NEW YORK CITY COLLEGE OF TECHNOLOGY
CITY TECH

DEPARTMENT OF ARCHITECTURAL TECHNOLOGY
Voorhees Hall V-818 • 186 Jay Street • Brooklyn, NY 11201
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Course code: **ARCH 1212**
Course title: **COURSE TITLE**
Class hours/credits: **9 hours** (1 lecture; 8 lab) **/ 5 credits**
Semester: **Spring 2024**
Mode of Instruction: **In person**

Course instructors:

Instructor	Section		Meeting Times
Eirini Tsachrelia + Ioannis Oikonomou	29283	D463	Mo We 8:30AM - 11:00AM Mo 11:30AM - 2:00PM
Deena Darby	29282	D464	Tu Fr 11:30AM - 2:00PM Fr 2:30PM - 5:00PM
Shaad Zaidi	29281	D465	Mo We 11:30AM - 2:00PM We 2:30PM - 5:00PM
Colin Carpenter+ Ann Le	29280	D466	Mo We 8:30AM - 11:00AM We 11:30AM - 2:00PM
Ammr Vandal	29279	D467	Tu Fr 11:30AM - 2:00PM Fr 2:30PM - 5:00PM
Demir Purisic	29278	D468	Mo We 11:30AM - 2:00PM Mo 2:30PM - 5:00PM
Li Lian Tan + Christian Camacho	29276	D469	Tu Fr 2:30PM - 5:00PM Fr 11:30AM - 2:00PM
Jason Okoren	29277	E462	Mo Tu Fr 6:00PM - 8:30PM

Office Hours:

Prof. Ioannis Oikonomou/ Prof. Tsachrelia: **Monday 11:30am-2pm** by appointment, alternate weeks

Prof. Eirini Tsachrelia/ Prof. Oikonomou: **Wednesday 11:30am-2:00 pm** by appointment, alternate weeks

Course coordinator: academic year 2023-2024
Prof. Claudia Hernandez
CHernandez@citytech.cuny.edu

Course Catalog Description:
A first-year foundational course that advances students' ability to perceive visual cues, create visual design, formulate concepts and render ideas in two or three dimensions. Students use a combination of hand and digital skills to aid in the creation and interpretation of three dimensional objects and space, and the delineation of the same using standard projection systems. The Visual Studies component of the course builds on the student's knowledge of architectural representation and visualization and focuses particularly on: precise crafting of physical and analogue models, architectural presentations, analogue and digital rendering techniques.

Prerequisites:
ARCH 1101 and ARCH 1112 with a grade of C or higher

Co-requisite:
none required.

Required Texts and References:
Ching, Francis D.K. *Architecture: Form, Space, and Order (latest edition).* New York, NY: John Wiley & Sons, Inc., 1996 (or most recent). Print.
Software Primers *for* Rhino, Illustrator, InDesign, Photoshop, and VRay located at:
https://openlab.citytech.cuny.edu/fuselab/softwarefabrication-tutorials/
Additional readings will be provided as required.

Recommended Texts and References:
Chin, Francis D. K. and Steven P. Juroszek. Design Drawing. Hoboken, NJ: John Wiley & sons, 2010.
Dunn, Nick. Architectural Modelmaking. London: Laurence King Pub, 2010.
Hannah, Gail G. Elements of Design: Rowena Reed Kostellow and the Structure of Visual Relationships.
New York: Princeton Architectural Press, 2002.
Janson, Alban and Florian Tigges. Fundamental Concepts of Architecture: The Vocabulary of Spatial Situations. Birkhauser, 2014.
Mills, Criss. Designing with Models: A Studio Guide to Making and Using Architectural Design Models. Hoboken, N.J: John Wiley & Sons, 2005.
Rasmussen, Steen E. Experiencing Architecture. Cambridge Mass.: M.I.T. Press, 1964.

Required Materials, Tools, and Software:

1. Lead Holder or Drawing Pencils 4H, HB, 4B	8. 12" Architect's Scale	18. 9"x12" or larger Self-Healing gridded Cutting Mat (18" recommended)
2. Lead Holder Sharpener or Pencil Sharpener	9. Drafting tape or drafting dots	19. Black Marker
3. Lead: 4H, HB, 4B (Only needed	10. Olfa Knife OR # 11 X-Acto	20. Corrugated Card Board

for lead holder)	Knife & Blades	
4. 12" 30°/60° Triangle	11. 18" Metal Ruler w/ Cork backing	21. Vellum 1-2 sheet s 24"x36"
5. 12" 45° Triangle	12. White Glue	22. Drawing Storage Tube
6. White Eraser	13. Wood Dowels	23. Roll of Tracing paper
7. Erasing Shield	14. chipboard	

Software Applications:

1. Rhinoceros
2. Adobe Creative Suite (Photoshop, Illustrator, and InDesign)
3. Miro
4. Zoom
5. Dropbox

Recommended Materials, Tools, and Software:
See appendix.

Course Context:
Design Foundations II is the second course in the one-year foundation sequence, The Visual Studies component of the course builds on the knowledge of architectural representation and visualization obtained in Foundations I and Visual Studies I. The course provides training in design tools that will strengthen visual, verbal, and graphic aspects of design and representation skills and will continue to build design and representation techniques and workflows that will prepare them for future coursework and professional practice.

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.

Student Accessibility:
City Tech is committed to supporting the educational goals of enrolled students with disabilities. If you have or think you may have a disability, you may be eligible for reasonable accommodations or academic adjustments as provided under applicable federal, state, and/ or

city laws. You may also request services for temporary conditions or medical issues under certain circumstances. If you have questions about your eligibility and/or would like to seek accommodation services and/or academic adjustments, please contact the Student Accessibility Center. [web site: https://www.citytech.cuny.edu/accessibility/ Email: Accessibility@citytech.cuny.edu]

Diversity and Inclusive Education Syllabus Statement:
This course welcomes students from all backgrounds, experiences and perspectives. In accordance with the City Tech and CUNY missions, this course intends to provide an atmosphere of inclusion, respect, and the mutual appreciation of differences so that together we can create an environment in which all students can flourish. It is the instructor's goal to provide materials and activities that are welcoming and accommodating of diversity in all of its forms, including race, gender identity and presentation, ethnicity, national origin, religion, cultural identity, socioeconomic background, sexuality and sexual orientation, ability, neurodivergence, age, and etc. Your instructor is committed to equity and actively seeks ways to challenge institutional racism, sexism, ableism, and other forms of prejudice. Your input is encouraged and appreciated. If a dynamic that you observe or experience in the course concerns you, you may respectfully inform your instructor without fear of how your concerns will affect your grade. Let your instructor know how to improve the effectiveness of the course for you personally, or for other students or student groups. We acknowledge that NYCCT is located on the traditional homelands of the Canarsie and Lenape peoples.

Alerts Reporting:
Use your official city tech e-mail for all correspondence. Check it regularly for class announcements and information. Throughout the semester, you may receive messages about achievements, goals, and requirements in this class. If the message indicates an issue, you may be contacted by the Student Success Center (https://www.citytech.cuny.edu/ssc/student-success-services.aspx). A Student Success Center Coach will reach out to you by phone, text, and email to offer support and suggest additional resources to support your achievements in this course.

Grading and c**ourse requirements:**
Final grade calculations or the importance of deliverables by percentage, for example:

Project 01: Bridging Surfaces	30%
Project 02: Urban Thresholds	50%
Class Participation	10%
Portfolio	10%
TOTAL	**100%**

Learning outcomes, objectives and assessment:

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. Lifelong learning Skills KNOWLEDE - Show curiosity and the desire to learn. Acquire tools for lifelong learning – how to learn, how they learn, knowledge of resources.	1. **Assess** students' development of sketches and massing models through weekly pin-ups.
2. Communication Communicate in diverse settings and groups, using written (both reading and writing), oral (both speaking and listening), and visual means.	2. **Assess** student's presentations during weekly pin-ups to determine how effective they are at communicating their ideas.

National Architectural Accrediting Board (NAAB) Students Performance 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) Design [reinforced] 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.	**Review** students' creative process (initial sketches through to the final project) by means of frequent pin-ups. **Observe** students' progression from simple to complex thinking as shown in sketches and completed projects
2. (SC.5) Design Synthesis [introduced] 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	**Review** the students' ability to make informed decisions regarding the synthesis of concept, program, site, and structure into a design project by means of frequent pin-ups and project Presentations.

design, and consideration of the measurable environmental impacts of their design decisions.	
Course Specific 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. **Implement** an iterative design process from problem identification, information gathering, solution generation and evaluation, implementation, presentation, and overall project evaluation. (Knowledge)	1. **Review** students' creative process (initial sketches through to the final project) by means of frequent pin-ups. **Observe** students' progression from simple to complex thinking as shown in sketches and completed projects.
2. **Incorporate** design concepts and vocabulary into design process and presentations. (Knowledge)	2. **Review** students' creative process (initial sketches through to the final project) by means of frequent pin-ups. **Assess** the students' use of professional vocabulary during oral presentations.
3. **Produce** both analog and digital orthographic, axonometric, perspective, and architectural vignette drawings. (Skill)	**Review** students' creative process (initial sketches through to the final project) by means of frequent pin-ups. **Review** students' 2-D and 3-D analog and digital representation skills. **Inspect** students' portfolios for quality of documentation and editing as well as organization. **Review** students' drawing and modeling work where students must exhibit their visual representation skills (2-D and 3-D).
4. **Utilize** analogue and digital media to create drawings and models. (Skill)	**3.** **Review** students' 2-D and 3-D analog and digital representation skills. **Observe** students' progression from simple to complex thinking as shown in sketches and completed projects. **Review** students' drawing and modeling work where students must exhibit their visual representation skills (2-D and 3-D).
5. **Recognize** the complexity of the physical world (Knowledge)	**4.** **Review** students' 2-D and 3-D analog and digital representation skills. **Review** students' drawing and modeling work where students must exhibit their visual representation skills (2-D and 3-D).
6. **Demonstrate** understanding of computer hardware and software as used in architectural practice (Knowledge)	**5.** **Review** students' 2-D and 3-D analog and digital representation skills. **Inspect** student digital files for use/application of professional

	standards. **Review** students' drawing and modeling work where students must exhibit their visual representation skills (2-D and 3-D).
7. **Document** analogue materials into digital format and process and edit for presentations and portfolio. (Skill)	**Observe** students' use and manipulation of computer hardware and software. **Inspect** student digital files for use/application of professional standards. **Inspect** students' portfolios for quality of documentation and editing as well as organization.
8. **Create** analog and digital 3-D models of medium geometric complexity. (Skill)	**6.** **Observe** students' use and manipulation of computer hardware and software. **Inspect** student digital files for use/application of professional standards.
9. **Manipulate** vector and raster files. (Skill)	**7.** **Inspect** student digital files for use/application of professional standards.

File Naming:
All digital files must be submitted in the following format:
Course number semester/year_Professor initials _Project Name_ Student Name (file number)
For example: ARCH1212_ SP24_ETIO_Proj1_JSmith (01)

Course structure:

- **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.

Weekly Course Outline: [tentative subject to change by the instructor]

Week 1
STUDIO
Course Introduction
ISSUE: PROJECT 01_Bridging surfaces
P01 Assignment 01: Site documentation through photography / image capture.
Assignment 02: line drawing and positive negative drawings
VISUAL STUDIES
Assignment 01: Portfolio: generate initial template (this will be an ongoing project throughout the semester)

Week 2
STUDIO
P01 Assignment 02: 3D abstract study models using linear, planar and volumetric language (Based on the 2D collage and drawings) Day 2 Hybrid models.
VISUAL STUDIES
Assignment 02: Rhino modeling

Week 3
STUDIO
P01 Assignment 03: series of iterations of the bridge design proposal (translation of abstract design language to architectural proposal)
VISUAL STUDIES
Assignment 03: Rhino modeling

Week 4
STUDIO
P01 Assignment 04: Final model construction
P01 Assignment 05: Orthographic projections of the final proposal
VISUAL STUDIES
Assignment 04a: **Rhino** creating content for presentation – outputting images and creating and setting up drawings.

Week 5
STUDIO
P01 Assignment 04 cont.: Final model construction
P01 Assignment 05 cont.: Orthographic projections
P01 Assignment 06: Presentation board
VISUAL STUDIES
Assignment 05: Composite Drawings Rhino + Illustrator

Week 6
STUDIO
DUE: PROJECT 01 – FINAL REVIEW
DUE: PROJECT 01 ARCHIVE
ISSUE: PROJECT 02_Vertical stage
VISUAL STUDIES
Assignment 06: PORTFOLIO draft 01 submittal

Week 7
STUDIO
P02A Assignment 02: Site Analysis and Site topography Construction(in conjunction with VSII)

VISUAL STUDIES
Assignment 07a**:** Site Analysis: Diagraming with Rhino, Illustrator and Photoshop + setting up file for laser cutting

Week 8 STUDIO
P02A Assignment 02 cont.: Site Analysis (in conjunction with VSII)P02
Assignment 03: Study models: generation of design language and concept development
VISUAL STUDIES
Assignment 07b: Workshop Refining Diagrams and presentation layouts

Week 9 STUDIO
P02A Assignment 04: Model: vertical stage design development
P02A Assignment 05: Digital model design proposal (in conjunction with VSII)
VISUAL STUDIES
Assignment 08**:** Digital model (Rhino): Different strategies for Modeling in Rhino.

Week 10 STUDIO
P02A Assignment 04 cont.: Final model: Vertical Stage design
P02A Assignment 05: Digital model (in conjunction with VSII)
VISUAL STUDIES
Assignment 09: Using the modeling techniques introduced last week create a digital model of your current design proposal. Use the clipping plane tool to study the sectional spatial qualities of the space. Print the sectional studies, insert a scale figure and continue to edit the section in sketch form.

Week 11 STUDIO
P02A Assignment 06: Orthographic projections (in conjunction with VSII)
P02A Assignment 07: Diagrams of design strategy and development (in conjunction with VSII)
P02 Assignment 08: Final presentation board(s)
VISUAL STUDIES
Assignment 10: Presentation drawings: Adding surface thickness, extracting, cleaning and articulating plans, elevations, sections and Section/perspectives from digital models

Week 12 STUDIO
DAY 1 **2/3 review Project 02**
DAY 2
P02 Assignment 11: Program analysis
P02 Assignment 12: Study models welcome center proposal
VISUAL STUDIES
Assignment 11: Storytelling through diagramming**:** Generate a sequence diagram to help describe the design development of Project 02

Week 13 STUDIO
P02B Assignment 02 cont.: Models design development welcome center

P02B Assignment 03: Digital Model
P02B Assignment 04: Diagrammatic sequence
VISUAL STUDIES
Assignment 12: Rendered sections: Using a section from project 02 create a composite drawing that activates the space

Week 14 STUDIO
P02B Assignment 02 cont.: Final Models welcome center
P02B Assignment 04: Diagrammatic sequence
P02B Assignment 04: Drawings: rendered Elevation, plan and sections (in conjunction with VSII)
VISUAL STUDIES Assignment 13: Develop digital models and presentation drawings for Project P02B in ARCH 1210

Week 15 STUDIO
DAY 1 P02B Assignment 03: Final model: Vertical Stage design
DAY 2 **DUE: PROJECT P02B – FINAL REVIEW**
VISUAL STUDIES
DUE: PORTFOLIO