Department of Architectural Technology   **Spring 2021**

ARCH 3612   **ARCHITECTURAL DESIGN VI**   1 lecture hour, 8 lab/9 studio hours, 5 credits

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Faculty Availability: In addition to class hours we are available during office hours and at other times by appointment. Office hours are posted on OpenLab. We will look respond to your emails within 24 hours Monday-Friday. We are not typically available (4pm Friday until 9 am Monday) so please plan accordingly.

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 high density mixed –use housing and public spaces 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
  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

The course may 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.

Community Engagement: An important aspect of this course will involve community engagement. We are fortunate to be working on a project site within walking distance of our college campus in downtown Brooklyn. We have been working closely with Cobble Hill community groups and in previous semesters our students have attended community board meetings. Members of the community will be available to us during the semester as well as urban planners and architects from the firm BIG (Bjarke Ingels), who have also been studying the project site. They may provide critiques during the semester and may participate in our midterm and final juries.

For the past two semester we have studied different aspects of this project and we will be building upon the work of our students from the past two semester. We will ask that you review the OpenLab sites from the previous two semesters and familiarize yourself with the work of previous student teams.

Assignment Overview:
Assignment sheets will be made available and posted on OpenLab. While there will be shorter one-day assignments to move the design project forward, the primary assignments include the following:

- **Precedent Studies:** Studies of existing projects that are in line with the design goals of the course are a helpful way to begin to identify relevant issues and evaluate potential solutions. Students will research precedent studies for both Urban Planning and Housing Design.

- **Site Inventory & Analysis:** All good design begins with an understanding of site conditions. Students will complete a detailed site inventory and will then categorize aspects of the site as assets or liabilities to achieving the defined design goals. Student design must respond to this analysis by taking advantage of site assets and minimizing site liabilities.

- **Zoning & Special Zoning District Development:** We will research and study how zoning works and how it affects the development of housing in an urban setting. Believing that we can improve upon standard zoning, we will investigate and develop or own special zoning districts to guide our design.

- **Site Strategies Development:** Site strategies are a synthesis of both the Inventory/Analysis process and the Special Zoning District Development. Site strategies will guide your individual design.

- **Student Housing Design and Development:** The work of the semester will culminate with development of individual housing solutions.

Grading:
- **40%** **Project research and development**
  Precedent studies, Site Inventory & Analysis, Zoning & Special Zoning District Development, Program Development
- **50%** **Design Concept and Development**
  Site Strategies Development, Student Housing & Design Development, Oral and Graphic Presentation of design solutions.
- **10%** **Participation in class discussions**

NAAB Student Performance Criteria Addressed in this course:
- A.4   Architectural Design Skills
- B.2   Site Design
- B.3   Codes and Regulations

Topical Outline (percentage of time in course spent in each content area):
- 60%   Integrated Design and Implementation:
- 10%   Code Analysis:
- 10%   Site Analysis:
- 10%   Program Analysis:
- 10%   Development of Building Assembly:

<u>Online / Remote Learning Format: For when the course is taught online or in Hybrid mode</u>

Online Tools: The following methods are used when this course is taught Online or in Hybrid format. As these tools are an effective means of communication from instructor-to-student and student-to-student, all students should be prepared to use them even when the course is taught in our traditional classroom.

Please be sure that all your login credentials are up to date prior to the start of the semester and create accounts as necessary to use the following free tools. Please inform us at the start of the semester if you will have difficulty in any way complying with the requirements of this online course- due to lack of bandwidth or computer access so accommodations can be made.

- **Zoom.us:** For class meetings we will make use of Zoom for video conferencing. To participate fully your computer should be setup with both audio and video. We will ask you to share your screen so please be mindful of closing any private information before class. We will record lecture and group discussion portions of the class and post these so you can review them. They will only be made accessible to member of the class. *<u>You must always be available & logged on during class sessions.</u>*

  We will use zoom for individual one-on-one sessions during our office hours. The schedule will be posted on OpenLab. During the compressed summer schedule session availability will be limited.

- **OpenLab:** Will be used as the primary means of communication from instructor to student. You will find the syllabus, assignment descriptions and readings here. We will post on a regular basis to provide clarifications, additional directions for assignments, for reminders and to address student questions. Additionally, you will find a wealth of resources organized on the class website that will help you complete your assignments. *<u>You must check the course OpenLab site on a daily basis.</u>*

- **Blackboard:** Provides us with an easy means to communicate to the entire class by sending messages to your CityTech email address. Please be certain your email is working and that you check your CityTech email on a daily basis. We may use blackboard to collect assignments and to post grades. Blackboard use varies from semester to semester – we will provide guidance as needed.

- **DropBox:** Depending upon the size of files collected from student assignments, they will be uploaded to either Blackboard or Dropbox. *<u>Please be sure your CUNY DropBox account is working</u>*. Videos of class sessions will be uploaded and shared here.

- **Miro.com:** Will be used for online presentation and collaboration. Free for educational use.

- **Slack.com:** Will be used for team collaboration and class communications. Free for educational use.

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) Students Performance Criteria (SPC)/ 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. (A.4) Architectural Design Skills [Reinforced] **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. (B.2) Site Design[Master] **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 into a clear understanding of the characteristics of the site and formulate knowledge to develop a design solution based on this information.
2. (B.3) Codes and Regulations [Master] **Ability** to design sites, facilities, and systems consistent with the principles of life-safety standards, accessibility standards and other codes and regulations.	3. **Demonstrate** the knowledge of life-safety standards, accessibility and other code and regulation in the developed design solution.

Weekly Course Outline:

WEEK 1   Introduction to course content. Typologies of Housing /UrbanPlan

WEEK 2   Introduction to the specific site. Discussion about approach, sun orientation, traffic, slope, zoning and other restrictions.   Site visit and Data gathering. Site model /UrbanPlan

WEEK 3   Pin-up team presentations: Site analysis / Precedent research + Analysis Typology of Housing/UrbanPlan

Building Code and Zoning analysis.

WEEK 4   Precedent research and analysis/Concept Development

WEEK 5   Programming and Space planning.

Complete the program of your building determining uses, location and rough sizes of floor areas. Consider the use carefully: how is it appropriate to the site and check whether allowed by zoning.

WEEK 6   Formulation of site strategies and design Principles (parti ideas)
Discussion of site selection and orientation of program on site. Site Strategy Diagrams

Diagrammatic Site layout showing ideas of unit configurations, including exterior spaces and orientation – show 4 different layouts (Macro)

There is currently a lack of innovative, affordable multi-family housing in Brooklyn. Many families are leaving the city for the suburbs as the housing is very limited. With this project, you have the opportunity to explore the future, question the past and re-invent the notion of responsible affordable housing with an emphasis on sustainability while addressing higher principles of societal health, human sustenance, site integration, energy production and appropriate materials.

WEEK 7   **I**ntroduction to Individual Residential Unit. Interior planning design concepts and requirements**.** Discussion of furniture layout, space planning.

WEEK 8   Mid-term review

WEEK 9   Design development – your building and public spaces

Diagrams of Massing: Choose your final layout of site – and create diagrams of the first floor showing the common space, elevator/stair cores, how you will use the exterior

spaces (walks, bbq areas, seating, gardening…. Specific to the needs of your project/neighborhood) Create site sections showing grading, elevation changes and buildings.

WEEK 10   Plans, Sections and Massing of Unit and Flooring Selection. Exterior connections.

WEEK 11   Exterior Site Configuration and integration of Housing – entrances, service, amenities…

WEEK 12   Exterior Elevations; material glazing. landscaping and Exterior spaces.

WEEK 13   Desk Crits/Review

WEEK 14   Layout of final presentation

WEEK 15   **Final Review**