or ARCH3510 either with a grade of C or higher

Suggested Textbooks:

Density: New Collective Housing by Javier Mozas

Housing Design: A Manual 2nd ed. Edition by Bernard Leupen (Author), Harald Mooij (Author)

Floor Plan Manual 4th Revised and Extended Edition Edition
by Friederike Schneider (Author), Oliver Heckmann (Author)

Attendance Policy: No more than 10% absences are permitted during the semester. For the purposes of record, two late arrivals are considered as one absence. Exceeding this limit will expose the student to failing at the discretion of the instructor due to lack of class participation and mastery of class material.

Academic Integrity: Students and all others who work with information, ideas, texts, images, music, inventions and other intellectual property owe their audience and sources accuracy and honesty in using, crediting and citation of sources. As a community of intellectual and professional workers, the college recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension and expulsion.

Course Structure: The studio will be organized as a research studio with one design project. Research papers, 2D and 3D drawings, and physical study models and final models will be utilized in program development, design and presentations

Course will also include a combination of the following activities:

- **Field Trips / High Impact Learning Practices:**

Field trips will look to visit existing buildings and construction sites, tour newly constructed buildings and urban spaces or visit institutions, including but not limited to museums, churches, or other colleges with discussions led by either the instructor or on-site experts in the field or the subject.

- **Lectures:**

Lectures will be given by a qualified instructor and if warranted invited guest lecturers or experts in the field or subject.

- **Activities:**

Students will participate in activities that provide them with the opportunity to apply what is learned in a given subject.

Research Activities:

Students will be given directed readings and be required to correlate their readings with the lab exercises. Supplemental research will be encouraged to promote a greater analytical and critical understanding.

- **Presentations:**

Students will participate in written, oral and graphic presentation of course subjects and issues identified through their reading, writing, and lab work.

Grading:

Project research and development	30%
Site Visit and Analysis	
Precedent studies	
Program development	
Regulatory, Zoning	
Design Concept and Development	60%
Presentation	
Completion and Resolution	
Participation in class discussions	10%

NAAB Student Performance Criteria Addressed:

- PC.2 Design
- SC.3 Regulatory Context
- SC.5 Design Synthesis

Topical Outline (percentage of time in course spent in each content area):

- Integrated Design and Implementation: 60%
- Code Analysis: 10%
- Site Analysis: 10%

Program Analysis: 10%
 Development of Site Integration: 10%

General Education Learning Outcomes / Assessment Methods	
Learning Outcomes	Assessment Methods
Upon successful completion of this course the student shall be able to:	To evaluate the students' achievement of the learning objectives, the professor will do the following:
1. Integrate Learning - Apply knowledge of building codes pertaining to egress and fire protection/suppression to design without compromising design aesthetics.	1. Review students' ability to synthesize circulation, zoning, urban context, views, construction types, hierarchy, codes, and precedents into their design.
2. Synthesize site circulation, zoning, urban context, and views to design. (Inquiry/ Analysis)	2. Review students' ability to incorporate knowledge from site analysis into design.
3. Demonstrate knowledge of different societies' values regarding space and its social implications. (Community/Civic Engagement)	3. Review students' integration of knowledge of community and living in housing design.
4. Show ability to contribute actively by applying knowledge to the identification and analysis of societal and professional problems to enact solutions. (Professional/Personal Development)	4. Evaluate final design presentation for key elements of professional knowledge integrated successfully into project.

National Architectural Accrediting Board (NAAB) Program and Students Criteria (PC/SC)/ Assessment Methods	
Learning Outcomes	Assessment Methods
Upon successful completion of this course the student shall be able to: (Realm . Number) title [depth]	To evaluate the students' achievement of the learning objectives, the professor will do the following:
1. (PC.2) (SC.5) Design/Design Synthesis Ability to effectively use basic formal, organizational and environmental principles and the capacity of each to inform two- and three-dimensional design.	1. Review students process of developing their design ideas through graphic and written assignments.
2. (PC.3) Ecological Knowledge + Responsibility Ability to respond to site characteristics including urban context and developmental patterning, historical fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design.	2. Evaluate through assignments the ability to synthesize the site elements in to a clear understanding of the characteristics of the site and formulate knowledge to develop a design solution based on this information.

<p>2. (SC.3) Regulatory Context Ability to design sites, facilities, and systems consistent with the principles of life-safety standards, accessibility standards and other codes and regulations.</p>	<p>3. Demonstrate the knowledge of life-safety standards, accessibility and other code and regulation in the developed design solution.</p>
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Weekly Course Outline:

Day 1. Introduction to Course Content and Team Building

- **Activity 1a** *About Me Boards* – Each student to compose a graphic board which expresses their architectural interests. Use in class review to determine teams.
- **Activity 1b** *About My Team Boards* – Each team to compose one graphic boards which includes a photograph and the name of each member. For each team member list the strengths they add to the team and identify at least 1 goal the member would like to accomplish this semester. Write a 2-3 sentence summary that expresses who your team is.
- **Posting** All final boards, individual, team and class are to be posted on MIRO.
- **Activity 2** Zoning Studies – 1 Per Group

Day 2. Introduction to Site: Visit – Inventory & Analysis – (Team) With an eye towards defining your own Special Zoning District for the project site, make virtual site visits and complete an inventory and analysis. Consider Circulation (Pedestrian/Vehicular /Private/Public), Views (to the site/ from the site), Environment (Noise, Odor, Vegetation, Winds, Sun), Land Use & Zoning, Demographics, Cultural, Educational, Service Facilities, etc. Divide the work up and put together a cohesive presentation. Introduction of 3D site model.

Homework: *Assignment: Due- Class 3 Preliminary Inventory and Analysis.*

Day 3. Site Analysis, Zoning District & Massing Studies

- **Activity 1** Continued Development– *Inventory & Analysis*
- **Activity 2** Review of Zoning Districts – Adjacent, www.nyc.gov/planning
- **Activity 3** *Zoning Case Study Massing Study* – Working with the adjacent zoning rules develop rules for your site (there is no zoning currently for this site). Can take one of the adjacent zones, combine, or develop your own for the group!
- **Activity 4** Research two Development Proposals – BIG BQP + Scott Stringer BQE Cut

Homework: *Assignment: Due- development of site analysis and proposed zoning*

Day 4. Site Analysis, Creating a Special Zoning District & Zoning Envelop Studies

- **Activity 1** Continued Development– *Inventory & Analysis*
- **Activity 2** Review of Zoning Districts – Adjacent, www.nyc.gov/planning
- **Activity 3** *Zoning Case Study Massing Study* – Working with the group rules create a zoning envelop for this site.
- **Activity 4** Final slide should be a team Site Strategy showing the findings and how your site will be impacted and how to best proceed with design.

Homework: *Assignment: Due- Class 4 Final Site Inventory and Analysis Presentation.*

- Day 5. Site Analysis & Inventory Presentation**
- **Activity 1** Presentations of Site Analysis and Inventory, Zoning + Site Strategy Diagram
 - **Activity 2** Precedent Studies: Urban Parks + Housing Precedents - Assign
Homework: Assignment: Due- Class 5 Urban Parks + Housing Precedent Studies
- Day 6. Precedent Studies**
- **Activity 1** Team work on Precent Boards
 - **Activity 2** Presentation of Precedent Studies:
Homework: Assignment : Individual Site Bubble Diagram
- Day 7. Concept**
- **Activity 1** Individual Concept Collages -2
 - **Activity 2** Individual Concept models- 3 models for each collage = 6 models
 - **Activity 3** Post to Miro by 11am REVIEW 11-12:15pm
Homework: Assignment: Due Class 7 – Create a Hybrid Model on Site Bubble Diagram
- Day 8. Review Hybrid Models**
- **Activity 1** Presentations 8:30 of hybrid models on site (physical models)
Homework: Assignment: Due Class 8 – Finalize Hybrid Model on Site to Scale with BOP
- Day 9. Parti Development**
- **Activity 1** Presentation and critique of final hybrid model on site and revisions
Homework: Assignment - Final Site Concept Model – plans and site sections+ Site Plan Concept
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- Day 10. Site Concept**
- **Activity 1** Formulation of site strategies and design principles (parti ideas). Development of site concept based on parti emphasizing public/private, open and closed spaces, circulation, views, et al.
Homework: Assignment Continued- Site Concept Diagrams – plans and site sections
- Day 11. Site Form**
- **Activity 1** Individual Final Site Concept Presentations
- Day 12. Amenities & Bubble Diagrams**
- **Activity 1** Review of Typologies of Housing – Precedent Studies. Begin programming and research into space planning. Complete the program to determine uses, locations and rough sizes of floor areas. Understanding applicable building code.
 - **Activity 2** Matrix and Bubble Diagram Presentation
 - **Activity 3** Guest Lecture Affordable Housing
Homework: Assignment: list Program spaces, Develop Matrix and Bubble Diagram
- Day 13. Programming**
- **Activity 1** Discussion and review of amenities, lobby, common spaces, programming matrixes, bubble diagrams.
Homework: Assignment: - 4 Concept models+ 2 collages
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- Day 14. Residential Units**

- **Activity 1** Introduction to Individual Residential Units. Interior planning design concepts and requirements. Discussion of furniture layout, space planning, unit layouts, light and air requirements. Discussion of housing, communal living, community...

Homework: Assignment: Typical unit layout, Studio, 1,2,3 bedrooms in double loaded corridor (Template Board) also duplex and modules to promote community living

Day 15. Building Codes

- **Activity 1** Group review of typical unit layouts
- **Activity 2** Building codes, fire stairs, travel distances, core development. Desk crits.

Homework: Assignment: Development of typical floor plan with core & fire stairs + Fire Egress Diagram with dimension of travel distance +Light/Air Calcs (Template Board)

Day 16. Design Development

- **Activity 1** Individual Review of typical floor plan layouts
- **Activity 2** Development of project massing, core, site, units.

Homework: Assignment: Final typical Floor plans with egress + Blow-ups with Light +Air Calcs

Day 17. Massing Development

- **Activity 1** Individual review of typical floor plan layouts
- **Activity 2** Continued development of project massing, core, site, units.

Homework: Assignment: Mid-semester Presentation + Site Plan with images of exterior amenities

Day 18. Mid-semester Presentation

- **Activity 1** Midsemester presentation with professors and guest jurors

Homework: Assignment: Rework typical plans, site layout and development of amenities

Day 19. Project Development

- **Activity 1** Further development of project massing, core, site and units. Development of Plans, Sections, Massing of Unit, typical floor layouts and connections to site.
- **Activity 2** Continued development of project on site.- FAR

Day 20. Ground floor plan – lobby and relationship to site

- **Activity 1** Individual review of Site Plan with images of exterior amenities
- Further development of project massing, core, site and Lobby. Development of lobby and connection to site- entrances, parking, service, mail, deliveries....

Homework: Assignment: Site Development and Lobby plan, site layout and development of amenities

Day 21. Ground floor plan – lobby and relationship to site Cont.

Homework: Assignment: Final Site Development and Lobby plan, development of amenities. Selection of your 3D views.

Day 22. Project Development

- **Activity 1** Further development of Plans, Building Sections, Exterior Elevations and 3d Models – development of typical floor plans.

Homework: Assignment: short site sections and 1 long site section

Exterior Façade – Landscaping and Site Amenities

Day 23. Exterior Elevations

- **Activity 1** Review of site sections. Development of exterior elevations and discussion of materials.

Homework: Assignment: Exterior Elevations with images of materials

Day 24. Exterior Elevations & Site Development

- **Activity 1** Review of site sections. Development of exterior elevations and discussion of materials. Development of site plan and site amenities.

Homework: Assignment: Site Development with images of materials

Day 25. Presentation Methodologies

- **Activity 1** Review of exterior elevations and image selections. Discussion of final presentation methodologies. Development of thumbnail story board.

Homework: Assignment: Thumbnail diagrams for final presentation.

Day 26. Desk Crits and Presentation Review

Day 27. Desk Crits and Presentation Review

Day 28. Desk Crits and Presentation Review

Day 29. Final Presentation

Day 30. Collection of Work/Final Submission and Recap