

ARCH 1212 ARCHITECTURAL DESIGN II: FOUNDATIONS AND VISUAL STUDIES

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

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Course coordinator, academic year 2021-22
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Meeting Times:

SECTION HD13

Monday (in person): 8:30 AM – 11:00 AM and 11:30 AM – 2:00 PM

Wednesday (remote via zoom): 11:30 AM – 2:00PM

SECTION HD10

Monday (in person): 8:30 AM – 11:00 AM and 11:30 AM – 2:00 PM

Wednesday (remote via zoom): 8:30 AM – 11:00AM

Class Format: Hybrid.

A hybrid class is designed to integrate face-to-face and online activities so that they reinforce, complement and elaborate one another, instead of treating the online component as an add-on or duplicate of what is taught in the classroom. 70% in-person meetings will be required.

Remote session will be held synchronously (during regularly scheduled class meeting times) via Zoom. Class meeting link:

<https://us02web.zoom.us/j/81650093522?pwd=RVhoTTN3NW1HN0wzK3NEZjdQSE54dz09>

Meeting ID: 816 5009 3522

Passcode: 740723

NOTE: In person classes will **not** be broadcasted remotely.

Course Description: Design Foundations II is the second course in the one-year foundation sequence which increases the student's ability to perceive visual cues, create visual design, formulate concepts, and render ideas in two- and three dimensions. Students will use a combination of hand and digital skills to aid in the creation and interpretation of three-dimensional constructs and space and the delineation of the same using standard projection systems.

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.

Course context: This is a required course in the design sequence.

Prerequisites: ARCH 1101: Intro to Architecture and ARCH: 1112 Architectural Design I: Foundations and Visual Studies (or ARCH 1110 + ARCH 1191) both with a minimum grade of C

Required Texts:

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 V-Ray* located at <https://openlab.citytech.cuny.edu/fuselab/softwarefabrication-tutorials/>

Additional readings will be provided as required.

Recommended Texts:

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.

Class Participation 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: This course is a design studio which will include lectures, student presentations, guest critics, in-class workshops, and charrettes. Each design problem will require students to engage in an iterative design process through which they will acquire new skills in a variety of media. Students will deliver verbal and graphic presentations of their designs that will demonstrate agility with vocabulary and concepts and result in a critical class discussion to assess the quality of the work. Work will be completed both in and outside of class. Students work will be evaluated at each class meeting. Students are encouraged to keep record of their own progress.

Grading: A review of students' work will occur at the end of each project.

Project 01: Bridging Surfaces	20%
Project 02: Urban Threshold	40%
Visual Studies Assignments	20%
Class Participation	10%
Portfolio	10%
TOTAL	100%

Sketch Assignments: Throughout the semester students will complete sketches relating to each design project. The sketches will document site conditions, materials, and ideas.

Required Supplies:

- Architectural Scale
- 12" Roll of tracing paper
- Sketchbook
- White Glue
- Olfa Knife and replacement blades
- 12" or 18" metal ruler w/cork backing
- 9" X 12" self-healing cutting mat
- Lead, Lead holder and Sharpener

Also see List of Essential supplies handout
Additional supplies and materials to be discussed in class.

File Naming: All digital files must be submitted in the following format:

Course number semester/year_Professor initials _Project Name_ Student Name (image number)

For example: 1212_SP22_ETIO_Horizontal Connector_JSmith (01)

Course Structure: Course will include a combination of the following activities:

- **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.

General Education Learning Outcomes / Assessment Methods	
Learning Outcomes	Assessment Methods
Upon successful completion of this course the	To evaluate the students' achievement of the

student shall be able to:	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 [introduced] 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 design, and consideration of the measurable environmental impacts of their design decisions.	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.
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 <u>iterative</u> 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.

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 DUE: PORTFOLIO Assignment 06: PORTFOLIO draft 01 submittal
Week 7	STUDIO P02A Assignment 01: Performance Analysis diagram P02A Assignment 02: Site Analysis (in conjunction with VSII) VISUAL STUDIES Assignment 07a: Site Analysis: Diagramming with Rhino, Illustrator and Photoshop
Week 7	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 DUE: PROJECT 02A – REVIEW DAY 2 ISSUE: PROJECT 02B_Thresholds: DUMBO welcome center P02B Assignment 01: Program analysis P02B Assignment 02: Study models welcome center proposal
	VISUAL STUDIES	DUE: PORTFOLIO 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