

**ARCH 3512**      **Architectural Design V –Adaptive Reuse Design Studio**  
1 lecture hour and 8 lab/studio hours, 5 credits

**Professor:**      Ardavan Arfaei                              aarfaei@citytech.cuny.edu  
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**Office Hours:**      TBA

**Course Description:** The course will investigate the adaptive reuse of existing buildings and will focus on design projects, involving the redesign and expansion of existing structures. Research, document and redesign an existing historic structure for rehabilitation will be the main focus of the course.

**Course Context:**

- To develop a schematic design to the next level of detail: design development.
- To formulate alternate design solutions for the renovation of existing buildings considering aesthetic and code requirements.
- To develop an architectural program and design solution
- To introduce and investigate how materials can be assembled to create space
- To research new materials, products and furnishings appropriate to their design.
- To survey an existing facility and site to determine the changes required for alteration work and the appropriateness for new work

**Prerequisites:** ARCH 2410/2412 with a grade of C or higher

**Recommended Text:** The Interior Design Reference & Specification Book updated & revised: Everything Interior Designers Need to Know Every Day  
by Chris Grimley, Mimi Love, published by Rockport Publishers 2018

The Interior Dimension: A Theoretical Approach to Enclosed Space

Joy Monice Malnar, Frank Vodvarka, published by John Wiley and Sons, Inc., 1991

Color, Space, and Style: All the Details Interior Designers Need to Know but Can Never Find

by Chris Grimley, Mimi Love, published by Rockport Publishers 2007.

**Suggested Reference:** Interior Graphic Standards, 2<sup>nd</sup> Edition by Corky Binggeli and Patricia Greichen , published by John Wiley and Sons, Inc., 2010

Architectural Graphic Standards [12th Edition], by Ramsey and Sleeper, published by John Wiley and Sons, Inc., 2016.

**Attendance Policy:** No more than 10% absences are permitted during the semester. For the purposes of record, two lateness are considered as one absence. Exceeding this limit will expose the student to failing at the discretion of the instructor.

**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.

**Suggested Text:**                              Texts will be assigned according to the subject covered that day.

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**Course Structure:** A series of problems will be assigned to be developed by the student and presented to the class through architectural drawings and/or models. Ongoing critiques and final jury presentations will be an integral part of the course.

**Grading:** One Design project with two phases. One phase will be commercial component and the second phase the residential component

Phase 1	50%
Phase 2	50%

**Each Phase will be evaluated based on:**

<b>Grading:</b>	45%	Research Assignments (Site Analysis, precedent study, program of spaces, concept design)
	40%	Final Design
	10%	Material Journal
	5%	Class participation

**A final grade of C or higher is required in this course to use it as a prerequisite for subsequent courses.**

**NAAB Student Performance Criteria Addressed:**

Introduced:	B.1	
	D.1	
Mastered:	A.2	Design Thinking Skills

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

Design Investigation and Solution:	60%
Understanding of Zoning and Codes:	10%
Research:	20%
Presentation Skills:	10%

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General Education Learning Outcomes / Assessment Methods	
Learning Outcomes	Assessment Methods

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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. <b>Develop</b> a schematic design to the next level of detail: Design Development.	1. <b>Review</b> students’ creative process (initial sketches through to the final project) by means of frequent pin-ups.
2. <b>Integrate</b> furniture, lighting, plumbing, interior detailing and finishes into their design.	2. <b>Review</b> students’ ability to incorporate materials and furnishing into design work.
3. <b>Formulate</b> alternate design solutions for the renovation of interior details of existing buildings taking into account aesthetic and building code requirements.	3. <b>Review</b> students’ ability to incorporate a concept into their design work.
4. <b>K.3 Integrate Learning</b> of various components from site, program, code into a design project.	4. <b>Evaluate</b> final design presentation for key elements 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.2) Design Thinking Skills [measured]  ABILITY to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.	1. <b>Review</b> students process of developing their design ideas through graphic and written assignments
2. (B.1) Pre-Design [introduced]  ABILITY to prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.	2. <b>Evaluate</b> through assignments the ability to logically formulate program from a specific use along with ordering the spaces based on adjacency.

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<p>3. (D.1) Stakeholder Roles in Architecture [introduced,]</p> <p>UNDERSTANDING of the relationships among between the client, contractor, architect and other key stakeholders such as user groups and the community, in the design of the built environment. Understanding the responsibilities of the architect to reconcile the needs of those stakeholders.</p>	<p>3. <b>Demonstrate</b> the needs of the user in the design based on research, programing and site analysis.</p>
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**Extent and duration of projects**

**Phase 1**

- 7 weeks
- *Commercial project, small scale project on a specific urban site*

**Phase 2**

- 8 weeks
- *Continuation of project one with design development with residential aspects*

**Course Outline:**

**Week 1: Introduction** to course content and overview with discussion of the various factors affecting the design development of a design problem. Discussion of human space and needs.

Introduction to Phase 1 of the design project. Analysis and development of facility function, image, public appeal density and urban impact.

Site visit.

Assignment: Analysis of existing building drawings, its systems, urban impact & program. Site model

**Week 2: Documentation of Site Analysis**

Examples of projects where site analysis made changes that impacted design. SITE STRATEGY DIAGRAM

**Week 3: The Use of Precedent Studies**

As designers we benefit from a comprehensive understanding of precedents. We use diagrams to convey information and relationships in a building. By researching and examining examples of similar work, and similar conditions we evaluate and interpret and translate for our own use.

Precedent studies and analysis and development of program requirements for facility.

Assignment : Research Precedent Studies

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**Week 4: Programming – Matrix and Bubble Diagrams/Design Alternative**

Introduction to spatial Organization, program development and space planning

Assignment: Space adjacencies bubble diagram and matrix

**WEEK 5: Parti / Developing Conceptual Ideas**

Assignment: Development of Parti and Schematic Plans.

3 Collages and 3 models per collage

Conceptual Ideas and development of schematic design

**Week 6: Presentation Organization and Layout**

Development of massing/plans/section based on bubble diagram.

Review of project and discussion of presentation techniques and models

**Week 7: Jury critique of Phase 1 and Introduction of Phase 2.** Discussion of the differences between Residential and Commercial design in relationship to materials, codes, fixtures and space planning

**Mid-term Pin up**

Floor Plans with furniture layout

Exterior elevation in context

Interior elevations

Sections

Color scheme

3D representation, physical model and digital model

**Week 8 Structure Façade Development , Landscaping Outdoor Spaces and Landscaping**

Discussion of entrance, signage, exterior space, landscaping and elevation. Elevation incorporating these elements required. Design development Plans, Sections Elevations.

**Week 9: Façade Development , Landscaping Outdoor Spaces and Landscaping**

Discussion of entrance, signage, exterior space, landscaping and elevation. Elevation incorporating these elements required. Design development Plans, Sections Elevations.

**Week 10: ADA Bathroom**

Commercial bathroom discussion including material, fixtures and ADA layout. Enlarged bathroom with materials and fixture required. Discussion of differences of residential and commercial interior materials, finishes and colors.

**Week 10: Furniture Layout- Bedrooms/Lobby**

**Week 11: Flooring + Lighting + Spec- Intro to Pinterest/Material application in design**

Discussion of various lighting techniques, ceiling types and different lighting types. A lighting plan and cut sheets of lighting selections required

Discussion of a material board and finish schedule and its uses.

Introduction to Material Journal.

**Week 12:** Review and development of all aspects of the design development and detailing of the project as previous discussed. Preparation of final documents for final Jury. The introduction of color and rendering into final presentation drawings.

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**Week 13&14** : Reviews before final presentation

**Week 15: Final Jury**

Part 1 – Design options explored with the final design the base of the Youth Hostel – incorporating the public spaces along with one additional space – bookstore, co-work space, activity (darts, ping-pong, music space...) that incorporates the community.

Part 2 – Design the bulk of the Youth Hostel that accommodates the rooms, outdoor space, support space and the offices. This is a new addition that brings in structure and exterior materials.