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—three-dimensional drawings (axonometric) 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.
**Methodology:** The course is comprised of a series of projects that allow for the sequential development of technical skills, conceptual thinking and design process. The first focus of the semester will be on the relationship between two and three dimensions through a conceptual problem that moves from writing and conceptual modeling, analysis and mapping to a spatial model, using both manual and digital techniques. We will work on two-dimensional, orthographic representations of the spatial models, and photographic layouts manipulated through Photoshop. The course will then explore the language of lines, three-dimensional units (tessellations) and aggregates, and how they move and create space at multiple scales. Next we will consider architecture’s relationship to social issues in New York City, to what it means to be human, and to a real NYC site. We will explore the relationship between two individuals in space, and collectives of humans, making efforts to create experimental built environments that relate human struggles and ultimately to compassion. 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.

**Format:** The course is based on the studio method, in which students are expected to work independently to develop their thinking/making, with regular critiques from a faculty member and teaching assistant. Class time will be divided into individual dialogues or critiques (*desk crits*) between student and critic, open discussions, student presentations, and/or informal lectures. Presentations of work will be public—either informal (*pin-up*) or formal (*review*). In both, students are required to intelligently (visually and verbally) present their work in order to instigate a discussion/critique about ideas in their work.

**Prerequisites:** This is an introductory course for students interested in thinking about space and architecture and is required for those majoring in architecture. There are no prerequisites, with the exception of a passion and a will to speculate. That is no small thing. This course is a work out for the brain. It turns all of your preconceptions about design on their head. You need to be ready to think and work hard. 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 language, and principles of development that arise from systems and methods that do not necessarily require sensation as a starting point. Perception explores other methods and techniques of spatial representation that require sensation and movement through a space, including photography, time-based media, and sensorial speculations.
Students in Architectural Representation: Abstraction and Perception should be able, at an introductory level, to:

1. 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
2. Verbally communicate architectural research methods and spatial concepts
3. Demonstrate an understanding of precedent and site analysis
4. Demonstrate an understanding of design method as a step-by-step, iterative and incremental process of research, synthesis and feedback
5. Demonstrate an understanding of design thinking as responsive to and shaper of social and cultural context
6. Demonstrate the ability to work independently and collaboratively
7. Demonstrate an understanding of the historical and theoretical contexts for architectural representational conventions
8. Utilize a range of analog and digital techniques in the design process

Abstraction:
9. Utilize digital fabrication technology in the design process
Perception:
9. Utilize three-dimensional digital modeling software in the design process

Requirements:

Attendance: Attendance is mandatory at all scheduled classes. As per department policy, three consecutive absences or four non-consecutive absences will mean that you have dropped (or failed) the course. The only excused absences are those for reasons of health or crisis, and must be justified with written documentation (i.e. a note from a physical or a Dean). You must email, or leave a telephone message for the critic or TA if you for some reason you cannot attend (212 854-8430). Unexcused absences will reduce your course grade, as will late arrivals or early departures from class. Two late arrivals to class or missing a group review will lower your grade by one-half point. You may not leave class early (i.e. after a desk crit), and you should always plan to use the hours you spend in class productively.

Our teaching assistant will schedule visits to the studio, usually some time during the weekend, for extras critiques, workshops etc. Attendance at these sessions is mandatory, however some may be missed for weekends away. Our TA will schedule individual appointments as necessary or recommended by faculty.
**Sketchbook/journal/notebook:** 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.

**Grading:** 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. Assignments and verbal brainstorming will identify the key concepts and criteria for projects. Students should target these key issues when producing work. Progress in craft, creative exploration and personal growth should be visible through the duration of the exercise.

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. Development in these areas will also be factored into each student's evaluation and grade at the end of the semester. 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. Individual reviews with your critic (written and in person) and both daily and at the midterm, will help you to guide your work and evaluate your strengths and weaknesses. 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.

**Room Rules and Security:**
1. Provide your own lock for the locker.
2. Studio door should be locked at all time. This is for your and safety and the security of your belongings (things have been stolen before, including models). Your ID will allow you in the room once the TA and the dept. have passed the info to security.
3. No spray painting or fixative is permitted in the studio. It is extremely toxic.
4. Students needing any accommodation in the studio and are encouraged to make an appointment to see me as soon as possible.
5. If you wish to work in the studio during other scheduled classes, please do so quietly.
6. Please keep the room clean. Recycle, throw out waste, and be courteous about noise and music. Work kept under your desk should be placed in a box and labeled, "Do not throw out." Blades should be wrapped up before being discarded. Negotiate music choices, and be sensitive to others.
**Supplies:** Students will be assigned an individual desk in the 4th Floor Diana Center studio. You must make an effort to work in the studio after hours. Your peers will become your best critics. You will be expected to equip your desk with the necessary tools and materials for your projects. 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. Consider this the equivalent of the book fees for the course.

**Basic Tools:** (this is the basic list which should be purchased by the weekend and on desks by next Wednesday. Your TA will be available to help over the weekend)

- parallel rule (36" or 42" - armor metal edge (for cutting) is highly recommended).
  If you wish to purchase a desk that comes with a parallel rule, please look for a good one. Some of them simply do not work and cause a great deal of frustration.
- 8" or 10" adjustable triangle and larger 30/60 (for long lines), plus miscellaneous other triangles may be helpful
- X-acto with #11 blades (suggest large pack), or Olfa knife with blades
- architect's scale (6 sided) plastic (NOT engineer's scale, which in Metric and not inches)
- 24" metal ruler with cork backing or t-square cutting edge
- swing arm light with base capable of being screwed to desk is highly recommended but not required ($10-15.)
- scissors (Fiskars (orange handles) work well)

**Basic Materials:**

- plastic cutting board / matt (keeps blades from getting dull)
- 1/16" chip board 30"x 40" for model making
- vinyl board cover (must be larger than parallel rule) or 1/16" white board 30"x40" for drawing board surface) (this will need cleaning from time to time)
- Elmer's glue
- masking tape, Drafting Dots preferred
- Scotch tape / clear tape
- lead pointer (special sharpener for leads)
- lead holder
- leads (H, 2H, B) – come in a box
- pencils (H - 6B)
- desk brush (natural hairs are better than plastic)
- white pencil eraser - Staedtler Mars (used w/ pencil and ink. Yellow ink erasers mar drawing surfaces).
- erasing shield
- 18" role white tracing paper, larger role may be required, one per assigned group
- sketchbook (should be at least 8x10 or larger, good paper), preferably spiral bind

as needed:
- technical drafting pens (.13, .18, .25, .35) or set which includes thin pen
  Rotring or Koh-I-nor are recommended
- Rapid-draw ink (in cartridges for Rotring, in bottle for Koh-I-nor)
- compass (look for attachments - ink for example)
- French curves (come in a set)

- external hard drive
- printing good printer paper: studio printer may not be good enough quality
- at a later date, students will need to purchase Bristol Board, double sided Mylar
  and other papers and model making materials
- misc. modeling materials, including roll of plaster cast-forming material

These supplies can be purchased at various art supply stores, including:
Janoff's Typewriter (2870 Broadway) (limited supplies, local but expensive)
Charrette store online
Pearl Paint (Google for location)
Blick 13th Street between 5th and University. (also cheap)

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

- pencils
- black Sharpee
- eraser
- sketch paper, sketchbook
- trace paper
- scissor
- tape
- straight edge
### Course Schedule for Fall Semester

**ARCH V3101.02  
**Madeline Schwartzman  
**Fall 2016**

<table>
<thead>
<tr>
<th>week</th>
<th>date</th>
<th>class</th>
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<tbody>
<tr>
<td>1</td>
<td>Wed 7 Sept.</td>
<td>Introduction – <strong>project 1.1</strong> assigned: Manhattan Transformation journey</td>
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<tr>
<td></td>
<td>Mon. 12 Sept.</td>
<td>research, analysis, text studies due</td>
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|      | Wed. 14 Sept. | **project 1.1** due  
**1.2 assigned: model series**  
begin experimental study models |
| 3    | Mon. 19 Sept. | **project 1.2 experimental models due** continue class  
modeling, assign **project 1.2 refined models** |
|      | Wed. 21 Sept. | in class modeling                                                      |
| 4    | Mon. 26 Sept. | modeling, desk critiques                                               |
|      | Wed. 28 Sept | **project 1.2 refined models due** assign **project 1.3 orthographic drawing** |
| 5    | Mon. 03 Oct. | workshop: orthographic drawing, movement in drawing, Photoshop workshop and techniques  
orthographic drawing, desk critiques, continued Photoshop |
| 6    | Mon. 10 Oct. | **project 1.3 orthographic drawing due**  
**project 2.1: tessellation.** in class work  
in class work, desk critiques: laser cutter tutorial |
|      | Wed. 12 Oct. | continued tessellation exploration                                     |
| 7    | Mon. 17 Oct. | **project 2.1: expanded tessellation due**  
In class scale exercise  
Begin **project 2.2: tessellation scale** |
|      | Wed. 19 Oct. (mid) | **project 2.1:** expanded tessellation due  
In class scale exercise  
Begin **project 2.2: tessellation scale** |
| 8    | Mon. 24 Oct. | tessellation at three scales                                           |
|      | Wed. 26 Oct. | tessellation at three scales                                           |
| 9    | Mon. 31 Oct. | **project 2.2 due**  
**assign project 3.1: social structure / mega structure**  
exploration of social themes and architectural structure |

*Note: Subject to change - see assignments for final dates.*
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<th></th>
<th>Mon.</th>
<th>Wed.</th>
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<tbody>
<tr>
<td>10</td>
<td>07 Nov.</td>
<td>09 Nov.</td>
<td>Academic Holiday</td>
<td><strong>3.1 due</strong> modeling of pods for two</td>
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<td></td>
<td><strong>assign 3.2</strong>: pod replication via drawing and collage</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td><strong>3.1 due</strong></td>
<td><strong>assign 3.2</strong>: pod replication via drawing and collage</td>
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<td>11</td>
<td>14 Nov.</td>
<td>16 Nov.</td>
<td>continued drawing and modeling</td>
<td><strong>3.2 due: assign 3.3</strong>: megastructure construction</td>
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<tr>
<td>12</td>
<td>21 Nov.</td>
<td>23 Nov.</td>
<td>megastructure modeling and</td>
<td><strong>assign 3.4 axonometric drawing</strong>: drawing workshop</td>
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<td></td>
<td>in class modeling and drawing</td>
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<tr>
<td>13</td>
<td>28 Nov.</td>
<td>30 Nov.</td>
<td>axonometric drawing</td>
<td><strong>assign 3.5 exploration of site and megastructure location</strong></td>
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<td></td>
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<td></td>
<td>continued drawing and modeling</td>
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<tr>
<td>14</td>
<td>05 Dec.</td>
<td>07 Dec.</td>
<td>final Photoshop presentation</td>
<td>final Photoshop presentation</td>
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<tr>
<td>15</td>
<td>12 Dec.</td>
<td>14 Dec.</td>
<td>final critique</td>
<td>alternate final critique day (first reading day)</td>
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