Title: Specification Writing: A case-study seminar on the theoretical foundations and consequences of the contemporary professional practice environment.

“The relationship between the Contract Drawings and the Contract Specifications in architecture is equivalent to the relationship between the pictures and the audio track in a movie, the latter providing the sounds and dialogue that are essential in precise collaboration with the flow of images to bring the film to life.” From CONSTRUCTION SPECIFICATION WRITING: Principles and Procedures 6th Edition

With the advent of digital technology/computational methods and the growth of internationalization of professional practice that revolutionized both the professional and boutique architectural design environment beginning around 1990, the factors that kept most boutique practices with cultural and/or discourse-driven ambitions comfortably distinct and separated from the service sector as a mode of practice – the basic business model, the relative status of standard formal typologies, relative costs, the vagaries of the regulatory environment, the regionalization of building delivery systems, etc – quickly began to fade forever into the past. Today, with the advent of BIM, a National CAD Standard, Integrated Project Delivery and Fast Track production as well as an equally broad and increasingly standardized regulatory and financial environment for the building industry boutique design practices must on virtually the same terms as service/commercial practices.

The consequences are interesting and simple to demonstrate. Because of these changing conditions, the following buildings, all built within the last 20 years, could not be build today for either legal or insurance reasons, even if the money for the construction were available:
Diamond Ranch School – Morphosis, The Wexner Center – Eisenman, Disney Hall – Gehry, Congrexp – OMA. Seattle library was almost stopped mid construction and required extensive redesign and 18 month delay. It is likely, because of proposed code changes to School and University classroom buildings under discussion as result of the national spate school shootings that the same will be said of Knowlton Hall in the very near future.

So, it is no longer adequate for an architect so inclined to study and master the history and theory of a building’s abilities to produce profound, long-lasting effects that far exceed the immediate functional, performance and service demands of a client if the building environment itself prohibits the possibility of realizing any of these talents. Thus, gain a foothold, even a possible advantage in our current environment, we must also understanding the elements of the profession with the same theoretical perspective as we do our discipline. Insofar as specification writing stands as formal representation of the qualitative “dialogue” of the legal documentation that sets a building into motion, it seems a reason place to begin such a case study.

Enrollment limited to 10 persons. Arch Pro Practice Class highly recommended but not required 3 credit hours.
Oubrie

Title: Variations, Morphing, Transformations: studies & exercises in the art of making, making art: from 2D to 3D and 3D to 2D

Very often, when we start inventing a new project, we begin to translate anything born in our thoughts through one or more often several sketches, going constantly back and forth to them and new ones, proceeding to better describe, give form: in fact, starting from zero, generating a project until now unknown to us.

This operation brings the problem of the origin as its process is one of the most genuine, the most direct, the most natural… it is so simple, requiring in fact, as technology, just some paper and pencil and our brain dreaming, imagining… recently the online magazine Wan asked this question to Philippe Stark, the French designer of impossible objects: “if you had to use only one material, what would it be?” and Starck to reply: “My brain…”

But as we all know: computers, drawing tablets, softwares, CNC machines, 3D printers and now even 3D descriptions with an App on our I-phone have multiplied our possibilities and allowed us to conceive directly spatially, volumetrically, plan and sections have become sub-product of these possibilities. In fact today we can say “the three dimensionality is the generator” paraphrasing the famous edict of Le Corbusier in “Vers une Architecture”: “…the plan is the generator”… meaning that the architecture was created first two dimensionally in plan and in section, the “façade” being the resulting product of their interaction. The spatiality of the project was practically mental, conceptual, inside the designer’s head, when today we do not work in such still a “compositional” let say “pre-digital age mode”, we can directly think in terms of space. But this process of “passage” from the 2 to the 3 world, or vice-versa, has always been intriguing, mysterious and some time magnificent., it is why this seminar will explore some of its multiple facets.

Around 1908-1914, during their real “cubist” period, George Braque and Pablo Picasso investigated new modes of representation of space on a two-dimensional surface, respecting strict conditions of edge and autonomy, without abandoning the presence of the object, even suggested, eliminating the perspective technique in use since the Renaissance, exacerbated once by Caravaggio and finally diminished by the 19th Century “Beaux-Arts” painters, the so-called “pompiers” artists. Two of their main discoveries were the “papiers colles” and the transformation of the pictural in sculptural form - in fact our problem here.

Numerous creative painters, sculptors and architects have been since deeply involved in this transformative process and we will study some of them in the course of this seminar. Starting from the initiators Georges Braque and Pablo Picasso, with a special attention to his serie of three dimensional painting-sculptures: the guitars, created between 1912 and 1914. We will look at Max Bill and his “Concrete Art”, at Naum Gabo and Antoine Pevsner tridimensional explorations: all sculptors whose art prefigured some of the spatial conceptions of today… or at Francis Bacon dramatic deformations on the other end of the spectrum.

In architecture we will examine the relationships between drawing generating projects in the work of Lebbeus Woods, Steven Holl, Frank Gehry, Wolf Prix.
Students will research and present their work from this specific point of view. It will not be to perform analysis projects but to research this specific problem of the origin of the project, of the origin of its generation.

It will also be required from the students, every 2/3 weeks, to produce an artefact based on the studies of the precedent week. So the collection of each student artefacts will be her/his final production associated with a powerpoint presentation.

To launch this process from the beginning, each student will start by making a photographic description of her/his head i.e a 3-dimensional representation which will become manipulated and extrapolated to 2 dimensions first, and then back to 3, prefiguring some other productions in the course of the seminar.

Schedule, exercises and readings will be provided at the first session.

3 credit hours

ARCH 5590: TOPICS IN BUILDING TECHNOLOGY

Cruse

Title: Novel Thermodynamics: On the Bond of Architecture and Energy

This seminar will explore the fertile relationships between architectural form and thermal vitality. While normative architectural practices typically address building’s thermodynamic qualities—temperature, energy, entropy, etc.—as secondary to form and space, this seminar will examine historical narratives and contemporary examples of novel thermodynamics, were architecture’s formal and thermodynamic qualities are united in complex, potentially contradictory, yet always compelling ways that expand it’s expressive potential and cultural relevance.

Novel thermodynamics seeks an expanded role for architectural expression by linking the fixed to the dynamic and the ocular to the atmospheric. The conceit of novelty is a disruptive element and a source of inspiration. Novel thermodynamics expands the definition of architectural innovation by looking more expansively at architecture itself as seen in many contemporary projects. BIG’s “engineering without engines” combines parametric design with climate to privilege the building envelope. Elemental’s Innovation Center (2014) poetically exploits the aesthetics of inertia, while materially inverting the office building typology. The non-style of MOS’s Element House (2013) remixes issues of materiality, media and history with sustainability into a polyphonic narrative.

3 credit hours

ARCH 5590: TOPICS IN BUILDING TECHNOLOGY

Baumberger

Title: Advanced Digital Fabrication Techniques

This is to be a project based seminar employing advanced digital fabrication techniques in the MAT/FAB Lab of Knowlton Hall. The course will include a series of software and equipment
workshops in the first part of the course. In part two students will be applying this knowledge toward the investigation and completion of a fabrication problem in the form of an installation or furniture piece (TBD).

3 credit hours

ARCH/CRPLAN 5960: DESIGN COMPETITION

Oast

Design competition details TBA.

2 credit hours

ARCH/LARCH/CRPLAN 5960: DESIGN COMPETITION

Kleit

This course focused on the HUD Student Planning and Design Competition (Graduate Students Only).

From HUD’s website: “The need for quality, affordable housing has never been greater. At its best, housing can help strengthen the social and physical fabric of communities and neighborhoods. It is the hope of HUD and PD&R that by initiating and funding this competition, a new generation will advance the design and production of livable and sustainable housing for low- and moderate-income people through research and innovation…..The IAH competition has been designed to replicate a real-life approach. Multi-disciplinary teams comprised of graduate students in architecture, planning and policy, finance and other areas will be asked to address social, economic, and environmental issues in responding to a specific housing problem developed by an actual public housing agency (PHA).

Team registration with HUD for the 2016 competition ends December 10, 2015. For more information, visit the HUD Challenge website.

This course is cross listed in Architecture, Landscape Architecture and City and Regional Planning.

2 credit hours