

ARCH 1212 SYLLABUS**ARCHITECTURAL DESIGN II: FOUNDATIONS AND VISUAL STUDIES**

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

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Course coordinators, academic year 2020-21
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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 & Visual Studies" 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: Class will be fully online but students will be held to the same standards as in in-person classes. 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: Horizontal Public Connector	20%
Project 02: The Vertical Stage Project	40%
Visual Studies Assignments	20%
Class Participation	10%
Portfolio	10%
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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: Additional supplies and materials to be discussed in class.

- 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

File Naming: All digital files must be submitted in the following format:
 Course number_Professor initials_semester/year_Project Name_ Student Name (image number)
For example: 1212_SP21_ETIO_HORIZONTAL CONNECTOR_FIRST INITIAL_LASTNAME_IMG01

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 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 (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	1. Review students' design and creative process

<p>[introduced]</p> <p>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.</p>	<p>through the development of sketches, diagrams and models. All of which show each students thinking leading to the final completed project.</p>
<p>2. (A.5) Ordering Systems [measured]</p> <p>ABILITY to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.</p>	<p>2. Review student understanding of Ordering Systems through the development of sketches, massing models and pin-ups.</p>
<p>Course Specific Learning Outcomes / Assessment Methods</p>	
<p>Learning Outcomes</p>	<p>Assessment Methods</p>
<p>Upon successful completion of this course the student shall be able to:</p>	<p>To evaluate the students' achievement of the learning objectives, the professor will do the following:</p>
<p>1. Implement an <u>iterative</u> design process from problem identification, information gathering, solution generation and evaluation, implementation, presentation, and overall project evaluation. (Knowledge)</p>	<p>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.</p>
<p>2. Incorporate design concepts and vocabulary into design process and presentations. (Knowledge)</p>	<p>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.</p>
<p>3. Produce both analog and digital orthographic, axonometric, perspective, and architectural vignette drawings. (Skill)</p>	<p>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).</p>
<p>4. Utilize analogue and digital media to create drawings and models. (Skill)</p>	<p>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).</p>
<p>5. Recognize the complexity of the physical world (Knowledge)</p>	<p>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).</p>

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	<p>STUDIO</p> <p>Course Introduction</p> <p>ISSUE: PROJECT 01_Horizontal Public Connector</p> <p>P01 Assignment 01: Site documentation through photography/ image capture.</p> <p>Assignment 02: concept collage and line drawing</p> <p>VISUAL STUDIES</p> <p>Assignment 01: Portfolio: generate initial template (this will be an ongoing project throughout the semester)</p>
Week 2	<p>STUDIO P01 Assignment 02: 3D abstract study models using linear, planar and volumetric language (Based on the 2D collage)</p> <p>VISUAL STUDIES</p> <p>Assignment 02: Rhino Modeling</p>
Week 3	<p>STUDIO P01 Assignment 03: series of iterations of the bridge design proposal (translation of abstract design language to architectural proposal)</p> <p>VISUAL STUDIES</p> <p>Assignment 03: Rhino Modeling</p>
Week 4	<p>STUDIO</p> <p>P01 Assignment 04: Final model construction</p> <p>P01 Assignment 05: Orthographic projections of the final proposal</p> <p>VISUAL STUDIES</p> <p>Assignment 04: Rhino Modeling</p>
Week 5	<p>STUDIO</p> <p>P01 Assignment 04 cont.: Final model construction</p> <p>P01 Assignment 05 cont.: Orthographic projections</p>

		P01 Assignment 06: Presentation board
	VISUAL STUDIES	Assignment 05: Composite Drawings
Week 6	STUDIO	DUE: PROJECT 01 – FINAL REVIEW DUE: PROJECT 01 ARCHIVE ISSUE: PROJECT 02 PART A) Vertical Stage
	VISUAL STUDIES	Assignment 06: PORTFOLIO SUBMISSION 1-3
Week 7	STUDIO	P02 Assignment 01: Performance Analysis diagram P02 Assignment 02: Site Analysis (in conjunction with VSII)
	VISUAL STUDIES	Assignment 07a: Site Analysis: Diagramming with Rhino, Illustrator and Photoshop
Week 7	STUDIO	P02 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	P02 Assignment 04: Model: vertical stage design development P02 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	P02 Assignment 04 cont.: Final model: Vertical Stage design P02 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	P02 Assignment 06: Orthographic projections (in conjunction with VSII) P02 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	DUE: PROJECT 02 REVIEW ISSUE: PROJECT 02 PART B) Welcome center P02 Assignment 01: Program analysis P02 Assignment 02: 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 02B in ARCH 1212

Week 15 STUDIO
DAY 1 P02B Assignment 03: Final model: Vertical Stage design
DAY 2 **DUE: PROJECT 02 PART A+B – FINAL REVIEW**
VISUAL STUDIES
DUE: PORTFOLIO 3-3