INTRODUCTION. This course explores the conventions of the representational language of architecture. Two dimensional orthographic projection and three dimensional elaborations will be used to analyze space, and will be investigated for their ability to reveal and conceal physical and social relationships. Particular emphasis will be placed on the revelatory value of this abstract language; a language that is both a concise method for abstracting architectural space, and a generative method for speculating on design.

The course is comprised of a series of projects that allow for the sequential development of both technical skills and conceptual thinking. First the studio will focus on the translation between two and three dimensional spatial systems through an abstract problem moving from full-scale environment toward two dimensional representation of social relationships following the conventions of plan and section drawing. Then the focus will shift to the city as a field of inquiry for the observation and transformation of abstract urban systems.

PROJECTS for this course will require creative thinking and precise execution with refined craft in the service of ideas. Through engagement and participation in the studio process students will be expected to:

VISUALLY communicate architectural concepts and design intent using discipline-specific techniques including:
- orthographic projections (plans, elevations, sections)
- paraline drawings (axonometric and isometric)
- physical models with various methods and materials
- multiple media and combined representational strategies

VERBALLY communicate architectural research methods and spatial concepts.

DEMONSTRATE an understanding of precedent and site analysis.

UNDERSTAND that the design method is a step-by-step, iterative and incremental process of research, synthesis and feedback.

ENGAGE in design thinking as responsive to and shaper of social and cultural context.

DEVELOP the ability to work independently and collaboratively.

DEMONSTRATE an understanding of historical and theoretical contexts for representational conventions

WORK with a range of analog and digital techniques in the design process.

UTILIZE digital fabrication technology in the design process.


B, Detail, Video game axonometric projection
METHOD. This course is based on the studio method in which students respond to design problems over an extended period of time guided by feedback from the instructor and fellow students. In some ways the design studio is similar to a science lab where project based learning occurs in an open environment. Each exercise is open-ended; students are encouraged to explore multiple solutions to a design problem before developing the final proposal for each project. Collaboration is encouraged as the information shared between students reveals alternative approaches to the design problems.

Class time will be divided into individual critiques with the instructor, group discussions and presentations.

Presentation of work will be either informal (pin-up) or formal (review). In both cases students are expected to present their work intelligently (visually and verbally) in order to instigate a discussion about the ideas in their work.

PREREQUISITES: This is an introductory course for students interested in thinking about architecture. It is intended for non-architecture majors that are interested in the process of design and design education. There are no prerequisites, with the exception of a passion and a will to speculate.

SKETCHBOOK: Students must maintain a sketchbook within which to draw, take notes, collect images or generally explore ideas through drawing. This is a critical tool in the development of any project or process, and as such should be with the student at all times in an out of studio.

ATTENDANCE: Attendance is mandatory at the scheduled class time. Three consecutive absences or four non-consecutive absences will mean that you have dropped the course. The only excused absences are those for reasons of health or crises, and must be justified with written documentation (i.e. a note from a physician or the Dean). Three late arrivals (20 min. after beginning of class) or missing a group review will lower your grade by one-half-point. You may not leave class early and you should always plan to use the time you spend in class productively.

GRADING: is based on the conceptual strength of your work, the development of your projects, and technical execution. Creative risks are encouraged and will be rewarded. Participation in group discussions and improvement throughout the semester will all be factors affecting your grade.
EQUIPMENT. Projects for the course require the use of basis 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
Portable drafting board with parallel rule – 24” x 36”
(or larger)
*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

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
Sketch book

SUPPLY LOCATIONS:
New York Central Art Supply - 62 3rd Avenue (the best source for materials and information)
Pearl Paint – 308 Canal Street, just west of Broadway
Janoff’s – 2870 Broadway (the closest, not the best)
STUDIO. Students will explore various analytical, conceptual and design approaches and examine existing and potential spatial and programmatic conditions. Students will use and experiment with various modes of representation (collage, sketching, orthographic drawing, physical models). Students are encouraged to address architecture through the expertise of their own disciplines. Studio work is integrated with field trips on campus and in the city.

PROJECT 01. draw as series of analytical diagrams that represent the observationed operation of an autopoietic social system.

PROJECT 02: invent a strategy and build a device that verifies the autopoietic systems described by your diagrams from Project 01. The invention should be a manipulation of our environment creating a new way to read the “public space” of the city.

PROJECT 03: using Adobe Illustrator create a pair of digital files using that represent information (and experiences) that you have collected at in the field. One file will study interaction at the urban scale and the other file will explore human scale encounter.

PROJECT 04: develop a design for a Time Bank at a site to be announced. The Time Bank is a social center designed for cooperative use. Social centers can be considered a kind of third space in the built environment – a space that is neither home nor work / domestic nor commercial. Social centers ‘touch the ground lightly’ and are often characterized by their quasi-legal and sometimes illegal existence.
## SCHEDULE

**Barnard / Columbia Architecture Program**  
**ARCH V3101.001**  
**M/W 09:00 - 11:50**  
**Fall 2014**  
**Instructor: R. Todd Rouhe**

<table>
<thead>
<tr>
<th>DATE</th>
<th>PROJECT</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep 03</td>
<td>Introduction:</td>
<td>Project_01.1 assigned</td>
</tr>
<tr>
<td>Sep 08</td>
<td>Project_01.1:</td>
<td>pinup</td>
</tr>
<tr>
<td>Sep 10</td>
<td>Project_01.2:</td>
<td>desk crits</td>
</tr>
<tr>
<td>Sep 15</td>
<td>Project_01.2:</td>
<td>desk crits</td>
</tr>
<tr>
<td>Sep 17</td>
<td>Project_01.2:</td>
<td>pinup</td>
</tr>
<tr>
<td>Sep 22</td>
<td>Introduction:</td>
<td>Project_02.1: desk crits</td>
</tr>
<tr>
<td>Sep 24</td>
<td>Project_02.1</td>
<td>pinup</td>
</tr>
<tr>
<td>Sep 29</td>
<td>Introduce:</td>
<td>Project_02.2: desk crits</td>
</tr>
<tr>
<td>Oct 01</td>
<td>Project_02.2:</td>
<td>discussion and desk crits</td>
</tr>
<tr>
<td>Oct 06</td>
<td>Project_02.2:</td>
<td>desk crits</td>
</tr>
<tr>
<td>Oct 08</td>
<td>Project_02.2:</td>
<td>desk crits</td>
</tr>
<tr>
<td>Oct 13</td>
<td>Presentation:</td>
<td>Project_02.2: pinup</td>
</tr>
<tr>
<td>Oct 15</td>
<td>Introduce:</td>
<td>Project_03 assigned</td>
</tr>
<tr>
<td>Oct 20</td>
<td>Project_03</td>
<td>desk crits</td>
</tr>
<tr>
<td>Oct 22</td>
<td>Project_03</td>
<td>field work</td>
</tr>
<tr>
<td>Oct 27</td>
<td>Project_03</td>
<td>desk crits</td>
</tr>
<tr>
<td>Oct 29</td>
<td>Project_03</td>
<td>desk crits</td>
</tr>
<tr>
<td>Nov 03</td>
<td>Election Day</td>
<td>no class</td>
</tr>
<tr>
<td>Nov 05</td>
<td>Presentation:</td>
<td>Project_03 pinup</td>
</tr>
<tr>
<td>Nov 10</td>
<td>Introduce:</td>
<td>Project_04 assigned</td>
</tr>
<tr>
<td>Nov 12</td>
<td>Project_04</td>
<td>discussion and desk crits</td>
</tr>
<tr>
<td>Nov 17</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
<tr>
<td>Nov 19</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
<tr>
<td>Nov 24</td>
<td>Project_04</td>
<td>lasercut deadline</td>
</tr>
<tr>
<td>Nov 26</td>
<td>Project_04</td>
<td>pinup</td>
</tr>
<tr>
<td>Dec 01</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
<tr>
<td>Dec 03</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
<tr>
<td>Dec 08</td>
<td>Presentation:</td>
<td>Project_04 final review</td>
</tr>
</tbody>
</table>

_F. Still, Playtime, Jacques Tati, 1968_  
_G. Graph Paper Architecture, Saul Steinberg, 1954_
TEXTS & REFERENCES

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 07: Graphics for Architecture, Kevin Forsyth, Wiley and Sons, 1980

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 07: Wings of Desire, Wim Wenders, Germany, 1996
CIN 08: Powers of 10 - The Films of Charles and Ray Eames, 1968

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/