Representation II

Architectural Representation II is the second semester in a year-long sequence that introduces students to tactical representation techniques. The first semester covered fundamental digital drawing and modeling technique; the second semester will cover the development of contemporary representation, complex digital form and the reciprocal relationships between representation and design development.

The goal of the course is to develop the student’s appreciation for the design potential of representation within the discipline of architecture. The term representation encompasses both the creation and the communication of an idea and can be pragmatic, conceptual and aesthetic. The course will review modes of drawing and modeling, including the importance of both precision and abstraction. Tasks provide opportunities to discover novel concepts through transformation and strategic work flows. Finally the course will foster the development of architectural character. You will be expected to develop expertise and execute your intentions with both precision and clarity. The exercises will range from straightforward drafting tasks to tasks that will require aggressive experimentation. This course will introduce you to methods and concepts of drawing, digital modeling, digital fabrication and rendering. An increased understanding and exposure to geometry and the rules that control it are necessary to fully harness the potential of the seemingly unlimited digital tools at our disposal.

Representation is not only a tool for visualization but a generative tool for the development of form and its transformation. This course will not only impart essential skills, but more importantly cultivate your own curiosity for acquiring new skills. The development of critical visual literacy is paramount. Not all drawings are intended to be definitive; indeed many are generated to be evocative. According to the late Lebbeus Woods, “Their purpose is to open the imagination to new spatial possibilities”.

The course will be organized into 5 main topics, each comprised of an introductory lecture, representation Lab A/B and a culminating assignment that will be collectively reviewed. The array of tasks will develop your skills to create, manipulate and extract information from digitally generated models.

5 Main Topics:
- Drawing
- Precision
- Transformation
- Workflow
- Character

References:
Carpo, Mario. Alphabet and the Algorithm, MIT Press, 2011
Ching, Francis. Architectural Graphics, Wiley
Ramsey, Sleeper. Architectural Graphic Standards Series, Wiley
Exercise 01: Drawing
(2d drafting)

The first exercise is primarily a drafting task; it requires a careful understanding of an existing precedent and flawless execution of a copy. We will review the development and relevance of orthographic drawings. The task is meant to develop and refine your drawing skills. A concise designed plan defines spatial boundaries and extends beyond a diagram for functions and circulation or as extraction from a 3D model. Elements such as transitions, edges, slopes, stairs, and terraces are all conditions that require drawing expertise. The drawing should be a measurable drawing executed at an architectural scale. Use only lines and make sure they can be dimensioned and reproduced at a variety of scales. (Vectors can scale up and down without compromising resolution) The goal is to understand the modes of representation utilized by architects.

Task 01

- Research your assigned drawing. Find detailed documentation. Write a descriptive paragraph recording your findings.
- Analyze the drawing, technique and background of the drawing.
- Evaluate the tactics that are employed to communicate depth, transitions and structure, both visual and actual.
- Redraw the drawing with exacting precision.

Output

- (1) Drawing to Scale (largest architectural scale possible on a 36” x 48” Plot) If a plan, north should be up.
- (optional) Additional Drawing

Tools: Raster Import, Layer Management, Drafting/Measured Techniques, Line Weight/Type, Drawing Convention (circulation)
Autocad/Rhino → Illustrator

Reference Reading:
Somol, R.E., Whiting, Sarah, “Okay, Here’s The Plan” in Log 5. spring/summer, 2005

Reference Project:

- Hotel de Montmorency, Ledoux, 1769
- Blenheim Palace, England, Sir John Vanbruch, 1860
- Larkin Administrative Building, Buffalo, 1906
- Robie House, Chicago, Frank Lloyd Wright, 1908-10
- Stockholm Library, Gunnar Asplund, 1924
- Johnson Wax, Racine Wisconsin, Frank Lloyd Wright, 1936
- Baker House, MIT, Alvar Aalto, 1947-48
- Guggenheim, New York, Frank Lloyd Wright, 1956-59
- Philharmonic, Berlin, Hans Scharoun, 1957-63
- Carpenter Center, Boston, Le Corbusier, 1960
- La Tourette, Lyon, Le Corbusier, 1960
- TWA Flight Center, New York, Eero Saarinen, 1962
- Berlin State Library, Berlin, Hans Scharoun, 1964-78
- New National Gallery, Berlin, Mies van der Rohe, 1968
- Exeter Library, New Hampshire, Louis Kahn, 1971
- Centre Pompidou, Paris, Richard Rogers/Renzo Piano, 1971-77
- State of Illinois Building, Chicago, Murphy Jahn, 1983
- Neue Staatsgalerie, Stuttgart, James Stirling, 1979-84
- Igualada Cemeneny, Barcelona, Enric Miralles/ Carme Pinos, 1986
- Sixth Street House, Santa Monica Thom Mayne, Andrew Zago, 1987

- Victoria and Albert Museum Extension (unbuilt) Daniel Libeskind, 1997
- Olympic Archery Range, Barcelona, Enric Miralles/ Carme Pinos, 1990
- Prototype No. 5, Los Angeles, Neil M. Denari, 1992
- Vitra Fire House, Weil am Rhein, Zaha Hadid 1994
- Cardiff Bay (Competition), Greg Lynn, 1994
- Aronoff Center, Cincinnati, Peter Eisenman, 1996
- Guggenheim Museum, Bilboa, Frank Gehry, 1996
- Brill Residence, Los Angeles, Wes Jones, 1998
- Disney Concert Hall, Los Angeles, Frank Gehry, 2003
- Prada Aoyama Epicenter, Herzog de Meuron, 2003
- McCormick Tribune Center, Chicago, OMA, 2004
- Dutch Embassy, Berlin, OMA, 2004
- Seattle Public Library, Seattle, OMA, 2005
- Walker Art Center, Minneapolis, Herzog de Meuron, 2005
- Mercedes Museum, Stuttgart, UN Studio, 2006
- BMW World, Munich, Coop Himmelblau, 2006
- Maxxi Museum, Rome, Zaha Hadid 2008
- Busan Cinema Center, Busan, Coop Himmelblau, 2011
- Biomuseo, Panama, Frank Gehry, 2012
### Schedule

#### 01 Paradigm Shift:
- **January week01**
  - 01.09.14 th Lecture: **Intro: Paradigm Shift** (Exercise 01 Issued)
  - Lab: --
- **week02**
  - 01.14.14 tu Lecture: **Representation/ Generation**
  - Lab: --
  - 01.16.14 th Lab: --
- **week03**
  - 01.21.14 tu Lecture: Work Day
  - Lab: --
  - 01.23.14 th Review: Exercise 01, Exercise 02 issued

#### 02 Precision:
- **February week04**
  - 01.28.14 tu Lecture: **Exact/ Inexact/ Anexact**
  - Lab: --
  - 02.06.14 th Lab: --
- **week05**
  - 02.04.14 tu Lecture: **Digital Modeling: Nurbs/ Polys**
  - Lab: --
  - 02.11.14 tu Review: Exercise 02, Exercise 03 issued
  - Lab: --
  - 02.13.14 th Lab: --

#### 03 Transformation:
- **March week07**
  - 02.18.14 tu Lecture: **Parametric Modeling**
  - Lab: --
  - 02.20.14 th Lab: --
- **week08**
  - 02.25.14 tu Lecture: **Variations**
  - Lab: --
  - 02.27.14 th Lab: --
- **week09**
  - 03.04.14 tu Review: Exercise 03, Exercise 04 issued
  - Lab: --
  - 03.06.14 th Lab: --

#### 04 Fabrication:
- **March week10**
  - 03.18.14 tu Lecture: **Workflow**
  - Lab: --
  - 03.20.14 th Lab: --
- **week11**
  - 03.25.14 tu Lecture: **Robotics**
  - Lab: --
  - 03.27.14 th Lab: --
- **April week12**
  - 04.01.14 tu Review: Exercise 04, Exercise 05 issued
  - Lab: --
  - 04.03.14 th Lab: --

#### 05 Character:
- **April week13**
  - 04.08.14 tu Lecture: **Descriptive Development**
  - Lab: --
  - 04.10.14 th Lab: --
- **week14**
  - 04.15.14 tu Lecture: **MoneySHOT**
  - Lab: --
  - 04.17.14 th Lab: --
- **week15**
  - 04.22.14 tu **FINAL REVIEW**: Exercise 05 (tentative)
General Course Information

Instructor
Kristy Balliet (KSA 231) balliet.5@osu.edu
office hours: Tuesdays, 2-3 Fridays, 12:00-1:30

Graduate Teaching Assistants
Sarah Bonser (G3 studio) bonser.5@osu.com
Ross Jackson (G2 studio) jackson.1868@osu.edu
Melissa Poeppelman (G3 studio) poeppelman.39@osu.edu
Michael Testrake (G2 studio) testrake.1@osu.edu
Lecture Times: T, Th 10:20 – 11:15
Location: Page Hall, 0010
Lab A/B Times: Group A: T, Th 11:30 – 12:30
Group B: T, Th 12:40 – 1:35
Location: Knowlton Hall 430
Credit Hrs: 3 units

General Policies

Attendance:
Per university guidelines, students are not given credit for a course if they miss three classes.
Excused Absences: Written verification for excused absences is required. Excused absences are as follows:
• Personal Illness: Please notify the instructor within one week after the period of illness.
• Serious illness or death of a member of the student’s immediate family: Please notify the instructor within one week after the funeral or period of illness.
• Military or Government Duty: Please notify the instructor prior to service.
• Official University trips (sponsored by classes; intercollegiate athletics or other activities). Notice must be given prior to the event.
• Major Religious Holidays: A student must notify the instructor in writing (email is fine) of these dates

Grading
Exercise 01: 20%, Exercise 02: 20%, Exercise 03: 20%, Exercise 04: 20%, Exercise 05: 20%
The percentage breakdowns above are used as a guide for determining grades. Final grades are at the discretion of the professor. Much like a regular design studio, attendance, work habits and skill development will be considered as a synthetic whole in determination of the grades assigned. The work will be evaluated on its design merits as well as its demonstration of technical skill.

Assignment Deadlines
Course assignments are due as noted in the syllabus or defined in class. Students who miss deadlines due to excused absences may submit the required work at a date agreed upon with the instructor. Students who turn assignments in and do not attend the class will not be given credit for the assignment.
Unexcused late projects are not accepted, incomplete projects are evaluated in relation to their degree of completion.

General Course Requirements
• Use of computers, cell phones and other electronic equipment during lectures is prohibited.
• During the labs, only the instructed software programs may be opened and used.
• Keep electronic copies of all of your work. Final documentation will be turned in on paper and electronically.
• Save back-ups of your work. Computer crashes and technology failures are not accepted reasons for late or missing work.

Documentation: Students must provide digital reproductions of all final projects and submit to the school archive if requested to do so.

Sexual Harassment: O.S.U.’s Sexual Harassment policy, which applies to all faculty, staff, and students, includes lewd remarks and inappropriate comments made in the studio environment, classroom, and computer Lab A/Bs as well as the “display of inappropriate sexually oriented materials in a location where others can see it.” Students can file a complaint by contacting Student Judicial Affairs at 292-0748. Sanctions include reprimand, suspension, and dismissal from the University.

Students with Disabilities: If a student requires accommodation for a disability, he or she should immediately arrange an appointment with the professors and the Office for Disability Services. At the appointment, the professors, disability counselors, and student can discuss the course format, anticipate needs and decide upon accommodations. Professors rely on the Office for Disability Services for assistance in verifying the need for accommodations and developing accommodation strategies.

Academic Conduct
All members of the class are expected to follow the rules of proper academic conduct as defined in section 3335-31-02 of the university’s legal policies.