



## MATERIALS, FORM, AND ARCHITECTONIC STRUCTURES

The smell of the rain-wet dirt, the texture merged with the color and the fragrance of orange rinds, and the steel-iced fusion of cold hard: these shape the haptic realm. The essence of material, smell, textures, temperature, and touch vitalize everyday existence. Phenomenology is a discipline that puts essences into experience. The complete perception of architecture depends on the material and detail of the haptic realm, as the taste of a meal depends on the flavors of its ingredients. – Steven Holl, Chemistry of Matter, Parallax

### To Craft an Idea:

Craft is another way of saying means. I think it's a question of conscious intention and personal gifts or giftedness. It seems that in art there is a primacy of idea over both means or craft and function. Idea has to transcend both. – Martin Puryear

This course introduces you to the structural principles and communicative possibilities of sculpture. We will explore the haptic qualities and structural possibilities of material as well as the historical precedents and Poetics of forms in space.

The course technically covers the fundamentals of wood fabrication and casting. You will learn

To use a variety of hand and power tools and casting techniques.

The assignments relate to 20<sup>th</sup> century sculpture from the industrial revolution to the present with a focus on works, which cross between the discipline of art, science and technology.

Readings and lectures will expose you to art works and philosophical ideas relating to postmodern and contemporary society wrestling with ethics and innovation.

### Objectives:

- Introduce the structural principles and communicative possibilities of materials; primarily wood, aluminum, & plaster.
- Develop your ability to apply the formal visual principles – balance, sequence, weight, and structural dynamics and special relationships– in sculpture.
- Expose you to the content and context of art forms.
- Application of the three scales of sculpture:
  - The intimate, which relates to the hand or head;
  - The human body scale, to which the body directly relates;
  - The architectural, which the body fits into.
- To give you experience conceiving, designing and fabricating sculptural forms with conceptual underpinnings.

### Assignments:

#### MATERIALS AND STRUCTURES:

A formal exercise in structural dynamics.

#### BIOLOGICAL STRUCTURES:

The architecture of molecular or skeletal forms, the architecture that holds bodies.

#### DEVICES OF WONDER:

Cabinets and architectural spaces for illumination, viewing devices, cameras or portable theaters

#### THE COLLECTIVE MUSEUM:

Architecture for mnemonic devices, the casting life's remnants in glass panels.

**READINGS:**

**Project 1 MATERIALS AND STRUCTURES**

Nature Imagination and Matter Bachelard

Modern Sculpture Reader, New Bauhaus and Space Relationship, Laszlo Moholy-Nagy

Materiality Making Culture and Weaving the World Tim Ingold

Sculpture Now, Design and the Handmade, Moszynska

**Project 2. BIOLOGICAL STRUCTURES**

Passages in Modern Sculpture, Analytic Space Futurism and Constructivism, Krause

Systems, Some Experiments in Art and Politics, on the work of Tomas Sareceno. Bruno Lator

Ethics, Humanity: Living Structures of a Biological and Cellular Architecture Lydia Clark

Net Works, Mark Libardi Global Net Works, Hobbs

Return from Exile Siah Armajani -Murtaza Vali

**Project 3. DEVICES OF WONDER**

Devices of Wonder From the world in a box to images on a screen

Microscopes, Shadow books of Kara Walker, Magic Lanterns Theater De Universes

Stafford and Terpak

The Poetics of Space, Drawer, Chests and Wardrobes, Bachelard

Art and Science Now-Living Systems

**Project 4. THE COLLECTIVE MUSEUM**

The Archive- The Freud Museum-Susan Hiller

Bio Art ,By Definition, art is an anthropological practice -Susan Hiller

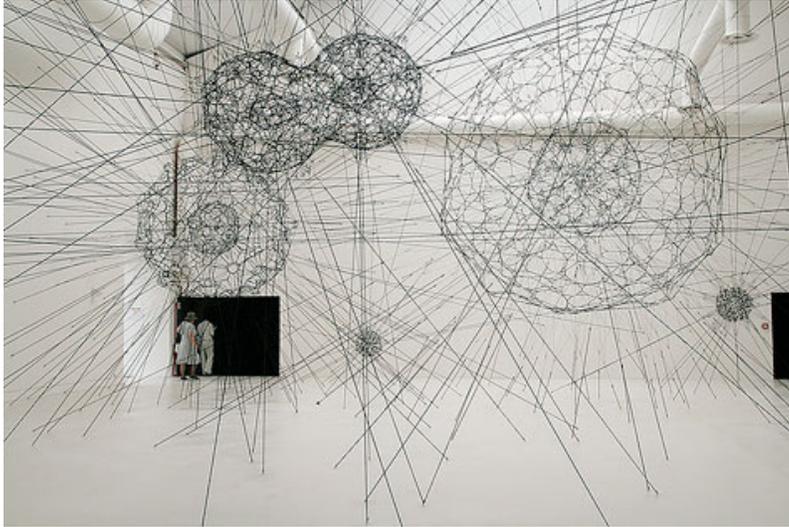
The Museum of Un Natural History

Vera List Center Field Guide-Theaster Gates Dorchester Projects

Community Museum Project- [http://www.hkcmp.org/cmp/c\\_002.html](http://www.hkcmp.org/cmp/c_002.html) Local Craftpeople

Perform Repeat Record, Touching Remains Interview Antonie /Heartfeild

Art and Artifact-Putman



[Tomias Sararcento](#)

## SCULPTURE I

Fall 2016

### WEEK 1

AUGUST

29 Introduction to the course. Requirements/Attendance.

Discussion of wood and hand tools.

Nature Imagination and Matter, Bachelard

Materiality Making Culture and Weaving the World, Tim Ingold

Lecture: An Overview of Sculpture 1

Read:

Modern Sculpture Reader, New Bauhaus and Space Relationship, Laszlo Moholy-Nagy

31. Lecture/Discussion-Bauhaus.

In class workshop on formal structures and structural principles, Introduce MATERIALS AND STRUCTURES

Read:

Sculpture Now, Design and the Handmade, Moszynska

Ethics, Humanity: Living Structures of a Biological and Cellular Architecture, Lydia Clark

Bio Art, By Definition, art is an anthropological practice, Susan Hiller

Friday Workshop: Hand tool training, Demo handsaws, chisels, and how to join wood without glue.

Work on first project, MATERIALS AND STRUCTURES

Links:

[Bauhaus](#)

[Albers Foundation](#)

[Alen Wexler](#)

[Joseph Lim Designs](#)

### WEEK 2

SEPTEMBER

5. No Class, Labor Day

7. Lecture/Discussion- Design and the Handmade

Work time on first project MATERIALS AND STRUCTURES

Friday Workshop: Electric Hand Tools + Work on Project MATERIALS AND STRUCTURES

**THE POETRY AND POLITICS OF DOCUMENTATION- Public reception September 9 -6:00-9:00  
in Studio Art**

**SASHA YANOW: *CHERIE DRE***

September 9–October 9, 2016 Public reception with the artist: **September 9, 4:30–6:30 at the Cooley**

### WEEK 3

12. Work Time

14. Work Time Crit: MATERIALS AND STRUCTURE 3pm

Friday Workshop: Woodshop Training 10-5pm. Please sign up for a 1 hour session.

Read: Passages in Modern Sculpture, Analytic Space Futurism and Constructivism, Krause

-  
- **September 16, 7:00 pm, Black Box Theatre, PAB:** Sacha will re-perform *Dad Band* for the Reed community and invited guests (feel free to invite colleagues and family members) for free. This performance will be followed by a conversation / Q&A with Peter Ksander. Happy to reserve seats for the department, I'll check in about this as we get closer. The performance contains no nudity or explicit sexual content re: kids.

#### **WEEK 4**

19. Lecture/Discussion "Analytic Space in Modern & Contemporary Artist and Architects"  
Introduction to forms and materials, steam bending, lamination, pop riveting.  
Demos: lamination. Introduce assignment BIOLOGICAL STRUCTURES

21. Demos: Steam bending. Sketches and models, Begin Individual meeting with Gerri.  
Friday Workshop: Lamination, steam bending, build model

Read:

Systems, Some Experiments in Art and Politics, on the work of Tomas Sareceno. Bruno Lator

Ethics, Humanity: Living Structures of a Biological and Cellular Architecture Lydia Clark

Net Works, Mark Libardi Global Net Works, Hobbs

Links:

Heackel [https://www.youtube.com/watch?v=tl\\_onFMjJWA](https://www.youtube.com/watch?v=tl_onFMjJWA)

[Tomias Sararcento](#)

[Olafur Eliasson](#)

[Mark Lombardi](#)

Azuma Makoto <http://inhabitat.com/makoto-azuma-suspends-bonsai-trees-then-returns-them-to-the-earth-unharmed/shiki20b03-510ae/>

Carol Colet <http://thisisalive.com/biolace/>

Sonja Baumele <http://www.sonjabaeumele.at/>

Enst Heackel <https://www.youtube.com/watch?v=6XQ2z9GERTI>

Heather and Ivan Morison <http://inhabitat.com/3d-printed-little-shining-man-kite-by-heather-and-ivan-morison-is-a-stunning-kinetic-sculpture/>

[Sol LeWitt](#)

[Buckminster Fuller](#)

#### **WEEK 5**

26. Discussion: Net works and Contemporary Sculpture and Architecture. Meeting with Gerri.

28. Work time, BIOLOGICAL STRUCTURES

Friday Workshop: Building final work BIOLOGICAL STRUCTURES

Read: Tim Hawkinson, Art 21

Return from Exile Siah Armajani- Murtaza Vali

#### **WEEK 6**

3. Review-Videos on Hawkinsen and Armajani -Work time BIOLOGICAL STRUCTURES

5. Work time BIOLOGICAL STRUCTURES

Friday Workshop: Building final work BIOLOGICAL STRUCTURES

#### **WEEK 7**

10. Finish, Install Critique: BIOLOGICAL STRUCTURES

12. Critique: BIOLOGICAL STRUCTURES

Read:

Devices of Wonder From the world in a box to images on a screen

Microscopes, Shadow books of Kara Walker, Magic Lanterns Theater De Universes

Stafford and Terpak

Reference:

50 Machines that Changed History/

Devices of Wonder- <http://www.getty.edu/art/exhibitions/devices/flash/>

Museum of the Moving Image- <http://www.movingimage.us/collection/opticaltoys>

[Museum of Jurassic Technology](#)

Diane Thater- <http://www.thaterstudio.com/>

Michal Rovner- <https://www.youtube.com/watch?v=kc3m5sRRnq0>

Chantal Ackerman- <http://www.contemporaryartdaily.com/2015/05/venice-chantal-akerman-at-the-arsenale/>

<https://www.youtube.com/watch?v=CnyqkcpiqR8>

Tim Hawkinson- <http://www.pbs.org/art21/artists/tim-hawkinson>

Yayo Kusama- [http://whitney.org/WatchAndListen/Exhibitions?play\\_id=683](http://whitney.org/WatchAndListen/Exhibitions?play_id=683)

James Turrell- <http://jamesturrell.com/>

Robert Irwin -<http://www.pacegallery.com/news/2649/major-exhibitions-planned-for-robert-irwin-in-2016>

Anthony McCall <http://www.anthonymccall.com/>

Kara Walker <http://www.nga.gov/collection/gallery/ggafamer/ggafamer-105098.html>  
Marilene Oliver <http://marileneoliver.com/exhibitions/presentfuture>  
<http://marileneoliver.com/portfolio/byseries#iknowyouinsideout>  
Alfredo Jaar <http://www.alfredojaar.net/index1.html>  
Dan Flavin <http://www.diacenter.org/sites/main/danflavinartinstitute>  
Amish Kapoor <http://www.anishkapoor.com/>  
Alison Kudla- <http://allisonx.com/>  
David Willison and the Museum of Jurassic Technology <http://www.mjtgiftshop.org/>,  
Ann Hamilton/EAT Robert Rauschenberg/ Krzysztof Wodiczko  
Resources:

### **WEEK 8**

Fall Break

### **WEEK 9**

24. Introduce Assignment 3: DEVICES OF WONDER  
Lecture/Discussion From the world in a box to images on a screen  
(Each student is responsible for a part of the reading.)  
26. Introduction to box building. Demo: corner joints, plexi insets and doors.  
Begin designing and model building.  
Friday Workshop: Box building I.

Reading

The Poetics of Space, Drawer, Chests and Wardrobes, Bachelard

### **BRAD KAHLHAMER**

October 25–December 11, 2016

Cooley Gallery

<http://www.bradkahlhamer.net/installation.html> <http://www.jackshainman.com/artists/brad-kahlhamer/>

Public lecture and reception with the artist:

**Saturday, October 29, 4pm, Reed College Chapel**, followed by a reception with the artist at the Cooley Gallery

### **WEEK 10**

31. Discussion, Drawer, Chests and Wardrobes  
Meetings, work time, build models, draft plans  
November  
2. Work time  
Friday Workshop: Box Building II -Light box demo, drawer demo, and work time

### **WEEK 11**

7. Work time  
9. Work time  
Friday Workshop: FINISH PROJECT

### **WEEK 12**

14. Critique: DEVICES OF WONDER  
Reading:  
16. Introduce Final: THE COLLECTIVE MUSEUM  
Friday Workshop: Casting  
Reading:  
The Archive- The Freud Museum-Susan Hiller  
Bio Art ,By Definition, art is an anthropological practice -Susan Hiller  
The Museum of Un Natural History  
Vera List Center Field Guide-Theaster Gates Dorchester Projects  
Community Museum Project- [http://www.hkcmp.org/cmp/c\\_002.html](http://www.hkcmp.org/cmp/c_002.html) Local Craftpeople

Links:

### **WEEK 13**

21. Introduce Final: THE COLLECTIVE MUSEUM  
23. Workshop glass casting.  
Reading:  
Perform Repeat Record, Touching Remains Interview Antonie /Heartfeild  
Art and Artifact-Putman

THANKSGIVING

### **WEEK 14**

28. Review Artist works.Work time  
30.Work time  
Friday Workshop: Glass finish work

**WEEK 15**

December  
5.Work time  
7. Work time

Reading Week-Dec 8-9  
Finish project

**DECEMBER 13 FINAL CRIT- THE COLLECTIVE MUSEUM**



### MATERIALS YOU MUST HAVE

3-ring binder for readings!!!

Sketch book/note book

Drawing pencils

Grid paper

Tracing paper

I will provide wood, aluminum, and plaster for the projects. Please see us for the resource list if you need other materials.



Olafur Eliasson's Studio

## MATERIALS AND STRUCTURE

Only after studying forms and attributing each to its proper matter will it be possible to visualize a complete doctrine on human imagination then one can appreciate the fact that an image is a plant –which needs earth and sky, substance and form. Images discovered by men evolve slowly, painfully; hence Jacques Bouquet's profound remark: "A new image cost humanity as much labor as a new characteristic cost a plant." Many attempted images cannot survive because they are merely formal play, not truly adapted to the matter they should adorn. Therefore I believe that a philosophic doctrine of the imagination must, above all, study the relationship between material and formal causality. Gaston Bachelard, *Water and Dreams; An Essay on the Imagination of Matter* 1942

To experiment is at first more valuable than to produce; free play in the beginning develops courage. Therefore, we do not begin with theoretical introduction; we start directly with the material...

Josef Albers, *Preliminary Course*

An introduction to the formal visual language and the Bauhaus concept "form and function" of materials. In-class discussion of formal principles and the physical dynamic of forms will demonstrate sculptural issues. Reading from Josef Albers will outline formal issues such as tension and compression, symmetry and asymmetry. The Bauhaus focus on economy of form, the use of industrial "flat" materials created at the turn of the century such as paper, steel, cloth, plywood and plexi and the contrast with the natural materials will be looked at. One structure will be hand-built from scrap wood using a Japanese saw, mat knife, and carving tools. Techniques using non-adhesive joinery will be employed.

### Assignment:

Make one hand-built structure after learning to use these materials, tools and process:

Materials – scrap wood, natural, plies and milled lumber, scrap plexi, plastics and cardboard

Tools – Japanese saw, mat knife, and chisel.

Process – Lap joints, finger joints, notching, strapping, pinning, and wiring (no glue allowed).

### The work must address two of these Formal Visual Principles:

Balance/Weight/counterweight

Numbers in form and/or pattern

Symmetry/Asymmetry

Texture

**The piece must use one of these principles to stand in space:**

Single point  
Three point  
Four point  
Rigid planes  
Anchored footing

**The work should explore materials:**

How does the direction of the wood grain affect the piece visually and structurally?  
Does one type of wood hold a cut better than another?  
How does the density of wood effect the work?  
Is the piece more stable when made of one material than with another?  
What happens when you put materials with various textures beside each other?  
What is the difference between industrial materials vs. natural materials?  
How can you join materials with different properties?

**Formal qualities to consider:**

Vertical vs. horizontal  
The dynamism of the angle  
Numbers and forms, a singular form versus a pair, 3 versus 4  
Why 5 has rhythm  
"Structural Intrigue," or a work that seems to defy gravity  
Basic geometric solids: cube, sphere, pyramid, cone, and cylinder

**Reading:Bauhaus: Preliminary course: Albers**

Albers taught an introductory course in fundamentals of design for those studying industrial design, crafts and fine art and architecture. He believed that all students needed to know the fundamental characteristics of materials. He believed in and enforced the "Economy of Form," or how to make a piece with minimal fabrication. The Bauhaus is a school born out of the industrial revolution. Its philosophy embraced the new materials of the day and trained students to use them with craftsmanship and formal qualities. The Bauhaus also promoted both a new social and political structure that believed there was no hierarchy in the arts and crafts and that crafted objects that functioned for the body could be made available for all, both rich and poor. The Bauhaus system of education was duplicated in American art schools as teachers such as Albers and Gropius fled the National Socialists.

The aftermath of WWII and the codification of art has lead us to the present point in which we reconsider the ideal of "form follows function" as a part of a relational aesthetics. The movement in the last 30 years to consider the viewer as user, viewer as producer of meaning, and the need for social and political interaction, and the undeniable need for housing has spurred artist such Wexner, Kawamata, Armajani to make a hybrid set of sculptural forms that craft materials for both concept and function.

**Readings:**

Nature Imagination and Matter Bachelard  
Bauhaus Workshop for Modernity, Bauhaus Fundamentals, Dickerman  
Modern Sculpture Reader, New Bauhaus and Space Relationship, Laszlo Moholy-Nagy  
Sculpture Now, Design and the Handmade, Moszynska  
Ethics, Humanity: Living Structures of a Biological and Cellular Architecture Lydia Clark  
Bio Art By Definition, art is an anthropological practice Susan Hiller

**Resources:**

Please look at these resources to understand how this lesson has played a vital role in the formation of modern and postmodern thinking.

Bauhaus <http://www.moma.org/interactives/exhibitions/2009/bauhaus/Main.html>

Albers Foundation <http://www.albersfoundation.org/Home.php>

Allan Wexler <http://www.allanwexlerstudio.com>

Olafur Eliasson <http://www.olafureliasson.net/works.html>

<http://www.moma.org/interactives/exhibitions/2008/olafureliasson/#/intro/>

Sarah Sze <http://www.sarahsze.com/>

Sol LeWitt <http://www.sfmoma.org/artists/42>

Tadashi Kawamata <http://www.tk-onthetable.com/>

<http://www.kamelmennour.com/artists/13/tadashi-kawamata.works-and-projects.html>

Los Carpinteros <http://loscarpinteros.net/>

Siah Armajani <http://www.alexandergray.com/artists/siah-armajani/>

Artists: Bauhaus- Student work, Albers, Moholy-Nagy, Alexander Calder, Fuller, Eliason, Rittefeild, Sol LeWitt, Richard Serra, Antonio Pevsner, David Smith, Tadashi Kawamata, Jen Shin, Sarah Sze, Olifer Eliison, Andrea Zittle, Mo Edoga, Edward Mayer, Robert Stackhouse, Carl Andrea, Martin Puryear, David Nash, Chris Dury Architectural models: Holl, Zaha Hadid, Wright, Zumptur Buckminster Fuller Models



## BIOLOGICAL STRUCTURES:

The architecture of cellular, molecular and skeletal forms,  
Architecture that holds bodies

If we have to be connected with climate, bacteria, atoms and DNA, it would be great to learn how those connections could be represented.

Bruno Latour, *Some Experiments in Art and Politics* 2011

“... The logic of the form is carried by the surface, and the notion of a dualistic split between inside and outside is resolved through a visual unification of meaning of the external structure and the experimental center of the work.”

Rosalind Krauss on Vladimir Tatlin's, *Monument to the Third International*, *Analytic Space: futurism and constructivism*.  
*Passages in Modern Sculpture*

### **Project:**

For this assignment you will explore the skeletal structure of architecture, machinery, or organic forms. Formally the work will express the dynamics of a self-supporting structure, showing patterning, movement, rhythm, and progression. Both the structure and the negative space it defines will be perceived and inhabited mentally and physically. The material of the sculpture is as much a part of its subject as are the techniques used to craft it. You will learn fabrication methods such as wood bending and lamination; learn to understand the basic structural possibilities of wood, and how to use all eclectic hand tools and the shop equipment. Various fasteners and joinery methods will be demonstrated.

You will begin your exploration on paper by building models. In a one-on-one conference with me, we will discuss the methods of fabrication, the materials that could be used, the scale and other issues. The process and materials will be carefully discussed and chosen so to specifically respond to the forms you wish to create.

Demonstrations and workshops in class and on Fridays on bentwood lamination, lashing, pop riveting, joining wood, bending and riveting aluminum will inform your fabrication. Stretched cloth, plastic sheeting, wire, and rope may be used.

The scale of the work should be at least 2' and no bigger than 6' so that it relates to the body on an architectural scale. The work must be installed in the gallery and play off of the architecture, the light and the shadow available in the space.

### **Historical issues to consider when designing the work:**

How did the early modernist embrace and use industrial materials?

How does the X-ray influence this early work?

What does it mean to “mirror mental space”?

What does he gain from vernacular cultures?

**Design and mechanical issues to consider:**

How does the work look and act if we see all of the joints?

Can you evoke this rather than illustrate underlying forms? (i.e., ribs, interiors of buildings, etc.)

How does the piece relate to your body?

What happens when light is projected on the work?

Which material is best for your work? For example, how does paper and wood behave versus cloth and metal?

**Tools:**

All wood hand tools

Metal roller

Steam bender

Molds for lamination

Jigsaw

Chop saw

Band saw

Drill

Pop riveter

Nail gun

**Readings Project 2.**

Passages in Modern Sculpture, Analytic Space Futurism and Constructivism, Krause

Systems, Some Experiments in Art and Politics, on the work of Tomas Saraceno. Bruno Lator

Net Works, Mark Libardi Global Net Works, Hobbs

Bio Art and the Gnawing Invisible- Will Myers

Materiality Making Culture and Weaving the World Tim Ingold

Return from Exile Siah Armajani Murtaza Vali

Art and Science Living Systems

**Passages in Modern Sculpture Rosalind Krauss Chapter 2 Analytic Space: Futurism and Constructions**

Social political issues relating to industrial revolution are at the heart of the work made by the Futurist, the Constructivist, the Bauhaus school, as well as the Dadaist to follow. New formal visual issues emerged via a desire for a new type of art, a new art school, and a new art audience which formed various aspects of modernist art fabrication and display. This chapter points out the new vision artists had via optics, film, photography, and the X-ray machine and the new materials including, sheets of plastic, metal, laminated wood, and industrial cardboard that gave their work new form and meaning. Many of the works featured in the article embrace both time and space, activating the architecture, and giving one multiple visions of the form as one moves around it. Concepts such as installation, metaphysical space, and simultaneous readings come forth. These artists blurred the boundary between sculpture and architecture. Their works were research-based investigations

**References:**

Andrew Yang <http://www.andrewyang.net/#!statement/c4sh>

Tomas Saraceno <http://tomassaraceno.com/>

Azuma Makoto <http://inhabitat.com/makoto-azuma-suspends-bonsai-trees-then-returns-them-to-the-earth-unharmd/shiki20b03-510ae/>

Carol Colet <http://thisisalive.com/biolace/>

Sonja Baumel- <http://www.sonjabaeumel.at/>

Enst Heackel <https://www.youtube.com/watch?v=6XQ2z9GERTI>

Heather and Ivan Morison <http://inhabitat.com/3d-printed-little-shining-man-kite-by-heather-and-ivan-morison-is-a-stunning-kinetic-sculpture/>

Allan Wexler <http://www.allanwexlerstudio.com>

Olafur Eliasson <http://www.olafureliasson.net/works.html>

<http://www.moma.org/interactives/exhibitions/2008/olafureliasson/#/intro/>

Sarah Sze <http://www.sarahsze.com/>

Sol LeWitt <http://www.sfmoma.org/artists/42>

Tadashi Kawamata <http://www.tk-onthetable.com/>

<http://www.kamelennour.com/artists/13/tadashi-kawamata-works-and-projects.html>

Los Carpinteros <http://loscarpinteros.net/>

Siah Armajani <http://www.alexandergray.com/artists/siah-armajani/>

Martin Peryear <http://www.moma.org/interactives/exhibitions/2007/martinpureyear/>

Ellen Driscoll <http://www.ellendriscoll.net/>

Kendell Buster <http://www.kendallbuster.com/about.html>

Ursula von Rydingsvard <http://www.pbs.org/art21/artists/vonrydingsvard/index.html>

Psycho-Buildings <http://www.southbankcentre.co.uk/minisite/psycho-buildings/>

Dennis Oppenheim <http://www.dennis-oppenheim.com/outdoor-sculpture>

Steven Holl <http://www.stevenholl.com/>

Mary Miss [http://www.marymiss.com/index\\_.html](http://www.marymiss.com/index_.html)

SIMPARCH <http://www.simparch.org/>

Ellen Driscoll, Kendel Buster, Simpark, Sarah Sze, Sol LeWitt, Richard Serra, Constantine Brancusi, Alexander Calder, Antonio Pevsner, Kurt Schwitters, David Smith, Tadashi Kawamata, Mo Edoga, Richard Deacon, Jackie Windsor, Leanore Tawney, Louis Barigon, Steven Hull, Edward Mayer, Robert Stackhouse, Robert Morris, Carl Andrea, Martin Puryear, David Nash, Magdalena Jetelová, Allan Wexler, Chris Dury, Mary Miss, David Nash, Alice Acycock

General Reference:

Shaker furniture, Japanese construction, Gothic Architecture, Eiffel Tower, Machintosh Furniture, Ethiopian Bamboo Hut, Horuji Temple in Japan, Green Houses. Look at crystallization, DNA helix, cellar division, Japanese joinery, window blinds, fans, wheels, rib cages, birdcages, and support beams.

**Materials:**

Cedar strips for steam bending

Birch ply for bending

Various pre-cut wood strips

Canvas/cloth

Papers/paper machine

Plexi and plastic sheeting

Aluminum strips

**Construction Methods Covered:**

Lap joints, mortise and tendon joints

Glue lamination

Steam bending

Pop riveting

Bolts & screws



## DEVICES OF WONDER:

Cabinets and architectural spaces for illumination, viewing devices, cameras or portable theaters

Devices of Wonder puts on display some of the key strange and uncanny optical instruments humans have used to perceive the world and some of the powerful images they have generated. Stafford and Terpak, *Devices of Wonder; The World in a Box to Images on a Screen*. 2001

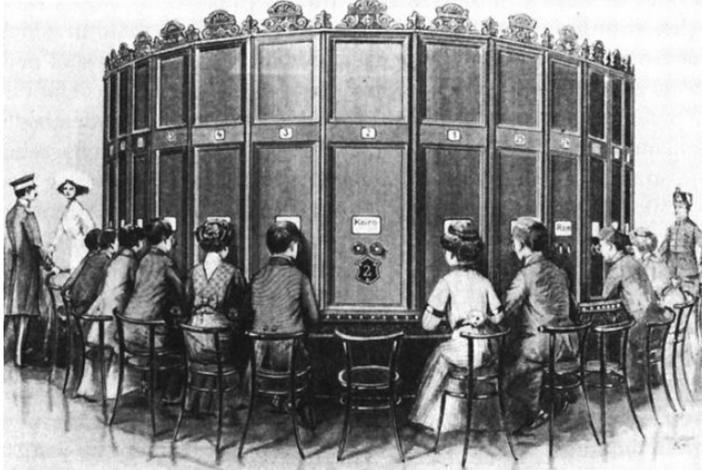
“The cabinet of the world contained those things that revealed the extremes of nature’s powers: the particularly large, the particularly small, the misshapen, and the monstrous... The cupboards were filled with things according to the nature of the material, so that each might contain both worked and un-worked items in the same raw material. The cupboard marked bones, for example where placed turned objects of ivory and also the arm bone of Duke Herman, an ancestor.”  
Eileen Hooper- Greenhill *Museums and the Shaping of Knowledge* writing on Arch Duke Ferdinand’s *Kunstkammer*

### **Project:**

Art is not just interpretation but transformation. When one creates an art form we begin to understand the passage from one dimension to another, that is the passage from the original order to a creative order.

Design a device or space for altered or expand vision or containment of physical and mental vision. Look at historical objects such as a magnify glass orbs, early box microscopes, navigational devices, zoatrpes, camera obsuras, medical models of the eye, projectors, shadow puppet theaters. Carefully consider the objective you have. Are you illuminating or projecting ready made images, or filling a space with light? Are you hoping to turn the visable object in the a magnified abstraction? Do you hope to expose or make vulnerable the materials? What contemporary artist do you look to as a roll model? Look to contemporary artist from Diane Thader to Michel Rovner, to the Museum of Jurassic technology that immerse your senses and creating spaces for us to experience a new vision, to see the unseen.

After your training in the woodshop you will have the ability to fabricate a box like structure that can hold optical instruments of create a projection. Techniques in building lidded spaces, light boxes, and glass cases will be demonstrated. Following the earlier “form follows function” ideology, you will design a form that conceptually responds to the object. Readings on the history of museums and optical devices and the influence this has had on artists today will play a central role in creating a work.



**Materials:**

Pre-cut lumber in 1 and 2' strips

Plexi

Glass

Hinges

Processes:

The entire object should be no larger than 2'.

Instruction on how to build a light box, a simple cabinet with lid or a door will be covered.

Various joints will be covered including the finger joint and miter joint.

**Tools:**

All shop tools and hand tools are available.

**Readings:**

Project 3.

Devices of Wonder From the world in a box to images on a screen

Microscopes, Shadow books of Kara Walker, Magic Lanterns Theater De L'Universes

Stafford and Terpak

The Poetics of Space, Drawer, Chests and Wardrobes, Bachelard

Art and Science Now-Living Systems, Wilson

**Reference:**

50 Machines that Changed History/

Divices of Wonder- <http://www.getty.edu/art/exhibitions/devices/flash/>

Museum of the Moving Image- <http://www.movingimage.us/collection/opticaltoys>

Diane Thater- <http://www.thaterstudio.com/>

Michal Rovner- <https://www.youtube.com/watch?v=kc3m5sRRnq0>

Chantal Ackerman- <http://www.contemporaryartdaily.com/2015/05/venice-chantal-akerman-at-the-arsenale/>

<https://www.youtube.com/watch?v=CnyqkcpiqR8>

Tim Hawkinson- <http://www.pbs.org/art21/artists/tim-hawkinson>

Yayo Kusama- [http://whitney.org/WatchAndListen/Exhibitions?play\\_id=683](http://whitney.org/WatchAndListen/Exhibitions?play_id=683)

James Turrel- <http://jamesturrell.com/>

Robert Irwin -<http://www.pacegallery.com/news/2649/major-exhibitions-planned-for-robert-irwin-in-2016>

Anthony McCall <http://www.anthonymccall.com/>

Kara Walker <http://www.nga.gov/collection/gallery/ggafamer/ggafamer-105098.html>

Marilene Oliver <http://marileneoliver.com/exhibitions/presentfuture>

<http://marileneoliver.com/portfolio/byseries#iknowyouinsideout>

Alfredo Jaar <http://www.alfredojaar.net/index1.html>

Dan Flavin <http://www.diacenter.org/sites/main/danflavinartintstitute>

Amish Kapoor <http://www.anishkapoor.com/>

Alison Kudla- <http://allisonx.com/>

David Willison and the Museum of Jurassic Technology <http://www.mjtgiftshop.org/>,

Ann Hamilton/EAT Robert Rauschenberg/ Krzysztof Wodiczko

**Resources:**

<http://www.instructables.com/id/How-To-Make-A-Pinhole-Camera/>



## THE COLLECTIVE MUSEUM:

Architecture for mnemonic devices, casting life's remnants in glass

Part of the makeup of my intellect, part of how I operate in the world, part of my modes of operation has to do with a very strong understanding of and strong sensitivity for things you cannot see. Theaster Gates 2015

In the last 30 years making works of art as a collective has moved from the theater to the visual arts arena. Socially minded work like the Aids quilt, made by citizens to create awareness is one of the greatest examples of our time. Works like this must come from a place of real sincerity and research not simply a collective without a mission. You will work as a class collective and consider what to archive and what it is the community will say by making one glass wall together. Readings such as the Vera List Centers interview with Theaster Gates, essays on the Citizen Museum, the Museum of Post Natural History as well as on individual artist like Emily Jacir who research that which has been left behind in war, or Rovner, that which remain of history will be discussed.

Technically you will be trained in mold making methods, and glass casting.

Example pieces from contemporary artist will inform the process technically and hopefully inspire you.

I ask you to engage in transformation and sympathetic imagination. The sympathetic imagination is, according to Walter Jackson Bates the ability of a person to penetrate the barrier which space puts between him and his object, and, by actually entering into the object, so to speak, to secure a momentary but complete identification with it.

British sculptor employs traditional casting methods and materials that are commonly used in the preparation of sculptures rather than for the finished object, such as plaster, rubber, and resin; she makes sculptures of the spaces in, under, and on everyday objects. Her art operates on many levels: it captures and gives materiality to the sometimes unfamiliar spaces of familiar life (bath, sink, mattress, or chair), transforming the domestic into the public; it fossilizes everyday objects in the absence of human usage; and it allows those objects to stand anthropomorphically for human beings themselves.

"It is the solid trace of all the air that a room once contained. Empty space has become solid. Because it is solid, it is closed. Nothing can get in or out. On this side of the white surfaces of the massive block, engraved with negative images of fireplace, door, window and light switch, we wonder at the dark invisible silence within. Vanished lives, lost voices; forgotten loves are trapped in that fossilized room like prehistoric creatures in limestone." Jonathan Jones,

### **Materials/Methods:**

Glass casting

Glass printing

Mold making

Clay, rubber, wax, plaster, glass



#### **Readings:**

##### **Project 4.**

Vera List Center Field Guide-Theaster Gates Dorchester Projects

Center for Post natural History- <http://www.postnatural.org/>

<http://www.postnatural.org/Press-1/Nature-Interview>

Perform Repeat Record, Touching Remains Interview Antonie /Heartfeild

Modern Sculpture Reader Louise Bourgeois A Passion for Sculpture: a conversation with Alain Kirli

Eve Hesse

Ai Wei Wei Chairs Tables and Maps

#### **References:**

Andrew Yang The Taxonomy of Broken teeth

<http://www.andrewyang.net/#!reconstructedfetish/zoom/cq13/image1v4f>

Aids Quilt-

Emily Jacir- [http://www.democracynow.org/2015/8/12/artist\\_emily\\_jacir\\_brings\\_the\\_palestinian](http://www.democracynow.org/2015/8/12/artist_emily_jacir_brings_the_palestinian)

[http://www.nikkiromanello.com/NikkiRomanello/3D\\_WORK/Pages/SCIENCE.html#4](http://www.nikkiromanello.com/NikkiRomanello/3D_WORK/Pages/SCIENCE.html#4)Community Museum Project-

[http://www.hkcmp.org/cmp/c\\_002.html](http://www.hkcmp.org/cmp/c_002.html) Local Craftspeople

Collective Museum-<http://ias.ucsc.edu/projects/collective-museum>

Heather Dewy Hagborg- <http://deweyhagborg.com/>

Song Dong <http://www.moma.org/visit/calendar/exhibitions/961>

<http://trendland.net/2009/07/15/waste-not-art-installation-by-song-dong/>

Warhol Time Capsules [http://www.frieze.com/issue/article/living\\_in\\_a\\_box/](http://www.frieze.com/issue/article/living_in_a_box/)

[http://www.nikkiromanello.com/NikkiRomanello/3D\\_WORK/Pages/SCIENCE.html#4](http://www.nikkiromanello.com/NikkiRomanello/3D_WORK/Pages/SCIENCE.html#4)Niikki Romanello-

<http://www.nikkiromanello.com/NikkiRomanello/BIO.html>

Center for Post natural History- <http://www.postnatural.org/>

<http://www.postnatural.org/Press-1/Nature-Interview>

Louise Bourgeois <http://www.pbs.org/art21/artists/louise-bourgeois>

Janine Antoni <http://www.mattress.org/archive/index.php/Detail/entities/1512>

<http://www.luhringaugustine.com/artists/janine-antoni/>

Studio MANN <http://www.mrmann.co.uk/about-studiomrmann>

Rachel Whiteread <http://www.luhringaugustine.com/artists/rachel-whiteread>

Do-Ho Suh <http://www.pbs.org/art21/artists/suh/index.html>

Alan McCulllen <http://www.pbs.org/art21/artists/allan-mccollum/>

Josiah McElheny <http://www.pbs.org/art21/artists/mcelheny/index.html>

Antony Gormely <http://www.antonygormley.com>

Eva Hesse <http://www.sfmoma.org/exhibitions/24>

Kiki Smith <http://www.moma.org/interactives/exhibitions/2003/kikismith/>

Cornelia Parker <http://www.tate.org.uk/colddarkmatter/texts.htm>



## **Evaluation:**

All students are required to follow the following guidelines for full course credit:

- \* Attend all scheduled class meetings.
- \* Work efficiently and attentively in class.
- \* Contribute to critiques and discussions.
- \* Do the readings, review the artists, and take notes.
- \* Make models and drawings for each project.
- \* Complete all assignments.
- \* Follow safety regulations and clean up work area before leaving.

I keep a record of each student's work, his or her progress, strengths and weaknesses. I will dialogue with each of you in class daily while working. We will have individual meetings/conferences to plan each project. This occurs 4 times during the semester by appointment. We will have group critiques after each project is complete. I will make a point of giving you feedback on the final work during the group crit. I keep a record of critiques for each assignment and I photograph the finished work for my records.

Please note that, my response to your work will mainly come in verbal form. I will respond in written form to the peer-review and your self-evaluation forms after each assignment. If at any time while making the project or when the project is complete you want an individual conference, I am available outside of class, Monday from 9-12, Tuesday/Thursday 1-4.

I use the following criteria in evaluating student work:

## **Attendance- 50%**

The strength of a group studio art course comes from the interaction of ideas and observation of others. In missing the class, a student undermines the effectiveness of the course and the educational experience of all.

Each student must arrive prepared to work with appropriate materials for the assignment, project, exercise, critique, discussion, or demonstration for that particular class day. Unprepared students may receive an absence for the day. Attendance and active participation in critiques is critical to learning in the studio classroom. All students are expected to contribute verbally by commenting or questioning aspects of the work being critiqued. Attendance at critiques is mandatory. Any student who knows they will be absent from a critique must contact the instructor prior to the critique. A verbal self-critique and or a peer review will be done for each project. This includes information on the technical skills you learned, the conceptual idea you worked with, and the artists and readings we covered. You will be asked to take notes in your sketchbook and on a classmate's work.

1. You must be in the studio by 1:15 p.m. We will begin the class with a discussion and or presentation. It is vital that you are here for the beginning of the class. If you are more than 30 min. late for a class without a reasonable excuse, you will be marked absent.
2. Participation in the classes includes contributing to dialogue, taking notes on technical skills or artist presented.
3. Come prepared to work on projects in class.

## **Assignments 40%**

Students should expect to spend 6 hours per week in class and approximately 4 hours outside of class working on assignments. The studio classroom is open for student use Tuesday, Thursday, and Friday afternoons.

All assignments will have a short reading and a list of artists to be read/reviewed prior to the introductory lecture. The readings will guide the conceptual framework and content of your work.

For each assignment the class will go over a series of technical skills.

We will have individual conferences discussing preliminary sketches and models for the assigned projects.

1. Turn in projects on time. Your grade will be lowered 10% for each week the project is late.
2. Generation of basic ideas and exploration of solutions. This includes drawings, models, and exploration of materials.
3. Visual organization of your forms. Your ability to follow a system of design.
4. Conceptual thought process put into visual forms. Your ability to convey the ideas covered in the assignment, the readings and artist referenced.

## **Safety and Etiquette 10%**

Your safety is of primary importance to us. We will train you to use all equipment and the shop properly. You must attend safety training for all hand tools, electric tools, and the shop equipment at the beginning of the semester. If you do not attend the training session, you will not be allowed to use the tools. Laura will check and evaluate your ability to use tools properly. This is a communal studio. You may not leave any materials out on tables or on the floor after classes. If you are working on a large-scale project, make sure Laura and I are notified and we will help you to find the proper placement and storage of the work. Chronic failure to clean up your work area and properly store materials will result in a 10% drop in your grade.

Failure to follow our safety regulations will result in a 10% drop in your grade and/or dismissal.

Unsafe practices with equipment, removal of equipment from the studio, allowing others not in the course to use the equipment, or using the equipment under the influence of alcohol or drugs will result in your dismissal from the course.

1. Keep the studio and shop clean and clear of obstruction.
2. Sweep up and throw away excess materials from your area when finished working.
3. Put away tools.
  4. Store your work properly.
  5. Do not dispose of flammables, wax, paint or plaster in the sink!

**SHOP AND STUDIO USE**

Choose an area of the studio and a table space to use on a regular basis.

Put your name on a shelf and use it for small storage.

Put your name on a locker and use it for large storage (both may be shared).

You are responsible for all tools and materials you get out so put them away when you are finished.

Use the electrical plug closest to your table; do not have extension cords running on the floor.

Use loud and messy tools such as sanders & girders outside.

**WOOD SHOP**

You may only use the wood shop when wood shop tech is present.

Louise's hours are 9-5 weekdays.

You may only use the shop after you have been trained.

Training will take place on Fridays beginning in September.

**STUDIO ACCESS**

You may have card access to the art building and use the studio when you wish.

The tool cabinet in the corner of the studio has tools for your use.

Make sure you lock up the cabinet after getting tools.



Calder- Circus