ARCH 540 L: Topics in Media for Landscape Architecture
University of Southern California, Department of Landscape Architecture
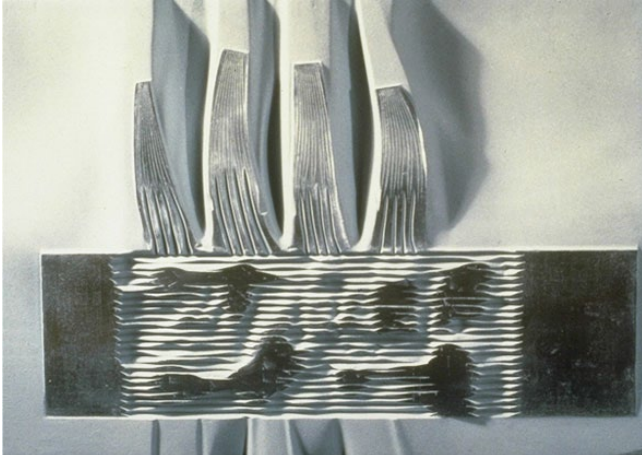2 Units
Fall 2014
Friday 9-Noon
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Office hours are by appointment

Reiser Umemoto, Watergarden for Jeff Kipnis

TERRA:CAMO:TECTONIC

This course will focus on the generation of form as it relates to the process of design in landscape architecture. Landform and morphology are essential characters in the production of the landscape project. Digital tools have given landscape architects new ways to examine and expand the language of topographical representation. Students will explore the full range of this potential moving between prescriptive and plastic methodologies. Students will be asked to look beyond pure form to the investigation of process and flows, camouflage, and tectonics as ways of materializing and rationalizing form.

The course will delve into digital media as a tool for enhancing design processes and production. Moving between process work and finished products, analog and digital platforms, students will experiment with modes of graphic and physical representation. Students will become familiar with the 3d modeling environment of Rhino and use this in conjunction with other design inputs to investigate 3-dimensional form, pattern, materials and tectonics. These explorations will be processed into two-dimensional representations using the adobe suite and v-ray rendering techniques. Additionally digital form will be processed into three-dimensional physical models, where students will test various digital fabrication outputs.

Initial physical models treated as analogue terrains, will address morphology, transformation, and process. These will be translated into the Rhino environment and output into drawings which probe the representation of landscape processes. Various digital modeling techniques will be employed through a series of exercises to test Rhino as a tool. Drawings will be treated as generative tools, emphasizing graphic sophistication over accurate representation.   The introduction of textural variation through photo investigations will be introduced on these models, and allow students to explore texture and pattern in relationship to morphology. The final output will be a series of digitally fabricated models, where students will implement methods for dissecting and rationalizing form.

Course Requirements
Reading:
There is required reading for each assignment, intended to enrich students understanding of the work and contextualize it within the discipline.
Stan Allen, "From the Biological to the Geological", *Landform Building*
Andrew Atwood, "Rendering Air: On Representation of Particles in the Sky" *Log*, Spring/Summer 2014.
Lisa Iwamoto, *Digital Fabrication*
Karen M'Closkey, "Synthetic Patterns: Fabricating Landscapes in the Age of 'Green'" in the *Journal of Landscape Architecture*
Achim Menges, "Polymorphism" *Architectural Design:Techniques and Technologies in Morphogenetic Design*, March/April 2006.

Required Software:
Rhino w/ Vray
Adobe Suite: Illustrator, Photoshop

Grading

All Assignments are due as detailed in the schedule, grades will be issued the following week.

Assignment 01   30%
Assignment 02   30%
Assignment 03   30%
Final Review   10%

Schedule   (subject to change)

Week 01   08/29
                     Class Introduction
                     TERRA
                     Lecture: Intro Lecture
                     Tutorial: Rhino Fundamentals:
                     Distribute: Assignment 1

Week 02   09/5
                     TERRA
                     PIN UP Assignment 1.1: Framework Terrain
                     Tutorial: Framework Translation

Week 03   09/12
                     TERRA
                     PIN UP Assignment 1.2: Framework Terrain
                     Tutorial: Process + Flow Translation

Week 04   09/19
                     TERRA
                     Tutorial: Composite Representations

Week 05   09/26
                     PIN UP Assignment 1
                     Distribute: Assignment 2
                     Tutorial: Photoshop + Camouflage Library

Week 06   10/03
                     CAMO
                     PIN UP Assignment 2.1
                     Lecture: Camouflage
                     Tutorial: Vray + Texture Maps
                     Work Session: Assignment 2

Week 07   10/11
                     CAMO
                     Tutorial: Light and Weather
                     Work Session: Assignment 2

Week 08   10/17
                     Midterm Review Assignments 1/2

Week 09   10/24
                     TECTONIC
                     Lecture: Tectonics
                     Tutorial: Sectioning
                     Distribute: Assignment 3

Week 10	11/01 TECTONIC *PIN UP Assignment 3.1a* Work Session: Assignment 3
Week 11	11/07 TECTONIC Tutorial: Digital Fabrication File Preparation
Week 12	11/14 TECTONIC *PIN UP Assignment 3.1* Tutorial: Paneling Tools
Week 13	11/22 TECTONIC Digital Fabrication Lab Time
Week 14	11/29 Thanksgiving Break
Week 15	12/6 TECTONIC Digital Fabrication Lab Time
Week 16	**Final Review Date TBD** **Assignments 1-3**

Assignments

Assignment 1	TERRA: Terrains + Transformation This assignment asks students to translate various physical and material model conditions to Rhino as a way of developing processes for generating and refining design ideas. A series of models exploring terrains and their attendant processes and flows, will be translated to three-dimensional topographies via Rhino. The final output will be a set of composite drawings addressing the challenges of representing dynamic landscapes and transformative terrains using digital models and line work as the source material. Reading: Stan Allen, "From the Biological to the Geological", *Landform Building*.
Assignment 2	CAMO: Disguising and Adorning Form This assignment will explore how materiality meets form, through methods for outputting 3d digital models: rendering with Vray and enhancing in Photoshop. Textures, pattern, and surface materiality will come in to play. A textural rendering of each morphology will address variations and disturbance in pure form akin to seasonality and climate. Reading: Andrew Atwood, "Rendering Air: On Representation of Particles in the Sky" *Log*, Spring/Summer 2014. Karen M'Closkey, "Synthetic Patterns: Fabricating Landscapes in the Age of 'Green'" *Journal of Landscape Architecture,* Spring 2013.
Assignment 3	TECTONIC: Rationalizing Form This assignment will explore how form is rationalized through technical drawings and digital fabrication. Various approaches and techniques will be explored from sectioning, tiling, to carving. Each morphology will be given its own technique for analysis, aspects of the camouflage will be incorporated and output into a series of physical models. Reading: Lisa Iwamoto, "Contouring", *Digital Fabrication: Architectural and Material Techniques*. Achim Menges, "Polymorphism" *Architectural Design:Techniques and Technologies in Morphogenetic Design*, March/April 2006.

Attendance Policy

The School of Architecture's general attendance policy is to allow a student to miss the equivalent of one week of class sessions (three classes if the course meets three times/week, etc.) without directly affecting the student's grade and ability to complete the course. If additional absences are required for a personal illness/family emergency, pre- approved academic reason/religious observance, the situation should be discussed and evaluated with the faculty member and appropriate Chair on a case-by-case basis. For each absence over that allowed number, the student's letter grade will be lowered 1/3 of a letter grade (e.g., A to A–).

Any student not in class within the first 10 minutes is considered tardy, and any student absent (in any form including sleep, technological distraction, or by leaving mid class for a long break) for more than 1/3 of the class time can be considered fully absent. If arriving late, a student must be respectful of a class in session and do everything possible to minimize the disruption caused by a late arrival. It is always the student's responsibility to seek means (if possible) to make up work missed due to absences, not the instructor's, although such recourse is not always an option due to the nature of the material covered.

Being absent on the day a project, quiz, paper or exam is due can lead to an "F" for that project, quiz, paper or exam or portfolio (unless the faculty concedes the reason is due to an excusable absence for personal illness/family emergency/religious observance). A mid term or final review is to be treated the same as a final exam as outlined and expected by the University.

See full attendance statement at: http://arch.usc.edu/People/SchoolGovernanceDocuments

Statement for Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 A.M.–5:00 P.M., Monday through Friday. The phone number for DSP is (213) 740-0776.

Statement on Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. SCampus, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: http://www.usc.edu/dept/publications/SCAMPUS/gov/. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: http://www.usc.edu/student-affairs/SJACS/. The USC summary of how to avoid plagiarism: http://www.usc.edu/student-affairs/student-conduct/ug_plag.htm and specific advice for grad students: http://www.usc.edu/student-affairs/student-conduct/grad_ai.htm may also be useful.

Accreditation

The Master of Landscape Architecture degree program includes three curricula. Curriculum +3 for students with no prior design education and Curriculum +2 for students admitted with advanced standing have full accreditation by the Landscape Architecture Accreditation Board. Curriculum +1.5 for students with advanced placement is a post-professional study and is not subject to accreditation. Information about landscape architecture education and accreditation in the United States may be found on-line at http://www.asla.org/Education.aspx.

Religious Holidays

The University of Southern California recognizes the diversity of our community and the potential for conflicts involving academic activities and personal religious observation. The University provides a guide to such observances for reference and suggests that any concerns about lack of attendance or inability to participate fully in the course activity be fully aired at the start of the term. As a general principle, students should be excused from class for these events if properly documented and if provisions can be made to accommodate the absence and make up the lost work. Constraints on participation that conflict with adequate participation in the course and cannot be resolved to the satisfaction of the faculty and the student need to be identified prior to the add/drop date for registration. After the add/drop date the University and the School of Architecture shall be the sole arbiter of what constitutes appropriate attendance and participation in a given course.