



FALL 2017

LAR TECTONICS II

Site and Process

LAR 5264

CRN: 85244

Tuesday

12:00pm - 4:00pm

Secret Room, 1001 Building

Paul Kelsch

This course will provide an overview of site construction practices with particular emphasis on applied grading, site layout, hydrology, stormwater design, and vegetation management. It will also address the ways in which sites are constructed in theoretical discourse. Theoretical readings will serve to bridge the perceived separation between theory and practice, and between design and construction. Because site construction is a broad and expanding topic, the theoretical perspectives will also serve to organize the material in a coherent framework and relate it to other discourses of landscape architecture. The first class will meet at 12:00 noon at Windmill Hill Park, at the corner of Lee and Gibbon Streets. Bring a sketchbook.



FALL 2017

IDEAS, CONCEPTS, AND REPRESENTATIONS OF ARCHITECTURE

ARCH 4114 CRN: 80687 (UG)
ARCH 5134 CRN: 90039 (G)

Tuesday 1:30pm – 3:20pm
Secret Room, 1001 Building
Markus Breitschmid

The subject of this course will be the identification, judgment, understanding, and description of buildings, principles, concepts of architecture and aesthetic ideas that have influenced architecture, with particular emphasis on contemporary architecture. The basic didactic tools of this course will be readings and discussions, along with student and faculty presentations. Each student will select one case study building to analyze over the course of the semester. This analysis will include, but is not limited to, ordering systems, materials, structural systems, scenography, architectural elements, site/landscape, and plan/function/program. This course will include required readings, and each student will lead one to two discussions of selected readings. The course offers, on a facultative basis, two field trips: a two-day trip to visit the Glass House by Philip Johnson in New Canaan, Connecticut and a two-day trip to Blacksburg on October 4/5 to participate in the Antón Garcia-Abril/Ensemble Studio lecture and “Antón Garcia-Abril: Conversation with Students” session. This course is required for all Virginia Tech B.Arch students. Those students will have a guaranteed seat in the class, if they choose to enroll.



FALL 2017

ARCHITECTURE AND URBANISM SEMINAR

Decisions, Decisions...

ARCH 5705

CRN: 80814

Tuesday

4:15pm-7:00pm

Middle Room, 601 Building

Susan Piedmont-Palladino

Architecture and the city result from an endless transformation of natural resources into cultural resources through human imagination and energy. In the words of historian of technology Carl Mitcham, we “make to use and use to make,” constantly gathering, assessing, testing, altering, and adapting the resources at hand to construct our world. The built environment that surrounds us represents a series of choices – this, not that; here, not there; this, with that – regarding the joining or separating of materials, environments, and populations. Thus, the most difficult task facing the design professional is that of making decisions.

Focusing on contemporary issues – and there will be many complex ones from which to choose – this class will consist of a combination of urban excursions, lectures and discussions with each of you playing a significant part in the selection of topics for attention. We will use the city of Washington DC as the vehicle for examining the decisions made, avoided, and pending about architecture and its urban setting. Lectures will explore the historical context, present manifestations, and future possibilities of the persistent issues that join architecture, the city, and society. Discussions will focus on how these issues manifest themselves in current practice, society, and the cultural landscape as a whole.



FALL 2017

ARCH AND URBANISM SEMINAR (Cont.)

Some of our questions will include: How is architecture political? How does architecture communicate? How do we communicate about architecture? What is sustainability? Is ornament a misdemeanor or a felony? How is architecture meaningful? What is its value? What is the relationship between architecture and technology? Is there progress in architecture? Drawing on the constant stream of words and images poured into our disciplines by media, old and new, popular and professional, we will dive into these issues and more.



FALL 2017

TOPICS IN DESIGN METHODS

A Bestiary of Architectural Elements

ARCH 4304 CRN: 80702 (UG)

ARCH 4304 CRN: 90225 (G)

Tuesday 4:15pm – 7:00pm
Cloud Room, 1001 Building
Jodi La Coe

"[...] it seems to us, any number of monsters, combinations of fish, bird and reptile, might be produced - the only limit being our own ennui or revulsion."

- Jorge Luis Borges, *The Book of Imaginary Beings*

"I think that architects should be composers and not designers. They should be composers of elements. The elements are things that are entities in themselves."

- Louis Kahn, "Space and the Inspirations"

Body-building analogies have served as the foundation of architectural theory, not only as sources of geometry to define a complete whole, but also as fundamental sources for understanding the nature of things. As Marco Frascari points out, architecture involves a metamorphoses of body into building, in which one transforms oneself into building elements. This transformation mainly occurs in understanding the elements of architecture, in the particular way they join, similar to the members (or limbs) of the body and their joints (arthro). Such anatomical references also involve animal bodies. Hence, an analysis of creation has always been fertile inspiration for man to create his own world through myths, as well as through architecture. For instance, various combinations of different anatomical features have led to the birth of imaginary beings and beasts. Since ancient times, these creatures have been transmitted through bestiaries, and still exert a strong influence in many cultures.



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TOPICS IN DESIGN METHODS (Cont.)

This course will study the body-building analogy through the example of beasts. In the simple form of dictionary descriptions, we tend to associate architectural elements with their primary functions only. Contemporary architectural practice unfortunately considers these fundamental elements as mere instruments in the creation of spaces, devoid of any attention to form and material. Yet, in our everyday experience, we encounter them as more than their so-called primary functions: we actually inhabit them, and they inhabit us through narratives. In that regard, the material essence of these elements, the way that they are designed and made, and more importantly, how they are joined together to form a complete whole, becomes the fundamental concern for creating a poetry of architecture. By offering a Bestiary of Architectural Elements, a deeper understanding of these elements can emerge to the extent that one realizes the design of architectural elements already contain within them all the complexity of the complete work of architecture. Like a medieval bestiaries – which combine observable descriptions of animals with mythological narratives, animal habitats with human uses of animal products, moral lessons, etc. – architectural elements are a complex mixture of materials, technology, cultural associations, and ethical functions. Therefore, by studying these elements beyond their tectonic qualities and functional uses – including their place in literature, art, and other forms of cultural expression – we can open our imaginations for architectural creation.

The most beautiful part of this adventure will be realizing how far our imaginations can take us within the reality of composing an architectural body. Modern architectural construction, as an assemblage of pre-made industrial materials, can suggest a solitary game of putting pieces together. Yet, as a work of architecture, it still must work as a whole body: standing up and resisting the forces of gravity. In that regard, like a medieval bestiary in which new creatures emerge from the combination of parts from preexisting animals, this class will explore new inventions of architectural creations through the given elements.



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TOPICS IN DESIGN METHODS (Cont.)

As humans, we can only invent from preexisting material. It is impossible for humans to create from nothingness (that skill being reserved for gods): yet, like the gods, we can invent new creatures by combining and reimagining existing creatures into entirely new entities that have never been seen before.



FALL 2017

THEORY OF URBAN FORM

Principles, Elements, and Applications:
Three World Cities and the World Beyond

ARCH 5614 CRN: 80811

Tuesday 7:00pm – 10:00pm
Middle Room, 601 Building
David Lever

THE PROBLEM OF URBAN DESIGN: Cities exist on multiple levels, as practical environments supporting the daily life of leisure and work; as human ecosystems with a complex relationship to the energy, hydrologic, and material cycles of the world; and as symbolic constructs of human aspiration and imagination. To confront the daunting world of cities, the designer or planner requires an intellectual framework grounded in principles, a rich vocabulary of elements, and experience in application.

PRINCIPLES: Through lectures and discussion, this course will introduce students to principles of urban design that address the scale and complexity of the modern metropolis. The Parks Movement, City Beautiful, the Garden City, and modernism attempted to bring visual and spatial order to the industrializing modern city, transforming it into a humane site for human activity. In our day, New Urbanism continues this search, and Landscape Urbanism further seeks to integrate nature and the city.

ELEMENTS: We will figuratively travel through Paris, London, and New York to study how streets, squares, building types, urban districts, and open spaces are expressed in each of these world cities, with their distinctly different morphologies and patterns of growth; and will consider how these cities contrast with urban situations in other parts of the world.



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THEORY OF URBAN FORM (Cont.)

APPLICATIONS: Using a sketch exercise, we will consider the role of design in advancing the characters of Paris, London, and New York as they face new urban tasks.

SELECTED TEXTS

- Original texts by Olmsted, Howard, Wright, Geddes, Stein, Garnier, Le Corbusier, others
- Robert Fishman, *Urban Utopias in the Twentieth Century*
- Peter Hall, *Cities of Tomorrow*
- Richard LeGates and Frederic Stout, *The City Reader* (2nd Edition)
- Michael Larice and Elizabeth Macdonald, *The Urban Design Reader*
- Mel Scott, *American City Planning Since 1890*

TOPICS

- An Urbanizing World
- The 19th Century City: An Urban Revolution and its Cures
- The Parks Movement: Frederick Law Olmsted and the Origins of American City Planning
- City Beautiful: Columbia Exposition, Washington, Chicago, Canberra; Totalitarianism and Colonialism
- The Garden City: Sir Ebenezer Howard and the British Experiment
- Garden Cities in America: Sunnyside, Radburn, Greenbelt, the New Towns
- Regional Planning: Patrick Geddes and the Regional Planning Association of America
- Modernism: Origins; Le Corbusier and the Radiant City; the Legacy of Modernism
- The Reaction to Modernism: New Urbanism, Landscape Urbanism, and Beyond
- The 21st Century City

REQUIREMENTS: Two presentations and a semester paper; active class participation; in-class sketch exercise



FALL 2017

MEDIA AND ENVIRONMENT

Photography

ARCH 3514 CRN: 80662 (UG)

ARCH 5115 CRN: 80791 (G)

Wednesday 7:00pm – 10:00pm
West Room, 1001 Building
Dan Snook

This course will explore the medium of photography through documentation, analysis, and creation in the visual environment. The course will also discuss the work of historical and contemporary photographers as a vehicle for studying the issues and methods of the medium.

This is not a course in photographic technique. This is a studio course emphasizing the images each student will create. Each student will produce a self-assigned, cohesive body of work along with a documentation of architectural projects or the built environment. No previous knowledge of photography is required.

EQUIPMENT: This course will focus on the images you create and not so much on the tools you use. We will discuss how cameras work, but it will be within the context of the best way to use the tools you have effectively. You can use your phone, fancy DSLR, or analog camera for any of the projects in this course.

The school has a full darkroom for the processing of black-and-white silver-based film, which all students will be welcome to use. The course will teach basic darkroom technique, but students will not be required to work there unless they are interested in the process.



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MEDIA AND ENVIRONMENT (CONT.)

Access to your own digital camera (phone cameras are OK) or analog camera is highly preferred, but the school does have a limited number of analog 35mm, medium format, and 4x5 cameras available for students to borrow.

COST: Students will be expected to cover their own costs for printing, paper, matboard, and other materials for the course. Most students spend between \$150 to \$250.



FALL 2017

PROFESSIONAL PRACTICE

ARCH 4044 CRN: 80682 (UG)
ARCH 5044G CRN: 80782 (G)

Wednesday 7:00pm – 10:00pm
Cloud Room, 1001 Building
Randy Mars

This course will cover the basic elements of professional architectural practice, from marketing to product delivery. We will discuss the history of the profession, noting how the industry has developed through time. We will also review office organization and operation, as well as how to establish relationships with associated professionals, including engineers, consultants, contractors, and owners.

We will review construction document delivery options, procedures and client services, marketing, and fees. We will also gain an understanding of legal matters and professional ethics. Finally, by seeing our designs through to fruition, we will review the role of the architect during construction and the many relationships involved in that process.

Guests to the class will include general contractors, owners, representatives, engineers, and attorneys, all of whom will share their views of the profession.

Students will be required to complete a series of exercises and encouraged to participate in class lectures and discussions. Midterm and final exams will test students' comprehensive understanding.



FALL 2017

TOPICS IN ARCHITECTURE HISTORY AND THEORY

Word and Image: Ten Treatises

ARCH 4214 CRN: 80695 (UG)
ARCH 5134 CRN: 80805 (G)

Thursday 1:30pm – 4:00pm
West Room, 1001 Building
Ezgi Isbilen

Artifacts – buildings, and cities, drawings and models – largely define our shared architectural inheritance. Yet equally important are texts, which present architects' thoughts through word and image. Treatises describe the cosmology through which an architect bodies forth architectural artifacts. Study of past treatises reveals fundamental continuities and discontinuities within our conceptions of architecture. This historical knowledge, possessed by the early Twentieth Century modernists, allows us to open apparently-fixed present thought to critical examination and therefore allows us to project new futures. This course will look directly to the words of past architects, and through their speech provide the basis to comprehend and imagine possible future worlds. Theory as the study of architectural treatises is intended to resist the flattening of architecture into iconic imagery and consumption of architectural celebrity as a purported measure of value. Instead, by examining sources, we deal with complete world-views in which architectural works find their meaning.

In addition to completing readings and participating in class discussion, each student must write a scholarly 10-page paper with 10 footnotes. The paper will explore an architectural element of one's choice. (See list of recommendations below). To study the changing nature of an element, compare at least one treatise with contemporary practice. Make a frontispiece with 10 elements as a hybrid



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TOPICS IN ARCHITECTURE (CONT.)

drawing of your paper and write a single page ekphrasis for your frontispiece. Your paper title, outline, frontispiece draft, and bibliography will be due at midterm. The complete frontispiece and ekphrasis will be due on the last class session, while the complete paper with its frontispiece will be due as your final exam. PhD students, in addition to all of the above, must also present a treatise to the class.

Suggested Architectural Elements

Air	Arch	Balcony	Body	Brick
Ceiling	Chimney	City	Column	Concrete
Corridor	Cosmology	Door	Earth	Elevation
Empathy	Diagram	Detail	Fireplace	Floor
Foundation	Garden	Glass	<i>Ichnographia</i>	Measure
Model	Naming	North Arrow	Ornament	Perspective
Plaza	Proportion	Roof	Room	Section
Shadow	Sun	Staircase	Street	Structure
Temple	Theater	Threshold	Time	Toilet
Wall	Water	Weaving	Window	Wood



FALL 2017

COMPUTER APPLICATIONS IN DESIGN

Revit

ARCH 4164 CRN: 80691 (UG)

ARCH 5064 CRN: 80786 (G)

Thursday 4:15pm – 7:00pm
Computer Lab, 1001 Building
Samer Bitar

This introduction to Revit will focus on key concepts of BIM (Building Information Modeling) and develop fundamental skills in using Revit as a designer.

The course will integrate BIM into the design process by teaching methods of design, analysis, and production that compliment methods used in the academic studio. We will also examine the implications of BIM on the professional practice of architecture. Students will be expected to leave the course with the competence required to contribute to a professional practice with BIM.

The course will be structured as a series of workshop-style lectures with related tutorial assignments and two project presentations (mid-term and final) demonstrating students' design projects.



FALL 2017

MATERIALS PROCESSES WORKSHOP

Design Build

ARCH 3514 CRN: 80660 (UG)

ARCH 5125 CRN: 80795 (G)

Thursday 4:15pm – 7:00pm
Red Room, 1001 Building
Ryan Pieper

“The mass of the subject matter, like a lump of wax, is at first resistant to handling; but if diligent application kindles the intellect, suddenly the material softens under this fire of the intellect and follows your hand wherever it leads, docile to anything.”

- Geoffrey de Vinsauf, ca. 1200

Ever since L.B. Alberti famously declared in the Renaissance that, “the carpenter is but an instrument in the hands of the architect”, the constructing of buildings has been increasingly separated from their construing. While various efforts have been made throughout history to re-unify the architect and the builder, a clear schism remains between those who conceive of building and those who carry out the conception. With new software technologies (BIM) promising a reunification of hand and mind through the rise of a ‘digital’ master builder, the desire to resurrect the pre-Renaissance notion of the architect as master builder is as powerful as ever.

The directness of touch is largely absent from the daily work of a modern architect. Stuck on cellphones or behind the screens of computers, architects nowadays have lost many of the basic sensibilities one can only learn through the sense of touch, via direct confrontation with materials. In WAAC Design Build, the hand becomes the singular and proper instrument with which to explore the realm of matter, allowing one to not only physically, but mentally, grasp architectural concepts. The hand thus becomes a direct extension of the architect's imagination.



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MATERIALS PROCESSES (CONT.)

Design Build students undertake projects that involve the skilled application of both hand and mind, engaging in the full spectrum of constructive thinking, from conception to drawing and modeling, all the way through to execution and reflection. Many Design Build projects involve renovation of the 1001 Prince Street building itself, allowing students to leave behind a small part of their work here to act as future inspiration for others.

ORGANIZATION: Class meetings will be devoted primarily to group work and workshop instruction. Occasionally, we will hold a short seminar to discuss project progress and pertinent theoretical topics. Shop demonstrations, field trips, and relevant readings will be utilized as necessary. Given the conversational nature of building projects, no pre-determined schedule is provided. Rather, the direction of the course will depend on the progress of students' projects.

REQUIREMENTS AND ASSESSMENT: Students will be evaluated based on participation and personal initiative in the workshop, as well as on contributions during seminar discussions. In addition to completing one's chosen Design Build project, each student must finish an initial workshop-based project and participate in final presentations.

- Introductory Project: 25% of grade
- Attendance and Participation: 25% of grade
- Final Project and Installation: 50% of grade

Students will be expected to allocate appropriate time outside of class toward the production of their projects. A GTA will be available during posted hours (exact days and times TBD). The workshop will be open 6:00am to midnight, seven days a week.



FALL 2017

TOPICS IN DESIGN METHODS

Collateral Beauty: Towards an Architecture

ARCH 4304 CRN: 90259 (UG)

ARCH 4304 CRN: 90260 (G)

Thursday 7:00pm – 10:00pm
West Room, 1001 Building
Martin Ahner

Louis Kahn called it “the essence of architecture” when he stated, “There is no such thing as architecture, what exists is the spirit of architecture.”

If we talk about “essence” in architecture, the term is difficult to rationalize. The aspect of beauty seems to be inseparably interwoven. Beauty is – as we know – is always in the eye of the beholder. However, there is something more: the measurement of things, their proportion and materiality. An aesthetic object is ultimately far more than its external appearance. It also implies an inner grace and dignity.

The interaction of materials, their poetic benignity, the literal touching of body and soul: it is less the fact of solid materiality, but rather the spiritual quality that communicates our material sensations to our senses, the indissoluble combination of material and immaterial characteristics of architecture that attracts us. When our fingers gently touch surfaces and cannot let go. An interplay of textures in reference to light that indulges us, detaching us from the world at hand for a moment. It is this emotional perception that lets us experience what we call “atmosphere.”

The course will address atmosphere and the tangible and intangible properties of place.



FALL 2017

PHD SEMINAR

Readings in the Philosophy of Architecture

ARCH 6005

CRN: 80873

Friday

10:00am – 12:30pm

Secret Room, 1001 Building

Paul Emmons

This advanced seminar is devoted to developing critical thinking, reading, and writing skills with texts focusing on the philosophy of architecture drawn from a variety of sources. Specific readings will be selected each semester and all participants will actively engage in their discussion. Guests will present their research to the group throughout the semester. Presentation of specific research topics to the group by the participants will also be scheduled. Final grades will be based on class participation and the development or expansion of a final project, which may include a written paper and an interpretive drawing.



FALL 2017

GRADUATE INDEPENDENT STUDY

The George Washington Memorial Parkway

Contact professor Paul Kelsch (pkelsch@vt.edu) to enroll.

In 2009, The National Park Service (NPS) completed “The Vegetation of the George Washington Memorial Parkway Cultural Landscape Report” (CLR) in coordination with the VT Landscape Architecture program. This invaluable report compiled data along the George Washington Memorial Parkway (GWMP), between Old Town Alexandria and Arlington Memorial Bridge, comparing original planting plans with the current landscape, assessing changes, and providing management recommendations.

This current project will bring the more general analyses and recommendations of the CLR to the practical level of applied management within the GWMP. We will develop a methodology and sample analysis for combining data on current tree locations with historic planting plans. We will then use this methodology and analysis to better inform GWMP management decisions regarding tree plantings, tree removals, and tree maintenance, communicating to the public those trees that hold a special place in the history of the park.

This effort will be managed collaboratively by the park’s horticulturist, landscape architect, natural resource manager, and GIS Specialist, along with the Virginia Tech Landscape Architecture faculty. The management program will provide multiple benefits and uses cutting across all divisions of the park. This information will guide natural and cultural landscape planning and design efforts, support maintenance and operations, and illustrate the history of the Parkway’s most significant living cultural resource.



FALL 2017

ENVIRONMENT AND BEHAVIOR STUDIES

UAP 5424

CRN: 87997

Monday

4:15pm-6:45pm

Room, 1021 Building

Shalini Misra

Why do people over-consume scarce natural resources? How can they be motivated to adopt more environmentally sustainable lifestyles? How does the design of our cities, neighborhoods, and buildings affect our health and wellbeing? What impact do crowding, noise, and poverty have on people? How is the increasing use of information and communication technologies affecting the quality of our lives?

Questions like these are of interest to environment-behavior scholars and professionals. Through the readings, lectures, exercises, activities, and assignments in this course you will: (1) learn about major theories, concepts, and principles of environment and behavior studies; (2) appreciate the linkages between the social, cultural, and physical aspects of our environments; (3) be acquainted with the research methods, tools, and techniques used in this field; (4) understand and critically evaluate empirical research and its findings in the field of environment and behavior studies; and (5) create a research evidence-based product to address a real environment-behavior issue in the local community.