ARCHITECTURAL REPRESENTATION: ABSTRACTION

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 observation and analysis of the social structure of everyday life. Then the focus will shift to the city as a field of inquiry where students will experiment with the 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.

BION + C A
Barnard and Columbia Architecture
ARCH 3101_001/04466
M/W 9:00 - 11:50
404 Diana Center
Instructor: R. Todd Rouhe
Office Hours: W 12:30 - 13:30 by appointment
rouhe@barnard.edu

B+C | A
Barnard and Columbia Architecture

A, BIIZ - info center, plan oblique, common room, 2016
B. Diagram, Versailles is Overgrown, common room, 2012
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. 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 making 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 other methods and techniques of spatial representation.

GRADING: is based on the conceptual strength of your work, the development of your project, and technical execution. Creative risks are encouraged and will be rewarded. Attendance, participation in group discussions and improvement throughout the semester will all be factors affecting your grade.

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 WITH DISABILITIES If you are a student with a documented disability and require academic accommodations, you must visit the Office of Disability Services (ODS) for assistance. Students requesting eligible accommodations in their courses will need to first meet with an ODS staff member for an intake meeting. Once registered, students are required to visit ODS each semester to set up new accommodations and learn how to notify faculty. Accommodations are not retroactive, so it is best to register with ODS early each semester to access your accommodations. If you are registered with ODS, please see me to schedule a meeting outside of class in which you can bring me your faculty notification letter and we can discuss your accommodations for this course.

C. Time Bank Pawn Shop
Student Model, 2015

D. Detail, Public School for Architecture material classroom, 2009

E. Detail, Collaborative Map, Student Work, 2015

F. Louis Kahn, drawing during a lecture on architecture
STUDIO ACCESS. 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)

ROOM 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.

WELLNESS. 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.

WELLNESS RESOURCES
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/
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. Required tools and supplies are listed below. The estimated cost for these Tools and Supplies listed below is $175 - $200. Supplemental tools and supplies may be used if so desired.

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
Erasing Shield
Digital camera / cell phone 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
Artist tape
Scotch tape
Sketch book

SUPPLY LOCATIONS:
Janoff’s Office and Art Supplies, Located on Broadway between 111th and 112th Streets

Blick Art Materials has several locations in downtown Manhattan, offering a large choice of art supplies, tools, and materials.

Canal Plastics Center, offers plastics and fabrication services and sells acrylics in hard to find colors and sizes.
PROJECTS. Students will explore various analytical, conceptual and design approaches to 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 current interests and developing representational skills. Studio work will be integrated with field trips on campus and in the city.

PROJECT 01: **Examine - analyze a social system**  
15% of Total Grade

PROJECT 02: **Create - prototype for encounter**  
25% of Total Grade

PROJECT 03: **Research - fabrication typologies**  
25% of Total Grade

PROJECT 04: **Respond - site specific intervention**  
35% of Total Grade

F. Detail, Manhattan Transcripts, Bernard Tschumi, 1976 - 1981
# SCHEDULE

**ARCH 3101_001/04466**  
M/W 9:00 - 11:50  
rrouhe@barnard.edu

<table>
<thead>
<tr>
<th>DATE</th>
<th>PROJECT</th>
<th>ACTION</th>
<th>ACTION</th>
<th>PROJECT</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 17</td>
<td>Introduction:</td>
<td></td>
<td>Apr 23</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
<tr>
<td>Jan 22</td>
<td>Project_01.1</td>
<td>pinup</td>
<td>Apr 25</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
<tr>
<td>Jan 24</td>
<td>Project_01.2</td>
<td>desk crits</td>
<td>Apr 30</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
<tr>
<td>Jan 29</td>
<td>Project_01.2</td>
<td>desk crits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan 31</td>
<td>Project_01.2 Due</td>
<td>pinup</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb 05</td>
<td>Introduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb 07</td>
<td>Project_02.1</td>
<td>pinup</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb 13</td>
<td>Project_02.1</td>
<td>desk crits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb 14</td>
<td>Project_02.2</td>
<td>discussion and desk crits</td>
<td>Apr 30</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
<tr>
<td>Feb 19</td>
<td>Project_02.2</td>
<td>desk crits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb 21</td>
<td>Project_02.2</td>
<td>desk crits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb 26</td>
<td>Presentation:</td>
<td></td>
<td>Apr 30</td>
<td>Project_02.2</td>
<td>pinup</td>
</tr>
<tr>
<td>Feb 28</td>
<td>Introduce:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 05</td>
<td>Project_03</td>
<td>desk crits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 07</td>
<td>Project_03</td>
<td>desk crits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 12</td>
<td>Spring Break</td>
<td>no class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 14</td>
<td>Spring Break</td>
<td>no class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 19</td>
<td>Project_03</td>
<td>desk crits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 21</td>
<td>Presentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 26</td>
<td>Introduce:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 28</td>
<td>Project_04</td>
<td>discussion and desk crits</td>
<td>Apr 23</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
<tr>
<td>Apr 02</td>
<td>Project_04</td>
<td>desk crits</td>
<td>Apr 04</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
<tr>
<td>Apr 04</td>
<td>Project_04</td>
<td>desk crits</td>
<td>Apr 09</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
<tr>
<td>Apr 11</td>
<td>Project_04</td>
<td>lasercut deadline</td>
<td>Apr 23</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
<tr>
<td>Apr 16</td>
<td>Project_04</td>
<td>desk crits</td>
<td>Apr 18</td>
<td>Project_04</td>
<td>desk crits</td>
</tr>
</tbody>
</table>

*F. String Installation, 2012*

*G. Still, Playtime, Jacques Tati, 1968*

*H. Life Without Objects, Superstudio 1971*

*I. Graph Paper Architecture, Saul Steinberg, 1954*
BK 01: Graphics for Architecture, Kevin Forseth, Wiley and Sons, 1980
BK 04: Translations from Drawings to Buildings and Other Essays, Robin Evans, Architectural Association, 1997
BK 07: Structures for Reflection, Allen Wexler, Neuer Folkwang-Verlag Hagen, 1993

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 Way Things Go, Switzerland, 1987
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://www.spatialagency.net
WEB 02: https://archpaper.com
WEB 03: http://www.bldgblog.com
WEB 04: http://biber.co/100-ideas/
WEB 05: http://www.sectioncut.com
WEB 06: https://archinect.com
WEB 07: http://stuckinstudio.com
WEB 08: https://architizer.com/blog/
WEB 09: http://archigram.westminster.ac.uk/