



**Fall 2018 Elective Course Offerings ~ as of 8/14/18**

**LANDSCAPE ARCHITECTURE**

LARP 720-001: Topics in Representation: Landscape Drawing

Valerio Morabito, Adjunct Professor of Landscape Architecture

Tuesday 10:30am – 1:30 pm

The research of an “Idea” of landscape and the training to the representation of it is the aim of this course. Sometimes it is easy to lose this “Idea” or it is impossible to recognize it because of the millions of images we can meet in every city, space, book, magazine and so on, and we often use them without a critical position. May be we have no particular training to break up an idea of landscape from a form of it. Traditional sketches, digital sketches, abstract models, alterations of pictures and a relationship between pictures and sketches, are the tolls we will use to discover and to understand our personal and collective “Idea” of landscape. Tools we can use day by day, to form a personal training, in a way to preserve an abstract condition of space, an interior our own space, a special place where we will be able to preserve our idea of landscape. This course is open to all interested School of Design students who have previous drawing experience or have taken foundation studios.

LARP 730-001: Topics in Professional Practice: Transformational Leadership: Research and Practice

Lucinda Sanders, OLIN, Philadelphia

Wednesdays, 3 - 6 pm

This course is designed to explore aspects of transformational leadership which can provide greater agency to emerging landscape architects. Two possible conduits for expanding the field of landscape architecture are practice and research. These two means of expression will be woven together under the umbrella of transformational leadership. Registration will be limited to LARP students, others by permission of the instructor. LARP-740-001 – topics course, need a description for this offering.

LARP 740-001: Topics in Digital Media: Simulated Natures

Keith VanDerSys, PEG-OLA, Philadelphia

Wednesdays, 9 am – 12 pm

This seminar will explore the value and potential of computer-aided analysis, simulation, and design in landscape architecture. Computation has greatly expanded the means by which designers can engage the temporal and relational qualities inherent to the dynamic medium of landscape. Students will engage in combining the computational capacities of geospatial analysis (GIS), computational fluid dynamics (Aquaveo SRH-2d, SLOSH, Ecotect, Ladybug), and parametric software (Grasshopper) to investigate new modes of defining, articulating, and reorganizing vacant sites along the banks of the Delaware River. Demonstrations of the essential tools and techniques will be presented and discussed throughout the semester, along with relevant project examples, readings, and guest lecturers. Students will explore the creation of living shorelines as new types of “environmental art forms.” These interventions, as both ecological resource and spectacle, can activate the publicly inaccessible pier sites along the southern portion of the Delaware River Master Plan. As such, we will be working closely with the Delaware River Waterfront Corporation (DRWC), Central Delaware Advocacy Group (CDAG), and The Nature Conservancy (TNC).

LARP 743-401: Topics in Digital Media: Geospatial Software Design  
 Dana Tomlin, Professor of Landscape Architecture and Regional Planning  
 Wednesday 9am – 12noon

Cross-listed with CPLN 670-401. The purpose of this course is to equip students with a selected set of advanced tools and techniques for the development and customization of geospatial data-processing capabilities. The course is open to any student with experience equivalent to that of an entry-level class on GIS.

LARP 755-001: Arboretum Management I: Understanding Plants  
 Cynthia Skema, Botanical Scientist, Morris Arboretum  
 Tuesday, 1:30 – 4:30pm, Held at the Morris Arboretum

In this course, students will learn about plants from an organismal perspective, an applied/practical perspective, an aesthetic perspective, an environmental perspective, and an evolutionary perspective. Utilizing the plant collection of the Morris Arboretum as a living laboratory and the expertise of arboretum staff, this course will bring all students, novices and experts alike, to a better understanding of plants. Session topics integrate both theoretical and hands-on practical work. Course assessment will be based on weekly practical assignments and two exams. Please note that this course takes place at the Morris Arboretum in the Chestnut Hill section of Philadelphia and students are responsible for transporting themselves to and from the arboretum on their own for class each week. For further information about the course, students may contact Cynthia Skema (cskema@upenn.edu).

LARP 780-001: Topics in Theory and Design: Design in the Terrain of Water 1  
 Anuradha Mathur, Professor  
 Tuesday, 1:30pm – 4:30pm

Designers largely image, imagine, and build on dry ground even when they are in water. Their tools, techniques, and modes of visualization privilege the dry moment. They work with maps and images that are generally conceived when the rain has passed, ice has melted, and clouds have cleared and when water appears contained within or separated from land. To consider wetness as the terrain of design is more than a simple shift in emphasis. It is a sensibility that privileges ambiguity over clarity, fluidity over containment, and possibility over probability. In this seminar / workshop we will explore past practices and contemporary projects through this sensibility. We will also in parallel develop techniques that engage water and wetness as the ground of design.

LARP 780-002: Topics in Theory and Design: World Park Working Group  
 Richard Weller, Professor and Chair  
 Friday, 1 – 4pm

This seminar concerns the planning of a contiguous landscape from Patagonia in the south to Alaska in the north. The seminar will work as a team to conduct research, site analysis and visualization of a 25,000-kilometer-long hiking trail linking the national parks across 13 nations. The seminar will work towards the creation of an exhibition and publication of the concept of a 'World Park' as a new form of global landscape that transcends national boundaries and the fragmentary nature of protected areas.

### **CITY PLANNING**

CPLN 530: Land Use Planning: Principles and Practice  
 Tom Daniels

Tuesday, Thursday, 10:30am-12pm

Exploration of the methods and tools for managing land use and shaping the built environment. Presents how to create a successful Comprehensive Plan, Zoning Ordinance, Subdivision Regulations, Capital Improvements Program, and design guidelines. Also, presents functional, area, regional, and state level-plans.

**CPLN 531: Introduction to Environmental Planning and Policy**

Tom Daniels

Wednesday, 2-5pm

Overview of federal programs for protecting air quality, water quality, and endangered species along with managing climate change, solid waste, toxics, energy, transportation, and remediating brownfields in an overall sustainability framework. State-level, local government, and NGO efforts to protect the environment are also explored as are green infrastructure and green cities.

**CPLN 550: Introduction to Transportation Planning**

Erick Guerra

Tuesday, Thursday, 10:30am-12pm

Survey of the technological and design aspects of urban transportation systems and land use patterns. Covers facilities operations, congestion, environmental concerns and policy debates revolving around mobility issues at the federal, state, and metropolitan levels.

**CPLN 627 Social Impact in Practice**

Julie Donofrio/David Gould

Wednesday, 5-8pm

The course will be an opportunity for students across PennDesign (and other schools) to meaningfully engage with community partners and practitioners working in Philadelphia and the surrounding region, and to grapple with the complex issues necessary for understanding community perspective, thereby influencing the approach when planning and designing as professionals. The course intends to reverse common perceptions and practices of community engagement ("beyond the theater of engagement:") and discuss how to productively and sensitively work with communities of all types, on projects of all scales, to work towards common goals and high aspirations. The organization of the course, will be a combination of readings and discussions, guest lecturers, and tours in the immediate community. The primary assignments will be reflection pieces, case studies, a collaborative group project, and a implementation project proposal. The group project(s) would partner students with a current, ongoing, or new community project that is funded and actionable. Students will work together, with the partner, and with community members to complete a project (could be built, a printed deliverable, evaluation, or other). The final assignment would ask students to brainstorm and present a potential "Phase II" implementation project, thinking through the mechanics of funding partnerships, academic research, etc, that could carry forward the work.

**CPLN 652, Topics in Infrastructure Seminar: Spatial Inequality**

Bob Yaro

Friday, 12-3pm

The Spatial Inequality Research Seminar will focus on the urgent need to reduce the growing economic and social gaps between fast growing, large metropolitan areas, such as Boston, New York and Philadelphia, and nearby small- and mid-sized cities that are losing population and economic vitality. The smaller cities often face vexing issues of access to transportation beyond cars and trucks. The fall research seminar will conduct an in-depth investigation into current levels of spatial inequality, the causes of these divisions, and solutions that are being used to address this challenge around the world.

**CPLN 662: Design in the City**

Marilyn Jordan Taylor

Wednesdays, 9-12pm

Great cities are both real and legendary. They have economies and cultures, identity and brand, pattern and chaos, inclusion and exclusion. They are made by men (and women) who either reap the benefits of their labors or are excluded from them. They are dynamic, or they are dead. Constant change is essential to the city. This seminar will explore the ways in which design -including architecture, urban design, and landscape design -is a constructive force in the creation of cities. What are the various scales of the operation of design? What are its elements? With whom do urban designers collaborate? How does design make "place"? How is the city experienced? How does it cultivate identity, inclusion and equity? Each class will be a wide-ranging discussion about a series of open questions regarding the city and design. Each

student will be expected to bring examples, quotes, readings, and news clips to support his answers. In alternating weeks, we will introduce a design problem to be addressed by teams of two or three students.

## **ARCHITECTURE**

ARCH 711-002: Topics in Arch Theory I: Building Theories

Franca Trubiano

F 9:00-12:00

Recent architectural projects have showcased unprecedented building technologies and inventions. The introduction of new materials, alternative energy sources, big data and the reorganization of global labor practices, have redefined the art of building. However, faced with these vast transformations in how we design and practice, architectural theory has been less than equipped to discuss, evaluate, and debate their impact.

Required is the ability to analyze, rationalize, and theorize their consequences; required is a theory of BUILDING. For decades, architectural theory has been remiss to recognize the contribution which building practices have made to how we ‘think’ about architecture. Redressing this condition is the goal of this seminar; dedicated to the critical examination of ideas fundamental to the art of building. In a text-based review of both significant contemporary projects and seminal architectural writings, this seminar outlines the first ideas of the nascent field that is Building Theories. Designs require their construction, and construction requires rationalization; and it is in this reciprocity that students are invited to elaborate a new theoretical field.

ARCH 711-003: Topics in Arch Theory I: Strange Symmetries: Towards a Symmetrical Architecture

David Salomon

W 9:00-12:00

Allegedly exorcised in the 20<sup>th</sup> century for its indifference to use, context and climate, it never really disappeared. Today, it is back with a vengeance. The diverse, if not divergent practices that use symmetry include: Reiser + Umemoto, MAD, Zaha Hadid, MOS, OMA, OFFICE, Foster, Pezo von Ellrichshausen, Dogma, David Ruy, Mark Foster Gage and Young + Ayata.

Why symmetry, why now? The seminar will look at the history of symmetry as an idea, its use in architecture, and its subsequent expansion into other intellectual arenas. It will then turn its attention to current debates within architectural discourse – namely, those around flat-ontology, Object Oriented Ontology, and global architectural history - and the sublimated presence of symmetry within them. Next, we will look at and compare historical and contemporary architectural projects with one another, using the presence of symmetry in them to help identify/establish cross-cultural and cross-temporal affinities and disjunctions between them. Finally, the ideas of Latour, DeLanda, Harman and others will be deployed to theorize the return of symmetry. In short, through the close examination of symmetrical architecture and ideas about symmetry we will ask if symmetry – with its exhibited capacity to cross borders without losing its identity – help architecture avoid having to make the false choice between autonomy and engagement?

ARCH 711-004: Topics in Arch Theory I: Modern Architecture in Japan – Culture, Place, Tectonics

Ariel Genadt

R 2:00-5:00

This seminar explores the diversity of forms and meanings that modern architecture took on in Japan since its industrialization in the 19<sup>th</sup> century. With this focus, it opens up wider questions on the capacity of construction, materials and their assembly to express and represent cultural, aesthetic, climatic and social concerns. Rather than an exhaustive chronological survey, the course demonstrates salient topics and milestones in the country’s recent architectural history, and places them in contexts of parallel practices in the world. It examines drawings, images, texts and films on architects whose work and words were emblematic of each topic.

## ARCH 711-005: Topics in Arch Theory I: Non-Cities

Paul Preissner

F 9:00-12:00

Sometime around the 1970's market ideology became the divine star for the redevelopment of American and European cities. The domain which was once considered thoroughly public began ceding its territory to the private sector, often for very cheap. What was returned was safety and security, what was taken was unpredictability and freedom. Popular and marketable again, cities compete with each other for the affection of the world's elite tourists and investors at the expense of their actual residents. The effects of this redirection of urban space and the cultural outlines that make it possible have developed a type of space, which Auge' titles as the "non-space." Building off this reading of social space that exists outside of clarity and memory, this seminar extends the designation to that of the city. The city exists as one of the great projects of humankind, simultaneously both conditioned by people and conditioning of people. If today the city is understood as vehicle for economies and lifestyle, this seminar investigates the forms of cities which exist outside the conventional understanding of the global city. These are places which cannot be understood as successes or failures according to the measurements of capital, and therefore allow for new forms of order and cultural relationships to occur. This research seminar will be structured to at first identify the contemporary definitions of the city along with the recent paths which have brought us here, and then detour through a set of case studies to better understand alternative urban forms. These case studies will allow us to speculate on the limits of a city through differing identifiers of "city-ness."

ARCH 711-006: Topics in Arch Theory: Automation in Construction; Architecture in the 4<sup>th</sup> and 5<sup>th</sup> Industrial Revolution

Anna Pla Catala

R 5:30-8:30

This course will research the potential of Automation in Construction (AC) within the technological and cultural paradigm opened up by the 4th and 5th Industrial Revolutions. Particular focus will be placed on the latest developments in Additive Manufacturing (AM) and Robotic Fabrication (RF) applied to architectural construction at the building scale. Whether it is a singular component or a complete building, the full-scale fabrication capabilities of AC, AM and RF is today a fact that is revolutionising design practices and everyday construction.

## ARCH 711-007: Topics in Arch Theory I: Designing for Equity

Aaron Levy

R 1:00-4:00

How has architecture changed in the fifty years since the assassination of Martin Luther King Jr.? This seminar will survey key debates about social equity in architectural theory from 1968 to the present. We will discuss histories of architectural complicity and entanglement and study how design often exacerbates racial and socio-economic injustice. We will also engage current design practices for social intervention, and debate our responsibility to design for equity. Finally, the seminar will address challenges facing the next generation of designers and educators, including socio-economic inequality, labor rights, urbanization, migration, and climate change. The seminar will equip students with theoretical competency in Marxist, Post-structuralist, and postcolonial schools of thought. Throughout, we will engage the writings of architectural critics such as Mike Davis, Fredric Jameson, Andrew Ross, Eyal Weizman, Peggy Deamer, Keller Easterling, and David Harvey, as well as seminal essays by theorists such as Michel Foucault, Guy Debord, and Giorgio Agamben. Students will be expected to actively contribute to class discussion and complete a draft midterm paper and final paper.

## ARCH 719-001: Archigram and Its Legacy: London, A Technotopia

Annette Fierro

W 9:00-12:00

Acknowledging the ubiquitous proliferation of "Hi-Tech" architecture in contemporary London, this research seminar examines the scope of technology as it emerges and re-emerges in the work of various architects currently dominating the city. This scope includes the last strains of post-war urbanism which spawned a legacy of radical architecture directly contributing to the Hi-Tech; a particular focus of the course will be the contributing and contrasting influence provided by the counter-cultural groups of the 60's- Archigram, Superstudio, the Metabolists and others. Using the premise of Archigram's idea of infrastructure, both literal and of event, the course will attempt to discover relational networks between works of the present day (Rogers, Foster, Grimshaw, etc.). As this work practices upon and within public space, an understanding of the contribution of technology to urban theatricality will evolve which is relevant to contemporary spheres of technological design practices. Students will be required to produce and present a term research paper.

## ARCH 721-401: Designing Smart Objects for Play and Learning

Assaf Eshet

T 3:00-6:00

Today's children enjoy a wide array of play experiences, with stories, learning, characters and games that exist as physical stand-alone objects or toys enhanced with electronics or software. In this course, students will explore the domain of play and learning in order to develop original proposals for new product experiences that are at once tangible, immersive and dynamic. They will conduct research into education and psychology while also gaining hands-on exposure to new product manifestations in a variety of forms, both physical and digital. Students will be challenged to work in teams to explore concepts, share research and build prototypes of their experiences in the form of static objects that may have accompanying electronic devices or software. Final design proposals will consider future distribution models for product experiences such as 3D printing, virtual reality and software- hardware integration. Instruction will be part seminar and part workshop, providing research guidance and encouraging connections with subject matter experts throughout the Penn campus.

## ARCH 724-001: Technology in Design: Immersive Kinematics/Physical Computing: Body as Site

Simon Kim &amp; Mark Yim

W 9:00-12:00

The aim of this course is to understand the new medium of architecture within the format of a research seminar. The subject matter of new media is to be examined and placed in a disciplinary trajectory of building designed and construction technology that adapts to material and digital discoveries. We will also build prototype with the new media, and establish a disciplinary knowledge for ourselves. The seminar is interested in testing the architecture-machine relationship, moving away from architecture that looks like machines into architecture that behaves like machines: An intelligence (based on the conceptual premise of a project and in the design of a system), as part of a process (related to the generative real of architecture) and as the object itself and its embedded intelligence.

## ARCH 725-401: Design Thinking

Sarah Rottenberg

T 1:30-4:30

Creating new product concepts was once a specialized pursuit exclusively performed by design professionals in isolation from the rest of an organization. Today's products are developed in a holistic process involving a collaboration among many disciplines. Design thinking — incorporating processes, approaches and working methods from traditional designers' toolkits — has become a way of generating innovative ideas to challenging problems and refining those ideas. Rapid prototyping techniques, affordable and accessible prototyping platforms, and an iterative mindset have enabled people to more reliably translate those ideas into implementable solutions. In this course, students will be exposed to these practices and learn how to engage in a human-centered design process.

**ARCH 731-001: Experiments in Structure**

Mohamad Al Khayer

T 9:00-10:30; 10:30-12:00

This course studies the relationships between geometric space and those structural systems that amplify tension. Experiments using the hand (touch and force) in coordination with the eye (sight and geometry) will be done during the construction and observation of physical models. Verbal, mathematical and computer models are secondary to the reality of the physical model. However these models will be used to give dimension and document the experiments. Team reports will serve as interim and final examinations. In typology, masonry structures in compression (e.g., vault and dome) correlate with "Classical" space, and steel or reinforced concrete structures in flexure (e.g., frame, slab and column) with "Modernist" space. We seek the spatial correlates to tensile systems of both textiles (woven or braided fabrics where both warp and weft are tensile), and baskets (where the warp is tensile and the weft is compressive). In addition to the experiments, we will examine Le Ricolais' structural models held by the Architectural Archives.

**ARCH 732-001: Technology Designated Elective: Daylighting**

Jessica Zofchak

T 6:00-7:30; 7:30-9:00

This course aims to introduce fundamental daylighting concepts and tools to analyze daylighting design. The wide range of topics to be studied includes site planning, building envelope and shading optimization, passive solar design, daylight delivery methods, daylight analysis structure and results interpretation, and a brief daylighting and lighting design integration.

**ARCH 732-002: Technology Designated Elective: Material and Structural Intelligence**

Mark Nicol &amp; Sameer Kumar

F 9:00-12:00

The semester long project will involve a gradual development of architectural ideas that are intimately informed by and centered on knowledge of Structure and Materiality. Employing both physical and digital simulations, the students will synthesize knowledge acquired in previous courses in structures, materials, and construction methods to develop architectural solutions within a carefully selected set of determinants.

**ARCH 732-003: Technology Designated Elective: Geometric Structural Design**

Masoud Akbarzadeh

R 2:00-5:00

Geometric structural design provides a comprehensive introduction to novel geometric methods of structural design based on 2D and 3D graphical statics. The primary emphasis of the course will be on developing a general understanding of the relationship between structural forms in equilibrium and the geometric representation of their internal and external forces. This link is the main apparatus for designing provocative structural forms using only geometric techniques rather than complicated algebraic/numerical methods. Moreover, special consideration will be given to materialization of the structural geometry and the proper fabrication techniques to construct the complex geometry of the structure. Note that this course is based on ongoing research in the field of 3D graphical statics, and therefore provides students with the opportunity to directly contribute to the current research in geometric methods of structural design. Familiarity with a parametric software is required, and code-writing ability is an asset. Particular attention will be given to structural model making and careful structural drawings. The outcomes of the course will become a primary collection of Polyhedral Structures Laboratory. Also, a unique summer research fellowship will be available for highly motivated students to build a one-to-one scale structural prototype based on the forms developed in the class.

## ARCH 732-004: Technology Designated Elective: Matter and Energy

Franca Trubiano

R 9:00-12:00

This seminar/workshop promotes architectural innovation in the field of construction technology. Matter + Energy are the two fields of enquiry which guide and structure the course's reading seminars and prototype workshops. Students will design and fabricate building related prototypes that productively respond to a well-documented and socially relevant environmental need. The creative and critical integration of Matter + Energy is the ambition of each prototype. Materials such as films, composites and plastic/polymers will be central to the investigation, as will the energy related topics of thermodynamics, light/heat studies and renewable energies. Invited design and building industry professionals will advise student teams and offer critical reviews of their process during the semester. Lastly, students will be introduced to performance design metrics used in evaluating the environmental impact of their material and energy choices, be they embodied energy, carbon emissions, or Life Cycle Assessments. More specifically, the seminar is dedicated to the development of a body of knowledge aligned with socially relevant ecological design principles. Students are encouraged to design and prototype innovative solutions for housing the world's homeless. The physical constraints of the art of building are essential to the exercise when the construction of new technologies is positioned between the practice points of energy + matter; power and materials. Given the world's energy resources are limited and fair acquisition is impossible given corporate and governmental power dynamics, the design of basic shelter for hundreds of millions of homeless must address this basic lack of fuel. Seeking inventive applications in renewable energy in the design of minimum existence housing is one goal of this seminar; the other, the innovative and intelligent application of materials to the same end. Students working in teams will develop their own Energy + Matter equation, actualizing a world of ideas and fabrication practices which give rise to socially relevant zero energy building prototypes.

## ARCH 737-001: Semi-Fictitious Realms

Christopher McAdams

R 9:00-12:00

The pursuit of immersive digital experiences has long been a goal of the computing industry. Early wearable displays designed in the 1960s depicted simple three dimensional graphics in ways that had never been seen before. Through trial and error, digital pioneers reframed the relationship between user and machine, and over the last five decades, have made strides that advanced both the input and output mechanisms we are so comfortable with today. As a field, architecture has been reliant on these advancements to design and document buildings, but these tools still leave the architect removed from the physicality of the design, with their work depicted as 2D lines or 3D planes alone. This course will study the evolutionary advancements made that now allow us to fully inhabit digital worlds through Virtual Reality. Using the HTC Vive and Unreal Engine, students will generate immersive, photorealistic models of unbuilt architectural works and explore digital/physical interactivity. From the terraces of Paul Rudolph's Lower Manhattan Expressway to Boulees Cenotaph for Newton, the goal of this course is to breathe new life into places and spaces that have, until this time, never been built or occupied

## ARCH 741-001: Architecture Design Innovation

Ali Rahim

W 9:00-12:00

The mastery of techniques, whether in design, production or both, does not necessarily yield great architecture. As we all know, the most advanced techniques can still yield average designs. Architects are becoming increasingly adept producing complexity & integrating digital design and fabrication techniques into their design process - yet there are few truly elegant projects. Only certain projects that are sophisticated at the level of technique achieve elegance. This seminar explores some of the instances in which designers are able to move beyond technique, by commanding them to such a degree so as to achieve elegant aesthetics within the formal development of projects.



**ARCH 743-001: Form and Algorithm**

Cecil Balmond &amp; Ezio Blasetti

M 9:00-12:00

The critical parameter will be to develop the potential beyond finite forms of explicit and parametric modeling towards non-linear algorithmic processes. We will seek novel patterns of organization, structure, and articulation as architectural expressions within the emergent properties of feedback loops and rule based systems. This seminar will accommodate both introductory and advanced levels. No previous scripting experience is necessary. It will consist of a series of introductory sessions, obligatory intensive workshops, lectures followed by suggested readings, and will gradually focus on individual projects. Students will be encouraged to investigate the limits of algorithmic design both theoretically and in practice through a scripting environment.

**ARCH 751-001: Ecology, Technology, and Design**

William Braham

T 1:00-4:00

This course will examine the ecological nature of design at a range of scales, from the most intimate aspects of product design to the largest infrastructures, from the use of water in bathroom to the flow of traffic on the highway. It is a first principle of ecological design that everything is connected, and that activities at one scale can have quite different effects at other scales, so the immediate goal of the course will be to identify useful and characteristic modes of analyzing the systematic, ecological nature of design work, from the concept of the ecological footprint to market share. The course will also draw on the history and philosophy of technology to understand the particular intensity of contemporary society, which is now characterized by the powerful concept of the complex, self-regulating system. The system has become both the dominant mode of explanation and the first principle of design and organization.

**ARCH 765-001: Project Management**

Charles Capaldi

F 9:00-12:00

ARCH 765 is an introduction to construction management, project management and various construction project delivery systems. In the study of construction delivery systems, we will examine the players, relationships and the advantages and disadvantages of different contractual and practical relationships, both on the construction site and at the tops of the various "paper piles". Exercises and lectures will focus on developing perspectives into the various roles, needs and expectations of the many parties involved in a construction project and the management skills and techniques which help to bring a project to a successful conclusion.

**ARCH 768-402 Real Estate Development**

Alan Feldman

M 3:00-6:00

This course evaluates "ground-up" development as well as re-hab, re-development, and acquisition investments. We examine raw and developed land and the similarities and differences of traditional real estate product types including office, R & D, retail, warehouses, single family and multi-family residential, mixed use, and land as well as "specialty" uses like golf courses, assisted living, and fractional share ownership. Emphasis is on concise analysis and decision making. We discuss the development process with topics including market analysis, site acquisition, due diligence, zoning, entitlements, approvals, site planning, building design, construction, financing, leasing, and ongoing management and disposition. Special topics like workouts and running a development company are also discussed. Course lessons apply to all markets but the class discusses U.S. markets only. Throughout the course, we focus on risk management and leadership issues. Numerous guest lecturers who are leaders in the real estate industry participate in the learning process. Format: predominately case analysis and discussion, some lectures, project visits.

## ARCH 811-001: Theories of Architecture: Architecture's Cultural Performance: The Façade

David Leatherbarrow

T 2:00-5:00

This course will reconsider these alternatives and ask again about the interrelationships between topics of design that seem to be categorically distinct: the project's functionality and its style, its provision of settings that allow the enactment of practical purposes and its contribution to the image and appearance of our landscapes and cities. Our concentration will be at once historical and thematic. We will study and reconsider buildings from the twentieth century and we will ask questions that resonate through the past several decades into the present, questions about the building (its materials, construction, and figuration) as well as the process of design (description, projection, and discovery). Throughout the course we will return to the building's most visible and articulate surface: the façade.

**FINE ARTS**

## FNAR 506: Design 21

Section 401- Orkan Telhan - Tuesdays 1:30pm - 4:30pm

Last century, the digital revolution transformed every aspect of our lives. It shaped every design discipline and defined the ways we imagine and fabricate anything from images to everyday products to clothing, cars, buildings and megacities. Today, design is going through other technical and conceptual revolutions. We design with biotechnologies, fall in love in Virtual Reality with AI bots, rent our cognitive labor through cryptocurrencies. Our creative capabilities, on the other hand, are bounded by a polluted, over-crowded, and resource-constrained planet that is suffering major income and educational inequality. Design After the Digital interrogates the role of design for this century. The seminar surveys the conceptual and technical developments in the past decade to develop an interdisciplinary understanding of design, science and technology. We will study how new design and fabrication methods shape what eat, what we wear, how we form opinions and express ourselves. The goal will be to develop new literacies of design that will help us acclimate better to the realities of the century as creative and critical citizens who can shape its products and values.

## FNAR 507: Converging Landscapes: Art, Ecology and History

Section 401- Paul Faber- Mondays 5:00pm – 8:00pm

Studies of landscape are at the core of multiple fields of fine art making, historical inquiry, and environmental research. Christopher Tilley defines "landscape" as "a holistic term" that frames relationships between living beings and locales, "forming both the medium for, and outcome of, movement and memory." For interdisciplinary arts practitioners in Philadelphia, the landscape may conjure such relationships at points of convergence: when the physical and symbolic layers of the city lay bare social dynamics and truths. Such a range of landmarks - including rivers, neighborhoods, the viewshed, the skyline - are impacted by the deep histories of the region itself, as well as the human-activity that traffics upon it. To produce work about and from Philadelphia is to inherit long-standing questions of civic belonging, make sense of shifting demographics and ecological conditions, and to balance aims for innovation and coexistence. Converging Landscapes - Art, Ecology, and History is a civic studio and structured as a socially-engaged art praxis experience: students will meet weekly for group facilitations, civic dialogues, and special guest lectures. In lieu of midterms and a final exam, students in the course will participate as members of specialized research teams, working a set number of hours per week, write reflection papers, and produce a final site-specific research portfolio. Together, they will explore and produce work at and about sites of convergence. Students will pursue group projects and cross-disciplinary independent work, around selected arts and municipal contribute toward a class wide exhibition, as well as collaborations with artists, archives, and organizations. The course is ideal for students invested in issues of socially-engaged public art, environmental humanities, history, and civic engagement.

**FNAR 523: Drawing I**

Section 401 – Staff – Monday and Wednesday: 5:00pm – 8:00pm

Section 403 – Andrea Hornick – Monday and Wednesday: 10:00am – 1:00pm

Section 404 – Matt Neff – Tuesday and Thursday: 9:00am – 12:00pm

Section 405 – Lindsay Buchman – Tuesday and Thursday: 5:00pm – 8:00pm

This course is designed to develop visual awareness and perceptual acuity through the process of drawing. Students learn to sharpen perceptual skills through observational drawing, and to explore the expressive potential of drawing. A variety of problems and media will be presented in order to familiarize students with various methods of working and ways of communicating ideas visually. Subject matter will include object study, still life, interior and exterior space, self-portrait and the figure. Different techniques and materials (charcoal, graphite, ink, collage) are explored in order to understand the relationship between means, material and concept. Critical thinking skills are developed through frequent class critiques and through the presentation of and research into historical and contemporary precedent in drawing. If you need assistance registering for a closed section, please email the department at [fnarug@design.upenn.edu](mailto:fnarug@design.upenn.edu)

**FNAR 524: Drawing Investigations**

Ivanco Talevski

Tuesday and Thursday, 1:30pm – 4:30pm

Drawing is a fundamental means of visualization and a hub for thinking, constructing, and engaging in a wide variety of creative activities and problem solving. This studio class explores drawing in both its traditional and contemporary forms. The projects are designed to help students in all disciplines find ways express and clarify their ideas through the process of drawing. The semester begins with the refinement of perceptual skills acquired in Drawing I, while encouraging experimentation through the introduction of color, abstract agendas, conceptual problem solving, and collaborative exercises, as well as new materials, techniques and large format drawings. Particular attention is given to ways to conduct visual research in the development of personal imagery. Assignments are thematic or conceptually based with ample opportunity for individual approaches to media, subject, scale and process. The goal is to strengthen facility, develop clarity in intent and expand expression. Attention is paid to the development of perceptual sensitivity, methods of image construction, and the processes of synthesis and transformation in order to communicate ideas through visual means. Recommended for students in all areas.

**FNAR 525: Figure Painting**

Marjorie Edgerton

Monday and Wednesday, 10:00am – 1:00pm

Beyond the introduction to technique and materials this course will emphasis the figure in historical & contemporary painting. This course will be based in perception, working from the model and move through modernism and toward varying approaches to the figure. Further investigation about the language of color through color theory will be covered. Drawing 1 pre-requisite, Painting 1 prerequisite recommended but not mandatory.

**FNAR 530; Making Space & Public Art**

Ken Lum

Tuesdays, 9:00am – 12:00pm

The French social philosopher Michel de Certeau upset the common understanding of the relationship between space and place by elevating space as practice place. By this, he meant that place is but a set of geo-physical particularities that has no dynamic meaning unless activated through social engagement so that space is produced. Spatial practice is a key concept in the modern understanding of the city as a society of abstract space, one in which the problem of human alienation is riven with the logic of spatial spectacularization. Public Art is often employed to address or mollify such urban problems through concepts of historical reconstruction or institutional critique, including possibly testing the limits of public expression. Historical markers play a somewhat different role by calling attention to lost or negative histories, albeit most often vetted through the language of tourism factoids. This course will examine the discursive issues at play in respect to art and markers, particularly for Philadelphia. Additionally, important public art works from around the world will be examined. The course will also include the occasional visit of several key works downtown in which the question of what can and cannot said will be pondered.

**FNAR 531: Painting Practices**

Section 401 – Pernot Hudson - Monday and Wednesday: 2:00pm – 5:00pm

Section 402 – Staff – Tuesday and Thursday: 1:30pm – 4:30pm

Painting practices is an introduction to the methods and materials of oil painting. This course begins with an investigation of color and color relationships. The beginning of the semester will cover technical issues and develop the student's ability to create a convincing sense of form in space using mass, color, light and composition. The majority of work is from direct observation including object study, still life, landscape, interior and exterior space and the self portrait. Class problems advance sequentially with attention paid to perceptual clarity, the selection and development of imagery, the process of synthesis and translation, color, structure and composition, content and personal expression. Students will become familiar with contemporary and art historical precedent in order to familiarize them with the history of visual ideas and find appropriate solutions to their painting problems.

**FNAR 532 & 534: Painting Studio**

Sam Mapp

Monday and Wednesday, 5:00pm – 8:00pm

Painting Studio presents an ongoing exploration of the techniques, problems and poetics of painting, the nuances of the painting language, and the development of a personal direction. A wide variety of problems will address such issues as color, composition, and the development of imagery, process, and content. Students are expected to improve in technical handling of paints and move towards developing personal modes of seeing, interpreting, and thinking for themselves. This course introduces different topics, strategies and individual challenges each semester, so it may be repeated with advanced course numbers.

**FNAR 536 Digital Figure Modeling**

Scott White

Tuesday and Thursday, 6:00pm – 9:00pm

This course introduces methods of modeling, texturing, and rendering human and animal figures. Students will study anatomical bone and muscle structures, and then employ this knowledge as they develop polygonal models for real-time 3D simulations or gaming environments, high-resolution renderings, and rapid prototyping.

**FNAR 538: Open Book, Benjamin Franklin Seminar**

Sharka Hyland

Monday, 5:00pm – 8:00pm

"Open Book" will focus on visual communication of information. It will address two methods of inquiry and the corresponding means of visual representation: the objective, well structured research of facts and images, and the creative process of their subjective evaluation and restatement. Students will propose a topic based on their area of interest and engage in a focused, semester-long exploration, which they will present in the form of a designed and printed book.

**FNAR 540: Mystics & Visionaries: Arts and Other Ways of Knowing**

Jackie Tileston

Tuesday, 1:30pm – 4:30pm

As a pioneer of abstraction in the early 1900's, Hilma Af Klint channeled a complex and highly original body of abstract symbolic work in secrecy. Using the upcoming Hilma Af Klint exhibition at the Guggenheim as a focus and departure point, this course will explore the ways in which artists have accessed alternative ways of seeing, knowing, and embodying non-visible realities as a source for their work. Accessing spiritual realms has been the subject of early European Modernisms investigations into Theosophy and Anthroposophy, as well as the primary intention of Tibetan Thangkas and Indian Tantra paintings. Postmodernism's crisis of belief and skepticism generated a cultural situation wherein the subject of spirituality was marginalized, ridiculed as anti- intellectual, and in disgrace. The Hilma Af Klint exhibition and surge of interest in her work signifies a new moment, where questions about consciousness and the nature of reality are being addressed with renewed vigor. How do we create space in a technology driven world for experiences that attempt to align the viewer/maker with the contemplative realm, heightened states of consciousness, or transcendence? We will examine a wide field of artists in an attempt to understand the possibilities of the "spiritual" in art and contemporary culture. This seminar will engage in readings, lectures, discussions, projects, and field trips. This course is appropriate for both grad and undergrad, art majors and non-majors alike.

**FNAR 541: Hand-Drawn Computer Animation**

Joshua Mosley

Tuesday and Thursday, 9:00am – 12:00pm

Using software tools designed for hand-drawn animation, students will develop animation skills applicable to all forms of animation. In this course students will learn to draw with a sense of urgency and purpose as they represent motion and drama in a series of frames. Through careful study of natural movements, precedents in the history of animation, and through the completion of a series of animation projects students will develop strategies for representing naturalistic movement, inventing meaningful transformations of form, and storytelling.

**FNAR 545: Sculpture Practices**

Section 401 – James Howzell - Tuesday and Thursday: 10:00am – 1:00pm

Section 402 – Fields Harrington – Tuesday and Thursday: 1:30pm – 4:30pm

As an introduction to traditional and contemporary three-dimensional practice, this course is concerned with the concepts and methodologies surrounding three-dimensional art making in our time. Students experiment with a variety of modes of production, and develop some of the fundamental techniques used in sculpture. In addition to these investigations, assignments relative to the history and social impact of these practices are reinforced through readings and group discussion. Processes covered include use of the Fab Lab, wood construction, clay, paper, mixed media, and more. If you need assistance registering for a closed section, please email the department at [fnarug@design.upenn.edu](mailto:fnarug@design.upenn.edu)

**FNAR 550: Intro to Printmaking**

Joshua Zerangue

Monday and Wednesday, 5:00pm – 8:00pm

The course offers an introduction to several forms of printmaking including: intaglio, screen printing, relief, and monoprinting. Through in-class demonstrations students are introduced to various approaches to making and printing in each medium. The course enhances a student's capacity for developing images through two-dimensional design and conceptual processes. Technical and conceptual skills are developed through discussions and critiques. If you need assistance registering for a closed section, please email the department at [fnarug@design.upenn.edu](mailto:fnarug@design.upenn.edu).

**FNAR 552: Printmaking: Relief/Screen Printing**

Lindsay Buchman

Tuesday and Thursday, 1:30pm – 4:30pm

This course is an introduction to technical skills and investigative processes in screen printing and relief and examines methods for combining digital technology with traditional print media. The course introduces students to several contemporary applications of silkscreen and relief printmaking including techniques in multi-color printing, photo-based silkscreening, digital printing, woodcut, linocut, and letterpress. Demonstrations include photo and image manipulation, color separating and output techniques, hand carving and printing, as well as drawing and collage. Both traditional and experimental approaches are explored and encouraged and technical and conceptual skills are developed through discussions and critiques.

**FNAR 566: Graphic Design with Creative Technologies**

Section 401 – S. Reifsnnyder - Tuesday: 1:00pm – 5:00pm

Section 402 – Mark Owens –Thursday: 4:30pm – 8:30pm

The aim of this course is to introduce students creative ways to use color, typography, and layout across new materials and media, ranging from print to physical objects. Students will explore visual design through a set of assignments and projects that are geared towards exploring the role of design in visual arts, interaction design, media design and architecture. The course introduces a number of design concepts such as content organization, navigation, interaction and data-driven design and show ways to develop new design metaphors, presentation techniques, and imagery using old and new technologies. course is structured as a combination of lectures and hands on workshops where students will have the chance to work both individually and collaboratively to realize their projects.

**FNAR 567: Computer Animation**

Joshua Mosley

Tuesday and Thursday, 1:30pm – 4:30pm

Through a series of studio projects this course introduces techniques of 2D and 3D computer animation. Emphasis is placed on time-based design and storytelling through animation performance and montage. Students will develop new sensitivities to movement, composition, cinematography, editing, sound, color and lighting.

**FNAR 568: Integrative Design Studio**

Orkan Telhan and Karen Hogan

Monday and Wednesday, 1:00pm- 4:00pm

This course is a research-based design studio that introduces new materials, fabrication, and prototyping techniques to develop a series of design proposals in response to the theme: Biological Design. The studio introduces life sciences and biotechnologies to designers, artists, and non-specialists to develop creative and critical propositions that address the social, cultural, and environmental needs of the 21st century. The course will be a pilot study of the first biodesign challenge organized by CUT/PASTE/GROW. The final projects will be submitted to a competition and the winning entry will be featured at Biofabricate in Summer 2019.

**FNAR 569: Typography**

Sharka Hyland

Monday and Wednesday, 10:00am- 1:00pm

The study and practice of typography spans the history of individual letterforms through the typesetting of full texts. It is a complete immersion into type as an integral part of visual communication. Typesetting conventions and variables including legibility, readability, texture, color and hierarchy will be stressed, as well as a form for organizing information and expressing visual ideas. Studio work will include collecting and analyzing type, designing an original typeface, researching type history and experimenting with typographic forms.

**FNAR 571: Introduction to Photography**

Section 401 – Karen Rodewald – Tuesday: 1:30pm – 4:30pm

Section 402 – Heather Phillips – Monday: 2:00pm – 5:00pm

Section 403 – Frederick Brent Wahl – Thursday: 10:00am – 1:00pm

Section 404 – Theo Mullen III– Tuesday: 5:00pm – 8:00pm

This course is an introduction to the basic processes and techniques of black & white photography. Students will learn how to expose and process 35mm film, SLR camera operation, darkroom procedures & printing, basic lighting and controlled applications. It begins with an emphasis on understanding and mastering technical procedures and evolves into an investigation of the creative and expressive possibilities of making images. This is a project-based course, where students will begin to develop their personal vision, their understanding of aesthetic issues and photographic history. Assignments, ideas and important examples of contemporary art will be presented via a series of slide lectures, critiques and discussion. No previous experience necessary. 35mm SLR cameras will be available throughout the semester for reservation and checkout from the photography equipment room. If you need assistance registering for a closed section, please email the department at [fnarug@design.upenn.edu](mailto:fnarug@design.upenn.edu)

**FNAR 580: Figure Drawing**

Margorie Edgerton

Monday and Wednesday, 2:00pm – 5:00pm

Students work directly from the nude model and focus on its articulation through an understanding of anatomical structure and function. Students will investigate a broad variety of drawing techniques and materials. The model will be used as the sole element in a composition and as a contextualized element.

### FNAR 583: Performance/Camera: Performance And-With-Through-For Cameras

Sharon Hayes

Monday, 2:00- 5:00pm

This intermediate course will explore the wide and expansive territories of art-making that exist between live performance and mediated image making-both still and moving. For much of the 21st century, the mediums of performance, video and photography have been weaving in and out of contact. Performance is known and understood largely through its documentation: sometimes voluminous and sometimes little more than a single photograph. On the other side, video, film and photography each developed through widespread explorations that were deeply entwined with the "capturing" of bodies on film. Using photography, video and performance in equal parts, the course is a hands-on exploration of this capacious terrain. The course will be structured by a series of bi-weekly assignments that allow for individual and collective production. The course will also include a regular schedule of short readings and presentations/screenings of existing works.

### FNAR 591: The Body and Photography

Gabe Martinez

Wednesday, 5:00pm – 8:00pm

The last few decades have introduced dramatic changes in the way we interact with each other, the way we communicate, the way we date, watch porn, etc. Ethical concerns have arisen with scientific advances such as stem cell research, fertility drugs, Botox, cloning and erectile dysfunction. This studio course will investigate the myriad ways in which the corporeal is addressed and manipulated in contemporary art, science, religion, pop culture and media. Students will develop photographic projects related to updated questions concerning gender, sexuality and social issues. Lectures, readings and class discussion will focus and inform their individual work.

### FNAR 615: Across Forms: Art and Writing

Sharon Hayes and Rachel Zolf

Wednesday, 2:00pm – 5:00pm

What if a poem spoke from inside a photograph? What if a sculpture unfurled a political manifesto? What if a story wasn't just like a dance, but was a dance-or a key component of a video, drawing, performance, or painting? In this course, artists and writers will develop new works that integrate the forms, materials, and concerns of both art and writing. Many artists employ writing in their practices, but may not look at the texts they create as writing. And many writers have practices that go beyond the page and deserve attention as art. This course will employ critique and workshop, pedagogic methodologies from art and writing respectively, to support and interrogate cross-pollination between writing and art practices. Additionally, the course will examine a field of artists and writers who are working with intersections between art and writing to create dynamic new ways of seeing, reading, and experiencing.

### FNAR 620: Producing Ephemera: Letterpress, Risograph, Inkjet and Xerox

Kayla Romberger

Monday and Wednesday, 10:00am – 1:00pm

This studio course introduces students to the world of printmaking and circulation through techniques in letterpress and Risograph (a high-speed digital printing system developed in Japan in the 1980s), in addition to Xerox, laser, inkjet, and off-set printing, focusing particularly on the format of prints, artists' ephemera, and the role of ephemera in understanding culture. Students will create their own broadsides, flyers, announcement cards, and independent publications throughout the course, exploring ways in which artists, designers, musicians, and activists make or have made use of the print to disseminate information; initiate happenings; advertise events; or format change. Students will learn about some of the most significant producers working within this realm - from Conceptualists to punk bands - and develop skills in page layout, typography, and design; mechanized and hand-pulled press operations; and digital to analog pre-press and post-print production methods. This course is designed for highly motivated students and requires out-of-class time commitment. However, no prior coursework is required. Students from all levels and backgrounds are encouraged to register. The course employs combined collaborative / self-directed approaches to learning to enhance students' understandings of ways in which print media and multiples serve as vital conduits for disseminating ideas involving visual art, popular culture, literature, politics, performance and many other topics students will wish to explore.

**FNAR 622: Big Pictures: Mural Arts in Philadelphia**

Jane Golden and Shira Walinsky

Monday and Wednesday, 2:00pm – 5:00pm

The history and practice of the contemporary mural movement couples step by step analysis of the process of designing with painting a mural. In addition students will learn to see mural art as a tool for social change. This course combines theory with practice. Students will design and paint a large outdoor mural in West Philadelphia in collaboration with Philadelphia high school students and community groups. The class is co-taught by Jane Golden, director of the Mural Arts Program in Philadelphia, and Shira Walinsky, a mural arts painter and founder of Southeast by Southeast project, a community center for Burmese refugees in South Philadelphia.

**FNAR 634: Art of the Web: Interactive Concepts for Art and Design**

Sebastien Derenoncourt

Monday and Wednesday, 6:00pm – 9:00pm

Art of the Web: Interactive concepts for art and design is a first step in learning how to create, analyze and discuss interactive content, as a visual creator. It is an exploration of the culture of the internet, the ideas behind its quirks, the dreams and freedoms it encapsulates, and the creative power it gives to us. Students will be assigned projects that will challenge their current understanding of the web, and the ways it shapes human connectivity and interaction. Upon completion of this course, students will possess a working knowledge how to organize and design websites and learn to critique web-content including navigation, UX design and information architecture. The course will require analytical and conceptual skills and foster creative thinking.

**FNAR 635: 3-D Computer Modeling**

Scott White

Section 401 - Monday and Wednesday, 10:00am – 1:00pm

Section 402 - Monday and Wednesday, 3:00pm – 6:00pm

Students will develop a comprehensive knowledge of how virtual worlds are constructed using contemporary computer graphics technique with a fine arts perspective. The course will offer the opportunity to explore the construction, texturing, and rendering of forms, environments, and mechanisms while conforming to modeling specifications required for animation, real-time simulations or gaming environments, and rapid prototyping.

**FNAR 636: Art, Design, and Digital Culture**

Section 401 – Jacob Rivkin– Monday and Wednesday: 2:00pm – 5:00pm

Section 402 – David Comberg – Tuesday and Thursday: 1:30pm – 4:30pm

Section 403 – Avery Lawrence– Monday and Wednesday: 6:00pm – 9:00pm

Section 404 – Scotty Reifsnyder – Tuesday and Thursday: 9:00am – 12:00pm

Section 405 – Staff – Tuesday and Thursday: 4:30pm – 7:30pm

Section 406 – Jacob Rivkin – Monday and Wednesday: 10:00am – 1:00pm

This course is an introduction to the fundamental perception, representation, aesthetics, and design that shape today's visual culture. It addresses the way artists and designers create images; design with analog and digital tools; communicate, exchange, and express meaning over broad range of media; and find their voices within the fabric of contemporary art, design, and visual culture. Emphasis is placed on building an extended form of visual literacy by studying and making images using a variety of representation techniques; learning to organize and structure two-dimensional and three dimensional space, and designing with time-based and procedural media. Students learn to develop an individual style of idea-generation, experimentation, iteration, and critique as part of their creative and critical responses to visual culture. If you need assistance registering for a closed section, please email the department at [fnarug@design.upenn.edu](mailto:fnarug@design.upenn.edu)



**FNAR 640: Digital Photography**

Section 401 – Theophile Mullen III – Monday: 10:00am – 1:00pm

Section 402 – Demetrius Oliver– Monday: 2:00pm – 5:00pm

Section 403 – Theophile Mullen III – Monday: 5:00pm – 8:00pm

Section 404 – Gabriel Martinez – Tuesday: 10:00am – 1:00pm

Section 405 – Gabriel Martinez – Tuesday: 2:00pm – 5:00pm

Section 406 – Karen Rodewald– Tuesday: 5:00pm – 8:00pm

Section 407 – Jamie Diamond – Wednesday: 5:00pm – 8:00pm

Section 408 – Sarah Stolfa – Wednesday: 10:00am – 1:00pm

Section 409 – Sarah Stolfa– Thursday: 10:00am – 1:00pm

Section 410 – Heather Phillips – Thursday: 5:00pm – 8:00pm

This class offers an in-depth technical and conceptual foundation in digital imagery and the opportunity to explore the creative, expressive possibilities of photography. Students will become proficient with the basic use of the camera, techniques of digital capture, color management and color correction. They will also develop competency in scanning, retouching, printing and a variety of manipulation techniques in Photoshop. Through weekly lectures and critiques, students will become familiar with some of the most critical issues of representation, consider examples from photo history, analyze the impact of new technologies and social media. With an emphasis on structured shooting assignments, students are encouraged to experiment, expand their visual vocabulary while refining their technical skills. No previous experience is necessary. Although it is beneficial for students to have their own Digital SLR camera, registered students may reserve and checkout Digital SLR cameras and other high-end equipment from the department. If you need assistance registering for a closed section, please email the department at [fnarug@design.upenn.edu](mailto:fnarug@design.upenn.edu)

**FNAR 642: Digital Photography II**

Jaime Diamond

Wednesday, 2:00pm – 5:00pm

In this course students will continue to develop conceptual, technical, aesthetic and formal strategies in digital photography, expanding their artistic process while refining their critical approach to researched subject matter. The class will be driven initially by a series of assignments formulated to further expose students to broad possibilities related to the medium and then they will be guided towards the evolution of a personalized body of work that is culturally, theoretically and historically informed. We will be examining key issues surrounding the digital image in contemporary society, led through a combination of class lectures, readings, group discussions, film screenings, gallery visits and class critiques. Students will further their knowledge of image control and manipulation, retouching and collage, advanced color management; become familiar with high-end camera and lighting equipment and develop professional printing skills. In addition to learning these advanced imaging practices, this course will also emphasize an investigation of critical thought surrounding contemporary visual culture and the role of digital media in the creation of art.

**FNAR 648: Counter the Land**

Brent Wahl

Friday, 10:00am – 2:00pm

Starting with the representation of landscape in painting in the early 1800s, the course will then move through Pictorialism and the Modernist movement in photography. Revisiting the later half of the 20th century, we will begin to consider the shifting practices of landscape and the ways it has been photographically depicted up to the present. Collaborating with the Brandywine River Museum of Art in Chadds Ford, students will begin their photographic exploration with the work of Andrea Wyeth and the landscape of the Brandywine Valley. As we consider Wyeth, the images of James Welling will also be introduced. Credited for pioneering new forms of representation in photography in the 1970s, Welling also revisited the work of Wyeth from 2010-2015, and committed to a fresh (and challenging) look at tradition. Working with imagery and text, this class will also touch on conceptual art, the New Topographics, and postmodernism. Through these various concentrations, students will consider and counter the traditions that they are already familiar with, while creating work based on issues of the landscape today. Questions about meaning, politics, social critique, land rights, technology and methods of presentation will be encouraged and explored throughout the course.

**FNAR 661: Video I**

Section 401 – Emory Van Cleve – Tuesday and Thursday: 9:00am – 12:00pm

Section 402 – Emory Van Cleve – Monday and Wednesday: 10:00pm – 1:00pm

Section 403 – Sosena Solomon - Monday and Wednesday: 5:00pm – 8:00pm

Section 404 – James Howzell – Tuesday and Thursday: 5:00 – 8:00pm

Section 405 – Sosena Solomon - Monday and Wednesday: 2:00pm – 5:00pm

In this studio based course, students are introduced to video production and postproduction as well as to selected historical and theoretical texts addressing the medium of video. Students will be taught basic camera operation, sound recording and lighting, as well as basic video and sound editing and exporting using various screening and installation formats. In addition to a range of short assignment based exercises, students will be expected to complete three short projects over the course of the semester. Critiques of these projects are crucial to the course as students are expected to speak at length about the formal, technical, critical and historical dimensions of their works. Weekly readings in philosophy, critical theory, artist statements and literature are assigned. The course will also include weekly screenings of films and videos, introducing students to the history of video art as well as to other contemporary practices. If you need assistance registering for a closed section, please email the department at [fnarug@design.upenn.edu](mailto:fnarug@design.upenn.edu)

**FNAR 663: Documentary Video**

Michael Crane

Wednesday, 2:00pm – 5:00pm

Documentary Video is an intensive production course involving the exploration of concepts, techniques, concerns, and aesthetics of the short form documentary. Building on camera, sound, and editing skills acquired in Video I, students will produce a portfolio of short videos and one longer project over the course of the semester using advanced level camera and sound equipment. One short presentation on a genre, technique, maker, or contemporary concern selected by the student is required.

**FNAR 670: Advanced Graphic Design**

David Comberg

Tuesday and Thursday, 9:00 – 12:00pm

This course will explore advanced commercial, public and personal forms of visual communication. Emphasis will be placed on creative problem solving with consideration for audience. Discussion of design history, current ideology and future design applications will inform individual student projects. Work generated in this studio can be used to build a portfolio.

**HISTORIC PRESERVATION****HSPV 606-001: Historic Site Management**

Laura Keim

Tuesday, 9:00am-12:00pm

This course focuses on management, planning, and decision making for all types of heritage sites from individual buildings to historic sites to whole landscapes. Course material will draw on model approaches to management, as well as a series of domestic and international case studies, with the goal of understanding the practicalities of site management.

**HSPV 640-301 Contemporary Design in Historic Settings**

Pamela Hawkes

Tuesday, 1:00pm-4:00pm

Contemporary design can add value and meaning to historic settings of any age or scale. Rigorous dialogue with history and context enriches contemporary design. This seminar immerses designers, planners and preservationists in the challenging yet rewarding realm of design with landmarks as well as existing structures and sites.

**HSPV 538-001 Cultural Landscapes & Landscape Preservation**

Randall Mason

Wednesday, 2:00pm-5:00pm

The course introduces the history and understanding of common American landscapes and surveys the field of cultural landscape studies. Methods of landscape preservation are also surveyed.

**HSPV 572-001 Preservation through Public Policy**

David Hollenberg

Friday, 9:00am-12:00pm

This course explores the intersection between historic preservation, design and public policy, as it exists and as it is evolving. That exploration is based on the recognition that a challenging and challenged network of law and policy at the federal, state and local level has direct and profound impact on the ability to manage cultural resources, and that the pieces of that network, while interconnected, are not necessarily mutually supportive.

**HSPV 552-001 Building Diagnostics and Monitoring**

Michael Henry

Friday, 2:00pm-5:00pm

Building diagnostics pertain to the determination of the nature of a building's condition or performance and the identification of the corresponding causative pathologies by a careful observation and investigation of its history, context and use, resulting in a formal opinion by the professional. Monitoring, a building diagnostic tool, is the consistent observation and recordation of a selected condition or attribute, by qualitative and/or quantitative measures over a period of time in order to generate useful information or data for analysis and presentation.

**KLEINMAN CENTER FOR ENERGY POLICY****ENMG 502 001: Introduction to Energy Policy**

Anna Mikulska, William Hederman

Monday, 2:00-4:50pm

This course provides an advanced introduction to the design and delivery of energy policy at various levels of government in the U.S. and elsewhere. Energy—especially in the context of economic development and environmental sustainability—presents a career-defining challenge to many disciplines and professions. This course, therefore, is intended to provide an organizing foundation for courses across the schools of Law, Wharton, Design, SAS, and SEAS. The first half of the course will offer readings and lectures on systems theory, the energy system, the policy process, design thinking, policy design, decision analysis, and emerging issues. The second half of the course will use this foundation to explore a set of timely energy policy issues using readings and student presentations. Issues will include: disruption of legacy business models in energy markets, carbon budgets and tax and trade policies, compliance options under EPA's Clean Power Plan, energy efficiency and rebound, grid reliability and investment, emerging technologies such as energy storage, stranded assets and corporate sustainability, and others. Students will write two short papers in the first half of class, give a presentation in the second half, and write a research paper on an energy policy issue as a final project.

**DEPARTMENTAL CONTACT INFORMATION:**

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- Landscape Architecture: [crocetto@design.upenn.edu](mailto:crocetto@design.upenn.edu)
- Kleinman Center for Energy Policy: [ccolijn@design.upenn.edu](mailto:ccolijn@design.upenn.edu)

**DETAILED INFORMATION ON REGISTRATION IS AVAILABLE ONLINE AT: [COURSES AND REGISTRATION](#)  
**QUESTIONS/CONCERNS REGARDING COURSE REGISTRATION: [REGISTRAR@DESIGN.UPENN.EDU](mailto:REGISTRAR@DESIGN.UPENN.EDU)****