

ARCH 2410: ARCHITECTURAL DESIGN I

AUSTIN E. KNOWLTON SCHOOL OF ARCHITECTURE THE OHIO STATE UNIVERSITY AU'13

MONDAY, WEDNESDAY, FRIDAY (1:50pm-5:15pm)

INSTRUCTORS

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Architecture 2410 is the first studio of the second year of the undergraduate architecture curriculum at the Knowlton School of Architecture. Following the preparatory first year of general education requirements, the second year begins the architecture curriculum in earnest. The curriculum can be summarized as follows: second year studios focus on issues of technique with support courses in graphics and architectural history, third year studios focus on issues of materiality with support courses in construction and structures, and fourth year studios focus on issues of organization with support seminars in technology and history / theory.

TECHNIQUE

Essential to architectural design is a facility with and understanding of the techniques that comprise its practice. Architects, after all, do not make buildings; they use various techniques to make drawings and models of buildings. Drawings and models abstract the world, foregrounding some aspects of it while placing others in the background. A model, for example, provides a better sense of a project's massing than a plan, while a plan gives a better sense of a project's organization, and neither can evoke the spatial experience of a perspective. Effectively deploying techniques requires the development of skills, but more importantly, it requires the marshaling of those skills with a fluid intelligence as the designer abstracts from the world while engaging with the world. Design is not the illustration of thought or action; it is a mode of thought in action.

Following the student's developing skills in the concurrent representation course sequence, second year projects begin with an emphasis on techniques of modeling and drawing accompanied by critical inquiry and move to large-scale installations in the spring semester. Thus, the spring semester project completes a cycle of abstraction and engagement and provides a bridge to the third year's emphasis on material issues.

POLICIES

Format

Studio meetings will generally be of two types: collective pin-ups and smaller group discussions. Individual desk critiques may happen occasionally; when they do they will typically be at the end of a project. Students should be prepared to be in studio for the entirety of class time and must be ready to present at the beginning of class. Studios are based upon ongoing research. Successful completion of assignments and requirements are subject to the discoveries of previous work. All communication with the studio instructor should be carefully considered, as it will be critical to evolving directions and assignments. Students must check their university email daily.

Deadlines

Students who miss deadlines due to valid extenuating circumstances may submit the required work at a date agreed upon with the instructor. University regulations limit such circumstances to serious personal illness and death in the immediate family, and both cases require written documentation: a doctor's note or a newspaper obituary. Unexcused late projects are not accepted, incomplete projects are evaluated in relation to their degree of completion, and a student is present only if he or she presents sufficient work to the instructor. A student will be warned by email after

the first unexcused absence; a student's grade will drop one letter grade after the second unexcused absence; and a student with three unexcused absences will be immediately dismissed and given an "F."

Documentation

Students must provide hardcopy and digital reproductions of all final projects. Hardcopy reproductions will consist of images of all final models and 8.5x11 reproductions of all presentation drawings. Digital reproductions of both models (as jpegs) and drawings (as PDFs) will be stored on CD's, one CD per student. Students must place documentation in their instructor's KSA office mailboxes by 5 PM Friday, December 6. Failure to meet this deadline will result in a grade of "incomplete."

Evaluation

Studio work is both individual and collective. Criteria of evaluation include not only individual design excellence, but also a student's contributions to the studio through collective research, documentation and discussions. Grading is based on a comparison with other students in the course, with students who have taken the course previously, and with the instructors' expectations relative to the objectives of the course. Projects are reviewed by juries that may include instructors or designers from both within or outside of the KSA. For an "A", the student must satisfy the course objectives excellently; for a "B", in an above average manner; for a "C" in an average manner; for a "D" in the lowest acceptable manner; and an "F" denotes that the student has not satisfied the course objectives.

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 labs 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.

Student Safety

University escort service provides safe transportation 7:30AM-3AM. Call 292-3322.

Studio Behavior

Students must work in the studio, because of the collaborative nature of research and the shared development of techniques. Students are responsible for keeping their areas clean, their floors free from obstructions, and all studio furniture in good condition and original location. All presentation materials must be removed from review spaces following reviews and all studio materials must be removed from the building at the close of every quarter. Students may, however, store material in their credenzas over winter and spring breaks.

Studios are inspected on the last day of final exams – negligent students are subject to grade withholding and maintenance costs. Also note:

- The following items are prohibited in Knowlton Hall: non-KSA furniture, liquor, weapons, bicycles, skateboards, rollerblades, and pets.
- The following tools are prohibited in Knowlton Hall: spray paints, foam cutter wands, welding devices, heat guns, and any flame or gaseous liquid device.
- The following safety compliances must be observed: electrical power cords cannot be connected in a series or extend over traffic areas; fire extinguishers must remain accessible and in full view; access to stairwells, corridors, and aisles must maintain a 44" clear width and handrails must be unobstructed.
- Building surfaces cannot be marked, anchored to, or penetrated.
- Installations may not occur in any part of the building except by permission of the KSA Building Coordinator.
- Power tools are restricted to the shop except when permission is granted by the KSA Building Coordinator.
- Loud noise is forbidden.
- Graffiti and vandalism are grounds for disciplinary action.

KSA STUDIO CULTURE POLICIES

The Knowlton School of Architecture (KSA) educates students to shape and serve the architectural profession, contribute to the intellectual and creative purposes of the University, and promote the improvement of design on the campus, in the region, and in the world. KSA is a learning environment that values optimism, respect, collaboration, engagement, and innovation.

Studio

The design studio is a central feature of the KSA architecture curriculum and a unique educational model. It is a place of exchange: studio projects are common ground for discussion and all studio members participate in their evolution. Critique is intrinsic to project development and an opportunity for students to join with peers, faculty, and guest critics in an open spirit of innovation. Critique also allows students to appreciate how their work can be interpreted from different, often unanticipated, perspectives.

Intellectual Diversity

KSA values the intellectual diversity of its faculty and students, and supports diverse approaches to studio instruction. A respect for individual rights is the foundation of an intellectual community, and all members of the community conduct themselves with the highest ethical principles and regard for others.

Collaboration

Design studios promote collaborative learning experiences that strengthen design solutions and anticipate professional practice. Students working jointly on one design problem learn how to work with others in successful collaboration. Students working on individual design solutions learn from and are supported by peers outside class time as well as faculty during class time. KSA values the involvement of other disciplines and professionals who contribute knowledge from unique perspectives.

Interdisciplinary Opportunity

KSA supports and encourages interdisciplinary research and design opportunities through which students acquire a broad range of skills and experiences.

Leadership

Students are encouraged to engage in school and community organizations and have a variety of opportunities to do so through active roles in committees, events, and service projects. Involvement in organizations such as AIAS, SERVitecture, and Habitat for Humanity enhance the learning environment and expand abilities.

Healthy Lifestyle

KSA recognizes that time management is central to a rewarding design education and a healthy lifestyle. KSA encourages faculty to guide students in developing the capacity to reconcile competing demands in their work and lives, while encouraging students to engage the wide range of opportunities available at The Ohio State University.

Integrity

KSA holds its students to the highest standards of academic integrity in their school work and ethical conduct in their daily lives. These standards are to guide behavior in all aspects of school life: fulfilling course assignments, maintaining buildings and equipment, interacting with peers, staff, and faculty; and behavior within the building and the broader academic and civic community.

SCHEDULE

8/21 INTRODUCTION | STUDY 1.1 HANDOUT "VARIATIONS ON VOLUMETRIC SOLIDS"
8/23

8/26 MATERIAL LAD INTRO/SAFETY INTRO
8/28 INTERNAL REVIEW OF STUDY 1.1 | STUDY 1.2 HANDOUT "INTERIORITY"
8/30

9/2 **LABOR DAY OBSERVED – NO CLASS**
9/4 [Ken Smith KSA Lecture]
9/6 INTERNAL REVIEW OF STUDY 1.2 | PROJECT 1 HANDOUT

9/9
9/11 [Tridib Banerjee KSA Lecture]
9/13

9/16 SHOP TUTORIAL (FOAMCUTTER/3D PRINTER/CNC) | STUDY 1.3 HANDOUT
9/18 [Peter Trummer KSA Lecture]
9/20

9/23 SHOP TUTORIAL (FOAMCUTTER/3D PRINTER/CNC)
9/25 **REVIEW OF PROJECT 1** | PROJECT 2 HANDOUT [Steven Holl Lecture 7pm@Mershon]
9/27 [Petra Blaisse KSA Lecture]

9/30 SHOP TUTORIAL (FOAMCUTTER/3D PRINTER/CNC)
10/2 [Doug Graf KSA Lecture]
10/4

10/7 SHOP TUTORIAL (FOAMCUTTER/3D PRINTER/CNC)
10/9 [Laura Kurgan KSA Lecture]
10/11

10/14 LASER CUTTER TUTORIAL
10/16 [Sylvia Lavin KSA Lecture]
10/18

10/21 LASER CUTTER TUTORIAL
10/23 **REVIEW OF PROJECT 2** | PROJECT 3 HANDOUT
10/25

10/28
10/30 [Mark Lee KSA Lecture]
11/1

11/4
11/6 [Daniel Libeskind KSA Lecture]
11/8 [Mose Ricci "Situating Food" Symposium Lecture]

11/11 **VETERANS DAY OBSERVED – NO CLASS**
11/13 [Sebastian Schmaling KSA Lecture]
11/15

11/18
11/20
11/22 **FINAL REVIEW (TBD)**

11/25 **FINAL REVIEW (TBD)**
11/27 **THANKSGIVING BREAK – NO CLASS**
11/29 **THANKSGIVING BREAK – NO CLASS**

12/2

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INTRODUCTION

Whereas in the first-year (freshman) studio students are acquainted with basic methods of inquiry and making along a linear strategy, the second-year studio seeks to develop enhanced architectural and design attention by developing and refining particular approaches to focus, awareness, and judgment within the design process. Though this process CAN be linear, it can also be highly experimental and oblique with respect to initial ambitions. This discovery process requires the student not only to develop a sense of purposeful play and production, but also requires them to become more skilled at playing the role of editor and critic with respect to their own work and the work being done around them. More specifically, the student is tasked with being able to move adeptly between research and production while incorporating the mediums of design available to the aspiring designer.

Over the course of the semester you will be exposed to the realizations of past architectural inquiry and production (via the History sequence course) as well as traditional and contemporary tools for the production of those inquiries (via the Representation course). You will also be introduced to various technologies in the school fabrication lab. These support courses and technologies will provide exposure to many of the possible ways of “making” throughout the tenure of your studies, but will require your dedication to studio production as a means of fully realizing the potential for architecture to produce purposeful and deliberate space.

APPROACH

There are many ways to enter into a study of architecture. On the one hand, architecture as a discipline has associated histories, theories, codes, and technologies that may seem alien to the beginner. But on the other hand, each student of architecture comes to the study with a unique set of experiences; many of these experiences are inherently architectural.

One of these experiences is that of the house. Its *everyday* nature, whether experienced firsthand or through its ubiquity in the American landscape, has the propensity to remove it from critical consideration. The painter Jean Helion rightfully said that “All of architecture is colored by the problem of the house.”

During the autumn semester, we will undertake a series of experiments and projects that address issues raised by housing of different types and for different uses. Ultimately we will question this type as a case for certain cultural norms (such as the nuclear family unit and its preferred form of habitat as a free-standing structure on a green lawn). Through a series of design studies and architectural projects, we will renegotiate this convention or even leave it behind.

The single-family house: exterior vs. interior

Andrea Deplazes described the evolution of the house from a single room to the compartmentalized dwellings that could support ever-increasing desires for privacy, variety, and multiplicity of use.

Because materials and construction techniques have always had limitations in terms of availability and performance, instead of expanding outward to add space, the original single room focused inward and was subdivided. Exterior walls could be carved out of or built into. There was (and still remains) an economy to this approach as functionality could be maximized and material consumption minimized. This produced an architecture that was outwardly fairly simple but complex on the interior.

The initial exercises in the 2nd Year studio will be based on developing and understanding some of the forms and methodologies that can be used in the development for architectural production. These exercises will segue into particular and refined spaces and collections of spaces that incorporate architectural programs familiar and unfamiliar.

STUDY 1.1

Variations on Volumetric Solids (Identity and Iteration) (Variables) (Mutations)

Every category of geometric solid possesses definable traits that make it identifiable as such. You will begin by identifying some of these forms and the qualities that define them. Through a series of drawing and modeling experiments, you will attempt to create mutations of some of these forms (i.e. forms that, while retaining some qualities of the source form, deviate from the original by providing new traits or qualities). Post-mutation, these forms will likely no longer be able to qualify as falling within the geometric category of the source form, but will instead establish itself as a new type.

What are the formal qualities that make up the studied geometric form(s)?
What are the manners in which the variables can be manipulated?
What do changes to the variables of that form mean for the new form?

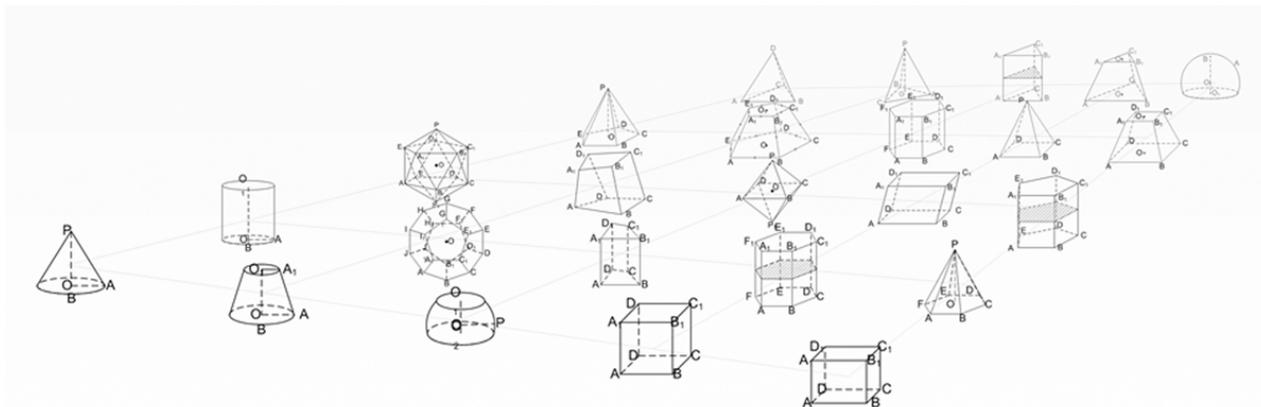
Basic Task:

Identify two categories of geometric solid. Create six variations on that solid for a total of twelve (12) new forms. Though initial exercises can be experimental, a major part of the success of this phase is the ability to accurately model what has been drawn (or, conversely, to accurately draw that which has been modeled).

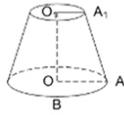
Document the variations via model, plan, and section. The plan and section of each new form should be indicative of the new or important traits created in that form.

All models should be based upon (approx.) a 3"x3"x3" original volume.
All drawings should be at 1:1 scale.

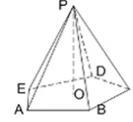
*Materials to be used will be determined by individual instructors.



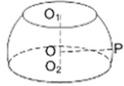
CONE FRUSTUM



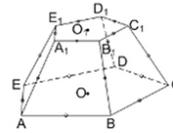
PENTAGONAL PYRAMID



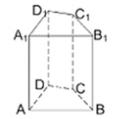
CROSS-SECTION SPHERE



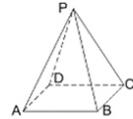
PENTAGONAL PYRAMID FRUSTUM



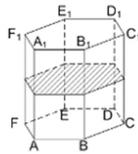
FOUR-PRISM



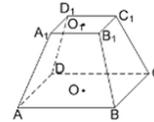
SQUARE PYRAMID



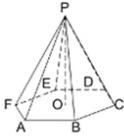
HEX PRISM



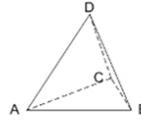
SQUARE PYRAMID FRUSTUM



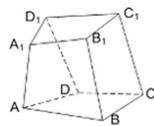
HEX PYRAMID



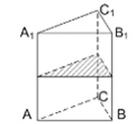
TETRAHEDRON



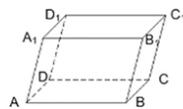
IRREGULAR POLYHEDRON



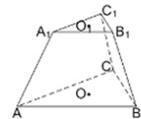
TRIANGULAR PRISM



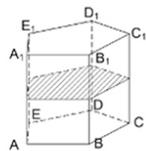
PARALLELEPIPID



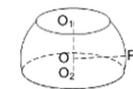
TRIANGULAR PYRAMID FRUSTUM



PETAGONAL PRISM



CROSS-SECTION SPHERE



STUDY 1.2

Interiority (Interiority and Scale [to human occupation])

Basic Task, first part:

Select two of the previously made forms and double the scale. Create an interior volume for each form that relates to the scale of human occupation.

Models and drawings should now be based on (approx.) a 6"x6"x6" volume.

*Use the mass and/or thickness of the volume to aid in determining the interiority and to differentiate solid vs. void.

Basic Task, second part:

For each of the three forms, create two distinct interior volumes that relate to each other in some way. Scale of overall volume should continue to be based on a 6"x6"x6" volume.

PROJECT 1

House of the Dead/Mausoleum (Siting/The Most Basic of Grounds/Threshold/Aperture/Program)

Program:

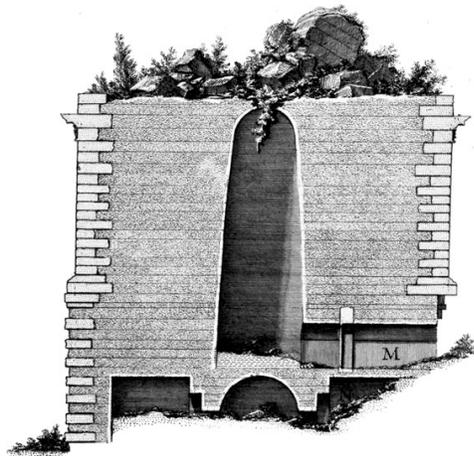
Internment Spaces (public) x 16
Family internment locations (private) x 2
Entry/foyer

Site (see STUDY 1.3):

To be determined by individual students/instructors. Must fit within a 12"x12" base, to be mounted atop podium



H. Labrouste, project for the Laperoue mausoleum, 1829.



An Analysis of the Structure of the Mausoleum of Cecilia Metella: From Antichità Romane, 1756.

STUDY 1.3

Siting

Basic Task:

Build a framed platform (12"x12"x12") using the tools in the woodshop and site your Mausoleum in a manner keeping with the agenda of the project.

The "site" here is to be determined by the student and can be topographical or abstract.

PROJECT 2 (FROM THE SINGLE TO THE DOUBLE)

The world-wide economic down-turn and trends towards urbanization combined with desires to live more sustainably have resulted in a crisis of living: people have to drastically reconsider their living arrangements. There is increasing pressure to provide alternate models to relatively the large, single-family houses with privatized lawns of grass.

In response to this shift, you are to design a home(s) for two families on a small lot sized for a typical single-family home. The definition of "family" is left to the discretion of each student as is the spatial relationship between the two entities. That relationship could range from providing completely independent living to one where the two co-mingle. No family unit should have more than 1200 square feet of living space.

"Like the sensation of heat can only be appreciated by first experiencing cold, architectural space can only be perceived through its physical boundaries"*. This statement becomes even more profound when considering that the condition of boundary is the device you will use to establish the relationship between the two families you are to accommodate in your double house. Through the series of techniques projects, you already have experience with boundary and spatial conditions. You will investigate and dissect these projects through drawing and photography to uncover a relationship between the two families.

As we move from the abstraction of the technique projects to the realities of site and program, consider the lessons of the sphere: the relatively platonic nature of exterior boundary condition revealed very little about the hidden interior. In many ways we can see this as analogous to the stylistic chameleons (English tutor, Georgian, Victorian) that line the streets of typical suburban neighborhoods.

Now what is the relationship between interior and exterior? Do they become more similar? Does the exterior deform to the site while the interior responds to the needs of every-day living?

**Andrea Desplazes*

Duplex (Overlapping/joining of similar forms)

Description:

Assignments:

Examples:

PROJECT 3 (FROM THE DOUBLE TO THE MULTIPLE)

Housing Pile (Multiples/further complexities)

Description:

Assignments:

Examples: