

Barnard and Columbia Colleges Architecture Department

Architectural Representation: Abstraction

ARCHUN 3101 / Fall 2017 / M/W 9:00 - 11:50am / 404 The Diana Center, Barnard

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GENERAL COURSE DESCRIPTION

This course explores the representational language of architecture - the conventions of the language, and the unconventional implications of working graphically and in "scale". Both two-dimensional methods - orthographic projection (plan, section, elevation) - and three-dimensional elaborations - axonometric drawings and models - will be used to analyze space, and will be investigated for their ability to reveal and conceal relationships in space. Emphasis will be placed on the revelatory value and limitations of this abstract language, and how this language is both a concise method for abstracting architectural space - an analytical tool - and a generative method for speculating on design and sparking conceptual ignition.

PRE-REQUISITES

This is an introductory course for students interested in thinking about architecture and is required for those majoring in Architecture. There are no prerequisites, with the exception of a passion and a will to speculate. It is generally recommended for the sophomore year, and can be taken before or after Architectural Representation: Perception. Abstraction and Perception complement each other, with the former concentrating on conventions of architectural representation, and the latter on methods and techniques of spatial representation.

STUDENT LEARNING OBJECTIVES

- Visually communicate architectural concepts and design intent using discipline-specific techniques including:
 - orthographic projections (plans, elevations, sections),
 - paraline projections (axonometrics, isometrics),
 - physical models using various techniques and materials,
 - multiple media and/or combined representational strategies
- Verbally communicate architectural research methods and spatial concepts
- Demonstrate an understanding of precedent and site analysis
- Demonstrate an understanding of design method as a step-by-step, iterative and incremental process of research, synthesis and feedback.
- Demonstrate an understanding of design thinking as responsive to and shaper of social and cultural context
- Demonstrate the ability to work independently and collaboratively

- Demonstrate an understanding of the historical and theoretical contexts for architectural representational conventions
- Utilize a range of analog and digital techniques in the design process
- Utilize digital fabrication technology in the design process

COURSE REQUIREMENTS

The course is comprised of a series of projects that allow for the sequential development of both technical skills and conceptual thinking. The first focus of the semester will be on the relationship between two and three dimensions through a conceptual problem that moves from analysis and mapping to a spatial model, using both manual and digital techniques. The course will then explore the language of lines and visual vocabulary. We will work on two-dimensional, orthographic representations of the spatial models, and photographic layouts manipulated through Photoshop. The focus will shift to the built work of visionary designers and architects, both at the scale of the body (sensorial environment / furniture) and the scale of the body in space (rooms and buildings). We will analyze this work through a sequence of processes - documentation, analysis and intervention - and end with a visionary experimental work of our own. All stages of this studio process require creative thinking and precise execution with refined craft in the service of ideas.

SKETCHBOOK

Students are required to maintain a sketchbook that will contain all drawings, sketches, notes, etc. This is an important supplement to the studio, and a place to begin to develop a consistent design process. It is also a great storehouse for drawings, when it comes time to make a portfolio of your work.

EVALUATION

Projects are evaluated according to the student's success in fulfilling the objectives of the project with emphasis on creative problem solving, process, development, imagination and the rigor of individual interest and output. Students should target these key issues when producing work. Process work will serve an important role in the development of a successful concept and the final manifestation of an idea. As such, evidence of the development of a work will play a significant role in determining student's overall grade at mid-semester and at the end of the term. Students' analytical and critical abilities will be developed through critiques and written assignments in response to reading material or problems given in class. Attendance, group discussions and improvement throughout the semester are important factors as well. You will be given a midterm review of your work and a final grade. There are no incompletes. Work for each problem must be completed within the specified time frame allotted. Some work will be held for the end of the year exhibition.

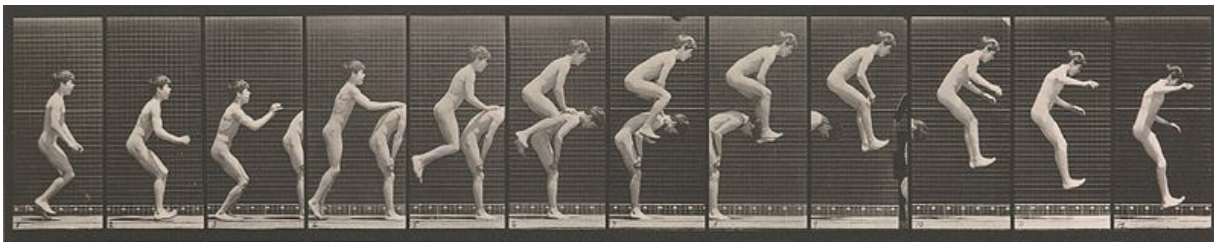
GRADING GUIDELINES

Project A: **10%** // Project B: **10%** // Project C: **10%** // Project D: **10%** // Class Participation: **10%**
Midterm BOOK & PRESENTATION: **10%** // Final BOOK & PRESENTATION: **40%**

METHODOLOGY

This course is taught by the studio method. The core method of instruction is that of 'desk critiques', a one-to-one dialogue at the desk between the student and the faculty (also described as "studio critics") or teaching assistants (TA). At the desk crit, previous design work is reviewed and discussed and the student and faculty formulate the next steps in the process. Desk crits are supplemented by Interim Reviews, or 'Pinups', where all students in the studio present their design ideas for group critique and discussions. The culmination of each project is the Final Review in which students present their work for public evaluation by a group of Studio Critics and Visiting Critics.

Each student will have a desk in 404 Diana. You must work in the studio after hours, employing your peers as critics. You will be expected to equip your desk with the necessary tools and materials for your projects (see below). No excuses for incomplete work should be made for lack of equipment. Each project will use different equipment more specific purchases should be made at that time.



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ATTENDANCE

Attendance is mandatory at all scheduled classes, field trips, and reviews. Studio is held Monday and Wednesday beginning promptly at 9:00 AM. Any student arriving after 9:20 AM will be considered late and anyone that arrives after 10:00 AM will be marked absent. Absences due to acute illness, a personal crisis (e.g. a death in the family), religious observance, or for other reasons of comparable gravity may be excused. In all such cases, students must promptly email their instructor to communicate the reason for their absence and to arrange an opportunity to review any important information they may have missed.

Students who know they will miss a scheduled class due to religious holidays should email their instructor during the first week of classes with a list of dates for their anticipated absences. Unexcused absences, late arrivals, or early departures from class will reduce your course grade. Three non-consecutive absences will result in a grade reduction by one-third (1/3) of one letter grade (e.g., A- to B+). Three consecutive absences or four nonconsecutive absences will be considered grounds for failing the course.

SECURITY

After the first week of classes, students will be granted 24-hour access to the studio and DAL through your school ID. It is crucial that the doors to these spaces remain closed and locked at all times for your personal safety and your belongings' security. Please do not prop open the door and do not leave any

valuables unattended at your desk. The studio and the DAL are open to all students in approved courses; please respect other critics and students that are using the space. Barnard and Columbia Security officers do periodically check the studio but security is a responsibility that we all share; please help us maintain a safe and productive environment. If your personal belongings are stolen (or go missing) please notify your instructor and Barnard Public Safety (for room 404 Diana) or Columbia Public Safety (for 116 Lewisohn).

Here is a sample of some general studio rules:

- You must provide your own lock for the locker.
- The studio must remain locked at all times.
- Use the spray hood in the model building room for spray paint or fixative.
- Use headphones for listening to music.
- You are responsible for keeping your desk and your storage area clean and organized. If you are using an empty desk adjacent to your assigned seat, it is also your responsibility to keep this area free of debris.
- 100% of the work surface of your desk space should be covered with 3-ply chipboard or vinyl board cover. Do not cut, carve, glue or otherwise destroy the plywood desktop.
- Please help us recycle and reuse extra materials by donating anything you don't need to our recycling locations in the studios.

TOOLS AND SUPPLIES / EQUIPMENT

Projects for the course require the use of basic architectural tools and supplies. Tools are implements used to accomplish the fabrication of the studio projects - they should be durable and last the duration of this course and beyond. Supplies are an estimated amount of material necessary for use, along with the architectural tools, on the studio projects - they may need to be replenished during the semester. Your tools and supplies should be carefully stored and maintained. You will be expected to bring all necessary tools and supplies to each class. No excuses for incomplete work should be made for lack of equipment, please make sure that you have access to all necessary materials at your workspace. Consider this the equivalent of book fees for the course.

TOOLS

- *Alternative / (or for first assignment) 1/8" white board and 24" T-square - wood, metal or plastic edge.
- Cutting surface (30" x 40" piece of 1/8" chipboard)
- 24" stainless steel straight edge ruler with cork bottom
- 8" or 10" 30/60 degree triangle / 8" or 10" 45 degree triangle
- Lead Holder(s) / Lead Pointer / Pencil Sharpener
- Olfa knife with 1/2" snap off blades
- X-acto knife with #11 blades
- 6-sided architectural scale
- Scissors
- Digital camera (Phones are fine)

AS NEEDED

- At a later date, students will need to purchase Bristol Board, double sided Mylar and other papers and model making materials

SUPPLIES

- Drafting Leads (2B, HB, F, H, 2H, 4H)
- Sketching Pencils - General or Sanford # 314
- Black permanent markers (Sharpie or Alvin)
- White pencil eraser
- 24" roll of white or buff colored tracing paper
- Sheets of 1/16" chipboard (at least 3 30 x 40 sheets)
- White Sobo glue / Uhu glue stick
- Masking tape / artist tape
- Scotch tape
- Sketchbook

For our next class you will need the following materials, in order to work on the first project:

- pencils - pens - eraser - sketch paper, sketchbook
- trace paper - scissor - tape - straight edge

These supplies can be purchased at various art supply stores, including:

- Janoff's Typewriter (2870 Broadway) (limited supplies, local but expensive)
- Pearl Paint (Google for location)
- New York Central (SW corner of 11th and 3rd Ave.)
- Utrecht (13th Street between 5th and University.)- (also cheap)

See the materials and vendors list provided by department on our website:

<https://architecture.barnard.edu/node/59931>

DISABILITIES STATEMENT

Students with disabilities who will be taking this course and may need disability-related accommodations are encouraged to register in advance with the Barnard College Office of Disability Services (ODS) in 8 Milbank or the Columbia College Disability Services in Suite 108A, Wien Hall.

WELLNESS STATEMENT

It is important for undergraduates to recognize and identify the different pressures, burdens, and stressors you may be facing, whether personal, emotional, physical, financial, mental, or academic. We as a community urge you to make yourself—your own health, sanity, and wellness—your priority throughout this term and your career here. Sleep, exercise, and eating well can all be a part of a healthy regimen to cope with stress. Resources exist to support you in several sectors of your life, and we encourage you to make use of them. Should you have any questions about navigating these resources,

please visit these sites: <http://barnard.edu/primarycare>, <http://barnard.edu/counseling>,
<http://barnard.edu/wellwoman/about>, <http://health.columbia.edu/> .

EXPECTATION OF ACADEMIC HONESTY

The intellectual venture in which we are all engaged requires of faculty and students alike the highest level of personal and academic integrity. As members of an academic community, each one of us bears the responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity.

Scholarship, by its very nature, is an iterative process, with ideas and insights building one upon the other. Collaborative scholarship requires the study of other scholars' work, the free discussion of such work, and the explicit acknowledgement of those ideas in any work that inform our own. This exchange of ideas relies upon a mutual trust that sources, opinions, facts, and insights will be properly noted and carefully credited.

In practical terms, this means that, as students, you must be responsible for the full citations of others' ideas in all of your research papers and projects; you must be scrupulously honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet agent.

Any breach of this intellectual responsibility is a breach of faith with the rest of our academic community. It undermines our shared intellectual culture, and it cannot be tolerated. Students failing to meet these responsibilities should anticipate being asked to leave Columbia.

It is your responsibility to fully understand what constitutes a violation of the honor code. Below are links to the Barnard and Columbia Colleges honor codes along with pages that summarize what the colleges consider to be academic dishonesty.

Barnard: <http://barnard.edu/dos/honorcode> / <https://barnard.edu/honor-code/faq>

Columbia: <https://www.college.columbia.edu/honorcode>
<http://www.college.columbia.edu/academics/academicdishonesty>

If an instructor believes you to have acted dishonestly, you will be referred to the formal process of Dean's Discipline. Overseen by Student Conduct and Community Standards, the Dean's Discipline process is an educational one that determines your responsibility using the principle of "preponderance of evidence." If found responsible, and depending on the nature of the dishonesty and whether or not you have a disciplinary record, you could face one of several sanctions.

Parents and guardians may be informed, faculty committees awarding honors will be notified, and the case may remain on your permanent record meaning that employers and graduate schools may also be informed. These sanctions are in addition to whatever determination the instructor makes on how your final grade in the class will be affected.

COURSE SCHEDULE

week	date	class
1	W: 06 Sept.	<i>ORIENTATION // Assigned: Project A: Tectonics I</i>
2	M: 11 Sept. W: 13 Sept.	Book Narrative I // Diagrams I // Workshop I (<i>In Design I // Illustrator I // Rhino I</i>) In class work
3	M: 18 Sept. W: 20 Sept.	In class work // Workshop II (<i>In Design II // Illustrator II // Laser Cutting I // Rhino II</i>) In class work
4	M: 25 Sept. W: 27 Sept.	In class work <i>PINUP Project Tectonics I // Assigned: Project B: Tectonics II</i>
5	M: 02 Oct. W: 04 Oct.	In class work // Workshop III (<i>In Design III / Illustrator III / Laser Cutting II / Rhino IV</i>) In class work
6	M: 09 Oct. W: 11 Oct.	In class work // Workshop IV (<i>Photoshop I // Laser Cutting III // Rhino V</i>) Book Narrative II // Diagrams II
7	M: 16 Oct. W: 18 Oct.	In class work In class work
8	M: 23 Oct. W: 25 Oct.	<i>PINUP Project Tectonics II // Assigned: Project C: Stereotomic</i> In class work
9	M: 30 Oct. W: 01 Nov.	In class work // Workshop V (<i>Photoshop II // Rhino VI</i>) In class work
10	M: 06 Nov. W: 08 Nov.	Academic Holiday In class work
11	M: 13 Nov. W: 15 Nov.	<i>MIDTERM Projects A, B & C (One Book + Physical Models)</i> Assigned: Project D: NNYC
12	M: 20 Nov. W: 22 Nov.	In class work // Workshop VI (<i>Photoshop III // Rhino VII</i>) Academic Holiday
13	M: 27 Nov. W: 29 Nov.	Book Narrative III // Workshop VII (<i>Photoshop IV // Rhino VIII</i>) In class work
14	M: 04 Dec. W: 06 Dec.	In class work In class work
15	M: 11 Dec.	<i>FINAL PRESENTATION (One Book + Physical Models)</i>

The schedule is subject to adjustment during the course of the semester based on the progress of the entire studio group from one project to the next. Any schedule conflicts due to religious or health reasons, etc. should be brought to the attention of the studio instructor.

TEXTS & REFERENCES

- BK 01: Experiencing Architecture, Steen Eiler Rasmussen, The MIT Press, 1962
- BK 02: Species of Spaces and Other Places, Georges Perec, Penguin Books, 1997
- BK 03: Pamphlet Architecture 1- 10, Princeton Architectural Press, publishers, 1998
- BK 04: Translations from Drawings to Buildings and Other Essays, Robin Evans, Architectural Association, 1997
- BK 05: How to Lie with Maps, Mark Monmonier, Univ Chicago Press, 1991
- BK 06: Delirious New York, Rem Koolhaas, The Monacelli Press, 1978
- BK 07: Graphics for Architecture, Kevin Forseth, Wiley and Sons, 1980
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- CIN 01: *Metropolis*, Fritz Lang, Germany, 1926
- CIN 02: *Man with a Movie Camera*, Dziga Vertov, Soviet Union, 1929
- CIN 03: *Five Obstructions*, Lars von Trier and Jorgen Leth, Denmark, 2003
- CIN 04: *Playtime*, Jacques Tati, France, 1973
- CIN 05: *La Jetee*, Chris Marker, France, 1962
- CIN 06: *The Social Life of Small Urban Spaces*, William Whyte, US, 1980
- CIN 07: *Wings of Desire*, Wim Wenders, Germany, 1996
- CIN 08: *Powers of 10 - The Films of Charles and Ray Eames*, 1968
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- WEB 01: <http://archidose.blogspot.com/>
- WEB 02: <http://bldgblog.blogspot.com/>
- WEB 03: <http://www.archinect.com/>
- WEB 04: <http://www.archpaper.com/>
- WEB 05: <http://lifewithoutbuildings.net/>
- WEB 06: <http://www.deathbyarchitecture.com>
- WEB 07: <http://www.plataformaarquitectura.cl/>
- WEB 08: <http://nyc.thepublicschool.org/>
- WEB 09: <http://archigram.westminster.ac.uk/>