



## Spring 2015 Elective Course Offerings ~ as of 1/9/15

### **KLEINMAN CENTER FOR ENERGY POLICY**

LAW-974-001 Defining and Achieving Regulatory Excellence  
 Cary Coglianese and Mark Alan Hughes  
 Monday, 12:00pm – 1:20pm

Penn's Program on Regulation at Penn Law is offering a unique spring course opportunity for advanced undergraduates and graduate students. The Alberta Energy Regulator recently awarded Penn a contract to design a Best-in-Class vision for how they can meet their mandate. This is particularly relevant given that Alberta is the home of tar sands and the origin point for KXL. Part of the project involves a spring seminar that will be led by Penn and visiting faculty who are working on the project.

We're actively recruiting a class of students from diverse backgrounds who can bring knowledge of science and technology, finance and energy to this discussion. Course meetings will be led by Dr. Cary Coglianese and Dr. Mark Alan Hughes, and will meet weekly on Mondays from 12noon to 1:20pm. Students are asked to write several short response papers and one research paper related to regulatory performance. Some regulators are more effective, trusted, just, credible, transparent, and efficient than others. This seminar will seek to answer a seemingly simple but truly vital question: What separates the very best regulatory institutions from their peers? Throughout the seminar, students will participate in probing discussion of a variety of vital and intellectually challenging questions about the design and management of legal institutions in the regulatory state. Participants will be exposed to cutting-edge research and analysis about regulatory performance, engaging side-by-side in discussion with faculty, staff, and fellow students involved in the Penn Program on Regulation's Best-in-Class Regulator Initiative as the latter work separately in real-time on a major research initiative on related issues.

The seminar will have a cross-national focus, just as suitable for students interested in how to improve regulation and regulatory institutions in the United States (whether at the federal or state level) as for students interested in regulation elsewhere around the world. Students will be expected to complete a combination of several short reflection pieces throughout the term as well as a longer research paper on a topic of each student's choice related to regulatory performance.

Students interested in enrolling should email Kleinman Center Program Director Cory Colijn, [ccolijn@design.upenn.edu](mailto:ccolijn@design.upenn.edu) for more information.

### **HISTORIC PRESERVATION**

HSPV-528-401 American Vernacular Architecture  
 Robert St. George  
 Monday, 2:00pm - 5:00pm

This course explores the form and development of America's built landscape – its houses, farm buildings, churches, factories, and fields – as a source of information on folk history, vernacular culture, and architectural practice.

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

Randall Mason

Wednesday, 2:00pm - 5:00pm

This course introduces the history and understanding of common American landscapes and surveys the field of cultural landscape studies. The cultural-landscape perspective is a unique lens for understanding the evolution of the built environment, the experience of landscapes, and the abstract economic, political and social processes that shape the places where most Americans spend most of their time. The course will focus on the forces and patterns (natural and cultural) behind the shaping of recognizably "American" landscapes, whether urban, suburban, or rural. Methods for documenting and preserving landscape will be surveyed. Class discussions, readings, and projects will draw on several disciplines--cultural geography, vernacular architecture, environmental history, historic preservation, ecology, art, and more.

### HSPV-625-001 Preservation Economics

Donovan Rypkema

Tuesday, 9:00am -12:00pm

The primary objective is to prepare the student, as a practicing preservationist, to understand the language of the development community, to make the case through feasibility analysis why a preservation project should be undertaken, and to be able to quantify the need for public/non-profit intervention in the development process. A second objective is to acquaint the student with measurements of the economic impact of historic preservation and to critically evaluate "economic hardship" claims made to regulatory bodies by private owners.

### HSPV-638-301 Topics in Historic Preservation: Photography and the City

Francesca Ammon

Thursday, 9:00am -12:00pm

This seminar explores the intersecting social and cultural histories of photography and the urban and suburban built environment. No prior background in photography is necessary. Since its inception in 1839, photography has provided a critical means for documenting change in American cities and suburbs. We might characterize the medium's evolution as moving through four major phases: 1) celebration of the great structures of the industrial city; 2) documentation and attempted reform of the social life of Progressive and New Deal era cities; 3) critique of expanding postwar suburbs and sprawl; and 4) reflection on change in the post-industrial city. Each week, we will compare two image collections as the basis for our discussion. While authorship by individual photographers provides the entry point to many of these conversations, our primary focus will be the images' portrayal of urban and suburban people, structures, and space. Through our investigations, we will explore how photography's dual documentary and aesthetic properties have helped to reflect and transform the city, both physically and culturally.

### HSPV-703-302 Memorials & Memorialization

Randall Mason and Ken Lum

Tuesday, 1:30pm - 4:30pm

The functions, meanings, images, designs and politics of memorials are an urgent issue in contemporary society. Memorials and memorialization processes occupy a central place in culture and public space, and concentrate some of the most interesting and fraught design, artistic and interpretive questions facing designers, artists and scholars today. This seminar, limited to 12 students from a variety of departments, will explore discourse and practices of memorialization. The focus of our critical inquiry will be the powerful connections between art, design, memory and culture as embodied and represented in memorials and memorialization processes. Particular topics will include controversies regarding tragedy memorials, changing discourses around public art, and the status of ephemeral/popular memorials. The course will be led by Randy Mason in collaboration with Ken Lum, Professor of Fine Arts. Together, they and the class will explore the literatures from both heritage/social-science/history perspectives and art/design perspectives. Class sessions may include field trips, exercises, projects and guest lectures.

### HSPV-703-301 Germantown Futures

Aaron Wunsch and Laura Keim

Friday, 2:00pm - 5:00pm

This seminar/studio hybrid explores urgent preservation and planning issues facing Philadelphia's Germantown neighborhood. Germantown has the largest concentration of historic buildings and landscapes outside of the city's core. But the word "concentration" is itself misleading: beyond the densely built-up spine of Germantown Avenue, the area is defined by large lots and old trees -- the very qualities that lured villa-builders there 200 years ago and suburban developers ever since. Contemporary development pressures are increasing dramatically; dealing with them robustly will require clear analyses of historic-resource patterns, zoning and planning structures, and community capacities. This course lays the groundwork for that effort, merging advocacy with analysis, resulting in recommendations for planning and preservation measures to improve the quality of life in Germantown without sacrificing its historic values and character. Students from varied PennDesign departments are welcome. Faculty for this course will include Aaron Wunsch, Laura Keim, and several preservation and planning professionals with significant experience in Germantown.

### HSPV-741-301 Special Topics in Historic Preservation: Feats Of Clay - Brick & Terra Cotta

Frank Matero

Monday, 9:00am -12:00pm

Of the major construction materials and systems employed since the earliest architectural building, few display the geographical and temporal spread or extreme material transformation as architectural ceramics. Born of clay, water, and fire, brick and its kin—terra cotta and structural, roof, and ornamental tile—have been employed to construct, protect, and ornament buildings in an unbroken tradition stretching from the towers of the Old Testament to the contemporary rain screens of today's high-rise buildings. Dating to the mid-15th century, the word can be traced to the Old French *brique*, meaning "a form of loaf" or "broken piece, fragment or bit," as in to break bread, thus reminding us of the ancient relationship between building in brick and the civilizing hallmarks of agriculture and urbanization. Archaeological excavation reveals an ancient and continuous global narrative of invention and re-invention. In each case, the remarkable adaptability of this modest material, hand-shaped, molded, pressed, poured, or extruded in a myriad of sizes, shapes, colors, and textures has produced structural designs of complex form and pattern, as well as incredible durability. Despite its repetitive production, brick can be deceptively variable, allowing functional and aesthetic vitality even in its most common usage. Regular by definition, brick finds its voice in legion, the result being a wall, arch or vault of any dimension or shape. Its close relative, terra cotta, possesses all the benefits of durability and reproducibility as brick but with the enviable advantages of the artist's hand and even greater versatility in color and shape. Despite modernism's embrace of brick's no-nonsense functionality and its long history as a fireproof material, brick has long been viewed as a second class material reserved for utilitarian structures or concealed with more luxurious stone or stucco veneers or even paint. From its earliest origins, Philadelphia has been a city of brick. Swedish, then English masonry traditions shaped the young metropolis. Philadelphia's brick masons passed some of the first brick laws in the colonies and were among the first to organize as a trade union. By 1880 brick was the dominant building material in urban America and compared to Boston and New York, Philadelphia possessed the highest concentration of brick buildings in the country. The region boasted in possessing the best clay deposits in the United States and its brick and terra cotta manufactories were world famous in their technological advances and quality of product, supplying architects and builders with a large variety of stock and custom designs. Given this unique context, our focus will be a cross-disciplinary study of structural clay products - namely brick and terra cotta. We will consider these materials in terms of material process, product, and structural assemblage and these considerations will allow an exploration of (1) historical and traditional technology and design, (2) material characterization and analysis, (3) performance and (4) conservation. These areas of consideration will set the structure of the course which will be conducted as a seminar where students will have the opportunity to conduct original research and to contribute to the Exhibit: Feats of Clay to open in the Kroiz Gallery/Architectural Archives in May 2015. Guest lectures and visits to sites in New York City and Boston Valley Terra Cotta Co. in Buffalo are planned. Open to all students in historic preservation, architecture, fine arts, archaeology and art history.

**CITY PLANNING****CPLN-504-001 Site Planning for Urban Designers**

Scott Page

Monday, 9:00am-12:00pm

This course introduces students to the practice of site planning. Skills and methods examined in the course include observation of the physical and community environment; physical and environmental site inventoring and analysis; analysis of alternative site programming and uses; site design processes and strategy; and the creation of site plans and development standards. Methods of community participation and collaboration with other disciplines will be explored. The spring version of this course differs from the fall version in its orientation toward urban designers and/or those with prior design backgrounds and skills.

**CPLN-620-001 Techniques of Urban Economic Development**

David Streim

Tuesday, 9:00am-12:00pm

This course is about how planners act to catalyze and support economic well-being in cities and regions. Students in the course examine the effectiveness of alternative strategies and approaches to economic development and practice a variety of specific economic development policy and finance techniques. The semester is divided into three modules. In part 1, students build knowledge about how theories of growth, specialization, agglomeration and innovation inform (and fail to inform) economic development strategies. In part 2, they develop a working understanding of economic development finance, completing exercises on tax increment finance, tax-credit financed development and “double bottom line” lending and equity investment. In part 3, they review best practices in the formulation and negotiation of location incentives and subsidies, examine “growth with equity” policies, and explore the technical and political details of economic impact analysis.

**CPLN-622-401 Community Development and Public Health**

Amy Hillier

Tuesday, 2:00pm-5:00pm

This course will focus on the intersection of city planning and public health by looking closely at the role of the built environment in health. We will cover such topics as food access, physical activity, walkability, bike-ability, air quality, water quality, community engagement, outdoor media and health communication. We will learn how to conduct Health Impact Assessments (HIA)—screening, scoping, assessments, recommendations, reporting, and monitoring—and to use various environmental audit tools to measure the built environment. Our final projects will involve working with local government and nonprofit agencies to conduct applied health research projects.

**CPLN-631-001 Planning for Land Conservation**

John Keene

Monday, 9:00am-12:00pm

Land preservation is one of the most powerful, yet least understood planning tools for managing growth and protecting the environment. This course provides an introduction to the tools and methods for preserving private lands by government agencies and private non-profit organizations (e.g., land trusts). Topics include purchase and donation of development rights (also known as conservation easements), transfer of development rights, land acquisition, limited development, and the preservation of urban greenways, trails, and parks. Preservation examples analyzed: open space and scenic areas, farmland, forestland, battlefields, and natural areas

**CPLN-689-001 Urban Policy Analysis**

John Landis

Thursday, 9:00am-12:00pm

How do urban policies get created and turned into laws and programs? In the first half of this methods-oriented course, students will explore the policy-making process focusing on how urban policy problems are framed, how alternative policy responses are identified, how supportive political coalitions are assembled, how policy legislation is written, the interplay between federal and local policies, and how program and policy evaluations are undertaken. The second half of the course will look at historical and contemporary policy initiatives in the areas of urban transportation, affordable housing, urban renewal and regeneration, local economic development, and climate change mitigation. Each student will choose an existing urban policy or program in their own area of interest to profile (Assignment #1), evaluate (Assignment #2), and propose changes to (Assignment #3).

**LANDSCAPE ARCHITECTURE****LARP-730-001 Topics in Professional Practice**

Lucinda Sanders

Wednesday: 3:00pm–6pm

This course will seek to gain a greater understanding of the dynamics and intricacies of professional practice for landscape architects. In addition to providing an overview of practice, exploration of the variability of the individual professional and of diverse business constructs will challenge the commonly held notion that professional practice is formulaic; further, this course is designed to enhance an understanding of the diverse cultures and built work that emerge from a vast spectrum of firms. Through lectures and seminar discussions, assigned readings, presentation of case studies, and site visits, the class will seek to understand that the process of gaining projects, negotiating contracts, nurturing client relations, preparing contract documents and contract closeout, while rigorous and often professionally and legally defined, can only be enhanced through increased knowledge.

**LARP-741-401 Modeling Geographic Space**

Dana Tomlin

Wednesday: 2:00pm– 5:00pm

*Cross-listed with CPLN 632-401*

The major objective of this course is to explore the nature and use of raster-oriented geographic information systems (GIS) for the analysis and synthesis of spatial patterns and processes. In contrast to the spring semester course, CPLN 666 – Modeling Geographical Objects, LARP 741 is oriented more toward the qualities of geographical space itself (*e.g.* proximity, density, or interspersion) than the discrete objects that may occupy such space (*e.g.* water bodies, land parcels, or structures). The course focuses on the use of GIS for “cartographic modeling,” a general but well defined methodology that can be used to address a wide variety of analytical mapping applications in a clear and consistent manner. This is done by decomposing data, data-processing capabilities, and data-processing control techniques into elemental components that can then be recomposed with relative ease and with great flexibility. The result is what amounts to a “map algebra” in which cartographic layers for individual characteristics such as soil type, land value, or population are treated as variables that can be transformed or combined into new variables by way of specified operations. Just as conventional algebraic operations (such as adding, subtracting, multiplying, or dividing) might be combined into a complex system of simultaneous equations, these cartographic operations (such as superimposing one map onto another, measuring distances or travel times, characterizing geographic shapes, computing topographic slopes and aspects, determining visibility, or simulating flow patterns) might be combined into a model of soil erosion or land development potential.

## LARP-745-401 Advanced Topics in GIS

Dana Tomlin

Thursday: 9:00am–12:00pm

*Cross-listed with CPLN 680-401*

This course offers students an opportunity to work closely with faculty, staff, local practitioners, and each other on independent projects that involve the development and/or application of geographic information system (GIS) technology. These projects often take advantage of resources made available through Penn's Cartographic Modeling Lab [<http://www.cml.upenn.edu>]. The course is organized as a seminar: a series of weekly meetings and intervening assignments that ultimately lead to the implementation and presentation of student-initiated projects. Early in the semester, each student selects a term project dealing with one particular topic in the field of GIS, broadly defined. Topics may range from the basic development of geospatial tools and techniques to practical applications in any of a variety of fields. Projects may be completed working either as individuals or in small groups. Ultimately, they presented in the form of in-class briefings and a final publication. Each week's class meeting generally involves a lecture and/or discussion engaging local GIS practitioners and relating to student projects, advanced techniques, or current GIS practice.

## LARP-750-001 Topics in Construction, Horticulture and Planting Design: Detailing in Landscape Design

Andrew Schlatter and Lindsay Falck

Thursday: 9:00am–12:00pm

What is the role of the detail in landscape architecture? What makes a good detail, technically and conceptually? How do we understand "detailing" as a process? The detail is the moment of intersection between the conceptual and the practical, born out of the designer's effort to merge an idealized vision with a set of imposed – and often conflicting – parameters and constraints. For some, the detail may contain the essence of a project, a representation of the idea made manifest. Yet it may also be the reason the whole thing falls apart. Through case studies of exemplary projects, lectures, discussions, and design exercises involving drawing, modeling, and fabrication at a range of scales, this seminar course will explore detailing as an idea, as a process, and as a vital component of design practice and construction methodology. This course offers students the opportunity to develop a strong grounding in the logic and language of details, supporting continued inquiry and critical engagement with design over the course of a career.

## LARP-756-001 Topics in Horticulture &amp; Planting: Issues in Arboretum Management II

Jan McFarlan

Thursday: 12:00pm–4:00pm at the Morris Arboretum

The Morris Arboretum of the University of Pennsylvania provides a case study in public garden management. Aspects of horticulture, landscape design, education, conservation, history, preservation, and management are considered. Work often includes seminars followed by outdoor practical sessions. For more information contact Jan McFarlan at the Morris Arboretum: [jlm@pobox.upenn.edu](mailto:jlm@pobox.upenn.edu) or call 215-247-5777, ext. 156.

## LARP-760-001 Topics in Ecological Design: Large-Scale Land Reclamation Projects

William Young

Friday: 10:00am–1:00pm

This course will present practical techniques for the restoration of large tracts of disturbed lands. The course will emphasize techniques used to evaluate sites before a landscape design or restoration plan is prepared. Case studies will be employed to illustrate real world, practical application of course principles. Topics will include examples of how to evaluate and assess health and ecological (toxicity) condition of sites, remediation using sustainable practices, and how to add real economic value to clients' projects and portfolios of properties through ecological restoration. The class promotes sustainable design through the application of "the triple bottom line": Ecology-Economy-Culture, and a template approach on how to achieve that on every project.

## LARP-780-002 Topics in Theory &amp; Design: Designing with Risk

Mattheus Bouw and Ellen Neises

Tuesday: 1:30pm–4:30pm

Risk assessment and, by extension, risk management, is central to the successful delivery of a project. Risk structures the finance of the project, having implications on (for instance) phasing and programming. Community engagement in part determines the political risks. The clients' willingness to take risks is translated into the space for design innovation in a project. Risk is a central category in any resiliency project. Understanding risk, and learning to design with it, has become essential to any architect, landscape architect or urban planner. In this seminar, taught by Mattheus Bouw and Ellen Neises, the influence of risk on projects will be studied and categorized. Subsequently, design tools to manage, adapt or mitigate risks will be developed. Elements of the seminar will be developed with the Wharton Risk Management and Decision Making Center. Parallel to the seminar, two symposia on 'Risk Management by Design' will be organized in conjunction with Rebuild by Design, NYU/Institute for Public Knowledge and Yale University.

## LARP-710-001 Implementation of Urban Design

Candace Damon

Tuesday: 5:00pm–8:00pm

With a focus on contemporary major cities this subject charts the various ways in which urban design is typically conceived, procured, administered and ultimately delivered. From the very conception of a project to its completion, the various methods and avenues through which contemporary cities are planned, designed and constructed are examined from multiple perspectives so that students become familiar with the myriad issues and main actors involved in urban development. Through exemplary case studies the subject offers a comprehensive understanding of the complexities and contingencies of contemporary city making, placing a particular emphasis on the role of the urban designer as a practical, ethical and visionary agent of change.

## LARP-781-401 Case Studies in Contemporary Urbanism, Landscape Architecture, and Design

David Gouverneur

Wednesday: 2:00pm–5:00pm

*Cross-listed with CPLN 673-401*

This course will expose students to a wide array of case studies in Planning, Urban Design, and Landscape Architecture. They include: notions of sustainable development, the interplay between open space and built form, the rehabilitation of existing areas as historic districts, commercial corridors, and the improvement of squatter settlements. Also, it will focus on city expansions and new towns, housing, mixed-use developments, and areas of new centrality. The program will address as well territorial planning, the improvement of open space systems, and site specific interventions of parks, plazas, streetscape and gardens. Cases will provide the proper ground for analysis and interpretation of issues related to the design and implementation of "good" landscape and urban form. Class discussions will be complemented with short design exercises. We will also enjoy the presence of outstanding visiting lecturers, who will share with us cutting-edge information, derived from their professional practice and research.

**ARCHITECTURE****ARCH-712-001 Topics in ARCH Theory II: Philosophy of Materials and Structures**

Manuel DeLanda

Thursday: 6:00pm-9:00pm

This lecture series introduces students to the basic philosophical concepts needed to understand contemporary science. Most of the examples and case studies discussed in class come from two fields that are intimately connected with architecture: structural engineering and materials science and engineering. But in addition, the class deals with the philosophical underpinnings of two other fields, one which has been the backbone of science since its inception, mathematics, and the other which has revolutionized mathematical models by setting them into motion: computer simulation.

**ARCH-712-002 Topics in ARCH Theory II: New York as Incubator of Twentieth-Century Urbanism: Four Urban Thinkers and the City They Envisioned**

Joan Ockman

Thursday: 3:00pm-6:00pm

This seminar is constructed as an argument among four important urban thinkers whose visions of the twentieth-century city were shaped by their response to New York's modern urban and architectural development: Lewis Mumford (1895-1990), Robert Moses (1888-1981), Jane Jacobs (1916-2006), and Rem Koolhaas (1944-). We will explore the central issues that preoccupied each of them -- from ecological urbanism and civic representation to urban infrastructure and renewal, from community engagement and diversity to urban spectacle and event -- and highlight differences and similarities in their conception of the city. Emphasis will be on the role of "urban intellectual" in the production of architectural discourse as well as the specific historical context to which each was responding. In addition to reading key writings by each of the protagonists, we will consider a number of other relevant urban theories. New York has been called the capital of the twentieth century; part of our task will be to assess and debate the ongoing relevance of the thought of all four thinkers to the cities in the twenty-first century.

**ARCH-712-003 Topics in ARCH Theory II: Building Envelopes: A Short History of Their Performance**

Ariel Genadt

Thursday 3:00pm-6:00pm

In the 20<sup>th</sup> century, building envelopes have become the prime architectural subject of experimentations and investments, as well as physical failures and theoretical conflicts. This semester examines the meaning of performance of 20<sup>th</sup>-century envelopes by unfolding their functions and behaviors in salient case studies, in practice and in theory. While the term performance is often used to denote quantifiable parameters, such as exchanges of energy, air and water, this seminar seeks to recouple these with other, simultaneous actions performed by the envelope and by the building it encloses. Albeit numbers cannot describe those performances, their consideration is key to the interpretation of quantifiable ones. Ultimately, the articulation of the polyvalence of envelopes becomes the measure of their architectural pertinence. Each class meeting includes a lecture, students' case studies presentations, and film screenings. This seminar qualifies as an elective for the Ecological Architecture Certificate and the M.E.B.D. program.

**ARCH-712-005 Topics in ARCH Theory II: Urban Ideology: Ways of Being Innovative with Architecture vis-à-vis Activism**

Srdjan Jovanovic Weiss

Thursday: 9:00am-12noon

This seminar explores expanding roles of a designer engaged in urban activism, that engulf fields and knowledge of architecture, urbanism and art. The course provides tools for critical thinking to interpret urban tensions that are often self-organized, anonymous and spatial. At the same time we will look into tools to interpret recent shifts in the work of Peter Eisenman, Herzog & de Meuron and AMO/OMA as well as explore younger innovative and alternative practices. The course is given by Srdjan Jovanovic Weiss, PhD (Goldsmiths Centre for Research



Architecture, London) and former architect and cultural researcher with Herzog & de Meuron Architects (Basel, Switzerland), founder of NAO (Normal Architecture Office) and co-founder of SMS (School of Missing Studies). The participants in the seminar will be involved in conceptualizing and creating the exhibit *Romancing Power* commissioned by the Anderson Gallery at The New School in New York to open February 2015. The exhibit will be produced in collaboration with Nina Krushcheva, grand-daughter of cold war president of Soviet Union, Nikita Khrushchev.

#### ARCH-712-006 Topics in ARCH Theory II: Baroque Parameters

Andrew Saunders

Monday 9:00am-12noon

In this course we will use computation as an instrument to reassess the geometric principles of Baroque architecture. Deep plasticity and dynamism of form, space and light are explicit signatures of the work; less obvious are the disciplined mathematical principles that generate these effects. Geometry and mathematics were integral to 17th-century science, philosophy, art, architecture and religion. They are what link Baroque architects Francesco Borromini and Guarino Guarini to other great thinkers of the period including Descartes, Galileo, Kepler, Desargues and Newton. Through the exploitation of trigonometric parameters of the arc and the chord, Baroque architects produced astonishing effects, performance and continuity. Generative analysis by parametric reconstruction and new speculative modeling will reexamine the base principles behind 17<sup>th</sup> century topology and reveal renewed relevance of the Baroque to the contemporary paradigm.

#### ARCH-714-401: Museum as Site: Critique, Intervention, and Production

Andrea Hornick

Wednesday: 9:00am-12noon

In this course, we will take the museum as a site for critique, invention, and production. As architecture, cultural institution, and site of performance, the museum offers many relevant opportunities. Students will visit, analyze, and discuss a number of local exhibitions and produce their own intervention in individual or group projects. Exhibition design, design of museum, the process of curating, producing artworks ranging from paintings to installation and performance, as well as attention to conservation, installation, museum education, and the logistics and economics of exhibitions will be discussed on site and in seminar. These topics and others will be open for students to engage as part of their own creative work produced for the class and an online exhibition.

#### ARCH-724-002: Technology in Design: Non-Discrete Architectures Digital Prosthetics, Connectivity and Augmented Space

Shawn Rickenbacker

Wednesday 9:00am-12noon

This sponsored research course will examine advances in computing technology that are producing a new range of digitally enhanced environments, structures and spaces. Through Digital Prosthetics, Connectivity and Augmented Space designers are now operating equally with tangible form as well as with intangible attributes (the virtual). Referred to as the imminent convergence of digital and physical space, this is being accomplished through new digital interactive exchanges and engagements fostered by increased digital connectivity. Embedded computing, sensors and ever increasing ubiquitous technologies are the enablers, targeting objects, users and physical space. This directly challenges the former singular concept of space known predominantly as static, in favor of new concepts of space, such as: Networked, Interactive, Immersive, Dynamic, Augmented and Data controlled. These new concepts and the corresponding new digital technology medium are the principal subjects of this research seminar. As a laboratory we will investigate the expanding the role of the designer's work, propose and prototype plausible design fictions and research how we as humans will interface with our new corresponding digital prosthetics, connectivity, dynamic spaces and augmented architectures? This course will run In conjunction with the Spring 15' Symposium, Non Discrete Architectures: Digital Prosthetics, Connectivity and Augmented Spaces. The seminar/lab explores the design of our environment through emerging technologies in

computing, interface and device culture. The lab is directed by Shawn Rickenbacker and resides at the University of Pennsylvania's Graduate School of Design.

#### ARCH-724-003: Technology in Design: Aperiodic -The Mathematics of Tiling in Architectural Design

Joshua Freese

Tuesday 12noon-3:00

Repetition and difference in geometric tiling patterns produce visual complexity, intricacy, economy and articulation. From textiles and ceramics to architectural design, the tradition of tiling has culled from mathematical systems that inscribe two- and three-dimensional geometric conditions, ultimately yielding cultural effects that are unique to their time. By examining this tradition across time and disciplines, this course will explore a range of mathematical systems, tools and media as well as how they advance contemporary architectural topics such as parametrics, optimization, fabrication, and implementation. Through lectures, readings and workshops, the course will lead students to develop contemporary and future-oriented methods that establish new parameters for tiling systems. Students will identify particular tiling families from guest lectures, historical precedents and readings, and will establish conditions for scripting new assemblies for generating three-dimensional patterns and assemblies. Fabrication methods will consider an economy-of-means, using minimal variation in base models and molds to achieve maximum differentiation in the aggregation of tiles into 3-dimensional volumetric models. It is through this negotiation between fixed rules and variable freedoms that tiling systems have historically asserted their cultural value – and this will be the ultimate goal of the course.

#### ARCH-724-004: Technology in Design: Data and Adaptation

Mark Nicol

Tuesday 9:00am-12noon

Data + Adaptation seeks to study emerging tools and workflows that allow designers to tap into abundant sources of data and leverage them towards crafting adaptable, dynamic constructions. Low cost sensors and simple scripting techniques will be used to collect and visualize complex data fields. Design tools within the Rhino/Grasshopper or Maya ecosystem with the capability of designing and simulating dynamic responses to shifting data fields will be explored. In the end, students will take a position with regards to how data might affect design and furthermore how architectural constructions might be designed with the capacity to dynamically adapt to those fluctuating data.

#### ARCH-726-401 Contemporary Furniture Design

Katrin Mueller-Russo

Tuesday 12noon-3:00pm

This course provides a platform, in the form of furniture, to execute and deploy architectural and engineering principles at full scale. It will be conducted as a seminar and workshop and will introduce students to a variety of design methodologies that are unique to product design. The course will engage in many of the considerations that are affiliated with mass production; quality control, efficient use of material, durability, and human factors. Students will conduct research into industrial design processes, both traditional and contemporary, and will adapt these processes into techniques to design a prototype for limited production. Instruction will include; model making, the full scale production of a prototype, its detailing; design for mass production and the possibility of mass customization; design for assembly, furniture case studies; design techniques, software integration, optimization studies; Computer Aided Manufacturing (CAM) and a site visit to a furniture manufacturer.

#### ARCH-727-401 Industrial Design I

Peter Bressler

Wednesday 9:00am-12noon

Industrial design (ID) is the professional service of creating and developing concepts and specifications that optimize the function, value and appearance of products and systems for the mutual benefit of both user and manufacturer. Industrial designers develop these concepts and specifications through collection, analysis and

synthesis of user needs data guided by the special requirements of the client or manufacturer. They are trained to prepare clear and concise recommendations through drawings, models and verbal descriptions. The profession has evolved to take its appropriate place alongside Engineering and Marketing as one of the cornerstones of Integrated Product Design teams. The core of Industrial Design's knowledge base is a mixture of fine arts, commercial arts and applied sciences utilized with a set of priorities that are focused firstly on the needs of the end user and functionality, then the market and manufacturing criteria. This course will provide an overview and understanding of the theories, thought processes and methodologies employed in the daily practice of Industrial Design. This includes understanding of ethnographic research and methodologies, product problem solving, creative visual communication, human factors / ergonomics application and formal and surface development in product scale. This course will not enable one to become an industrial designer but will enable one to understand and appreciate what industrial design does, what it can contribute to society and why it is so much fun.

#### ARCH-728-401 Design of Contemporary Products

Carla Diana

Tuesday 12noon-3:00

Smart objects are information-based products that are in ongoing dialogs with people, the cloud and each other. By crafting rich interactions, designers can create expressive behaviors for these objects based on sophisticated programmed responses. At the same time, sensor technologies have enabled us to introduce natural gestures as a means of interacting with a product. (Not only can we push, pull and twist a data value, but we can wave at, caress, tilt and shake it as well.) With an explosion of new possibilities for object interaction and human control, it is the designer's role to envision new solutions that are both meaningful and responsible. This course will explore product design solutions through a combination of physical and digital design methods. Beginning with an examination of case studies, students will gain a sense of the breadth of product and interaction design practice as it applies to smart objects. Through a series of lectures and hands-on studio exercises, students will explore all aspects of smart object design including expressive behaviors (light, sound and movement), interaction systems, ergonomics, data networks and contexts of use. The course will culminate in a final project that considers all aspects of smart object design within the context of a larger theme.

#### ARCH-730-001 City Hall Pavilion Development and Construction

Mohamad Al-Khayer

Wednesday 6:00pm-9:00pm

The course will focus on the design morphology, detailing, and the construction of "Moment Lab Pavilion" which is set to be constructed in Spring 2015 at the southeast corner of Philadelphia City Hall. The course will develop through hands-on workshops and will focus on acquiring knowledge through making (Techne), understanding the morphological transformation of a given geometric packing, and building using readily available materials. The process consists of building and testing physical models that simulates the actual pavilion. In addition to digital simulation sessions to realize the desired design, which answers to the program developed by the Moment Lab curators. The second half of the semester will focus on using lightweight materials to fabricate the pavilion's actual components, including structural members, panels, and joints, which are required for pavilion's superstructure and envelope.

#### ARCH-734-001 Architecture and Ecology

Todd Woodward

Tuesday 9:00-12noon

Architecture is an inherently exploitive act – we utilize resources from the earth and produce waste and pollution to create and occupy buildings. We have learned that buildings are responsible for 40% of greenhouse gas emissions, 15% of water use and 30% of landfill debris. This growing realization has led building designers to look for ways to minimize negative environmental impacts. Green building design practices are seemingly becoming mainstream. Green building certification programs and building performance metrics are no longer considered fringe ideas. This course will investigate these trends and the underlying theory with a critical eye. Is "mainstream green" really delivering the earth-saving architecture it claims? As green building practices become

more widespread, there remains something unsatisfying about a design approach that focuses on limits, checklists, negative impacts and being “less bad.” Can we aspire to something more? If so, what would that be? How can or should the act of design change to accommodate an ecological approach?

#### ARCH-738-001 The Modern House: Technology Then and Now

Annette Fierro

Wednesday 9:00am-12noon

In the current age of new fabrication methodologies, methods are emerging for the conception and design of the contemporary house which have radical potential for enclosure, habitation and practices of daily life. This course begins by examining the canonical houses of the original avant-garde--Adolf Loos, Frank Lloyd Wright, Le Corbusier, Mies van der Rohe and Alvar Aalto—on the premise that their houses were working manifestos for rethinking space, form and indeed ideas of life itself—all of which were prompted by new concepts of construction. From this spectrum of issues, contemporary houses and contemporary methods and materials will be studied extensively to develop equally new ideas between matter and quotidian life. As the primary task of the course, students will work in teams to develop highly detailed constructional proposals for a portion of a speculative home.

#### ARCH-740-001 Formal Efficiencies

Eric Carcamo

Tuesday 9:00-12noon

The seminar is a discourse based in the use of multi-layered techniques and production processes that allow for control over intelligent geometries, calibration of parts, and behavioral taxonomies, normalizing an innovative field of predictability. Our goal is to explore innovative, potential architectural expressions of the current discourse around form through technique elaboration, material intelligence, formal logic efficiencies and precision assemblies as an ultimate condition of design. The seminar will develop and investigate the notion of proficient geometric variations at a level of complexity, so that questions towards geometrical effectiveness, accuracy and performance can begin to be understood in a contemporary setting.

#### ARCH-744-401 Digital Fabrication

Ferda Kolatan

Monday 6:00pm-9:00pm

This seminar course investigates the fabrication of digital structures through the use of rapid prototyping (RP) and computer-aided manufacturing (CAM) technologies, which offer the production of building components directly from 3D digital models. In contrast to the industrial-age paradigms of prefabrication and mass production in architecture, this course focuses on the development of repetitive non-standardized building systems (mass-customization) through digitally controlled variation and serial differentiation. Various RP and CAM technologies are introduced with examples of use in contemporary building design and construction.

#### ARCH-750-001 Parafictional Objects

Kutan Ayata

Friday 9:00-12noon

This Representation/Design Seminar will start with series of lectures examining the histories of Realism in Art spanning from French Realism of 19<sup>th</sup> Century through Hyperrealism into Parafictional Art of the recent past with their aesthetic provocations at the center of this inquiry. Weekly discussions of the reading material will be followed by student presentations on assigned topics. The design portion of the seminar will commence with the regeneration and defamiliarization of objects extracted from Still Life Paintings. The process will carry through multiple mediums of image patterning, line drawing, 3D modeling and surface mapping, exploring the potentials of cross-medium translations to articulate surface characters. These objects will then be fabricated to gain physical presence in the world. The realism of these objects as things in the world will be further explored through a project in rendering and photocomposition as each object will be inserted back into the Still Life painting.

## ARCH-754-001 Performance Design Workshop

Yun Yi

Friday 9:00am-12noon

The workshop applies simulation and diagramming techniques to a series of discrete design projects at different scales. The emphasis is on refinement and optimization of performance based building design. Performance analysis techniques can provide enormous amounts of information to support the design process, acting as feedback mechanisms for improved performance, but careful interpretation and implementation are required to achieve better buildings. Energy, lighting, and air flow are the three main domains covered in the workshop. Students will learn how to utilize domain tools at an advanced level, and utilize them as applications to examine the environmental performance of existing buildings. Using the results of analytical techniques, the students will develop high-performance design strategies in all three domains.

## ARCH-764-001 Vertical Cities Asia

Chris Marcinkoski/Josh Freese

Monday 9:00-12noon

This seminar will develop entries to the Vertical Cities Asia International Design

Competition: [www.verticalcitiesasia.com](http://www.verticalcitiesasia.com). Organized by the National University of Singapore School of Design and Environment, and sponsored by the World Future Foundation, the competition is predicated on the belief that a new paradigm of high-density compact urban settlement is necessary for rapidly urbanizing Asian territories besieged by massive rural-urban migrations. Jettisoning the notion of recycling existing urban architectural models to accommodate increasing populations with devastating effects on land, infrastructure, and the environment, the competition endeavors to elaborate fundamentally new models of urbanization within a rapidly transforming 21st century Asian milieu. The first portion of the seminar will focus on developing a dossier of research related to the particular site and theme of this year's competition. This work will be developed collectively within the seminar. The second portion of the seminar will explore canonical 20th century proposals for new urban form and settlement. This work will be developed individually with each student contributing a short chapter on their case study for the seminar dossier. The remaining portion of the seminar will focus on the elaboration of individual strategies for a new 1 sq km urban district for 100,000 residents. While this is not a studio, the expectation remains that students will develop their individual propositions using a range of visual means and modeling techniques.

## ARCH-765-001: Project Management

Charles Capaldi

Friday 9:00am-12noon

This course is an introduction to techniques and tools of managing the design and construction of large, and small, construction projects. Topics include project delivery systems, management tools, cost-control and budgeting systems, professional roles. Case studies serve to illustrate applications. Cost and schedule control systems are described. Case studies illustrate the application of techniques in the field.

## ARCH-814-001: The Idea of an Avant-Garde in Architecture: Manfredo Tafuri's The Sphere and the Labyrinth

Joan Ockman

Thursdays 12noon-3:00pm

No historian of architecture has written as intensely about the contradictions of architecture in late-modern society or reflected as deeply on the resulting problems and tasks of architectural historiography as Manfredo Tafuri (1935–1994). For many architects, the Italian historian's dismissal of "hopes in design" under conditions of advanced capitalism produced a disciplinary impasse. This in turn led to calls to oust Tafuri—to move beyond his pessimistic, lacerating stance. The seminar will undertake a close reading of one of Tafuri's most complexly conceived and richly elaborated books, *The Sphere and the Labyrinth: Avant-Gardes and Architecture from Piranesi to the 1970s*. Initially published in Italian in 1980 and translated into English in 1987, the book represents the first effort to define and historicize the idea of an avant-garde specifically within architecture. Its content centers on the architecture and urbanism of the first three decades of the twentieth century. Yet surprisingly Tafuri

begins his account with the eighteenth-century inventions of Piranesi, and he concludes with a critique of the “neoavant-garde” of his own day. In addition to traversing *The Sphere and the Labyrinth* chapter by chapter—starting with its formidable methodological introduction, “The Historical ‘Project’”—the seminar will read a number of primary and secondary sources on the historical contexts under discussion and consider some important intertexts that shed light on Tafuri’s thinking. The course’s focus is at once historical and historiographic: we will be concerned not just with actual events but with how they have been written into architectural history. One of our aims will be to reassess the role of an avant-garde in architecture and compare Tafuri’s conception to that advanced in other disciplines. Is the idea of an avant-garde still viable today? Or should it be consigned to the dustbin of twentieth-century ideas? Note: This course is intended for Ph.D. students. Others will be admitted by permission of the instructor.

### **FINE ARTS**

#### **FNAR-558-402 Introduction to Clay: the Potter's Wheel and Beyond**

Sumi Maeshima

Monday and Wednesday: 2:00 – 4:00 p.m.

In this introductory clay class, students will learn all the fundamental skills needed to create three-dimensional forms in clay using a variety of methods: wheel throwing, handbuilding (such as coil building and slab construction), and press molding. Whether creating utilitarian forms or creating sculpture, projects are designed to strengthen both craftsmanship and individual creativity. In addition to developing a working knowledge of the ceramic process, including surface treatments and glazing, students will also be introduced to design issues as well as contemporary art/ceramics topics that influence our aesthetic sensibilities. No prerequisites.

#### **FNAR-558-401 Introduction To Clay: the Potter's Wheel and Beyond**

Matthew Courtney

Monday and Wednesday: 5:00 – 8:00 p.m.

In this introductory clay class, students will learn all the fundamental skills needed to create three-dimensional forms in clay using a variety of methods: wheel throwing, handbuilding (such as coil building and slab construction), and press molding. Whether creating utilitarian forms or creating sculpture, projects are designed to strengthen both craftsmanship and individual creativity. In addition to developing a working knowledge of the ceramic process, including surface treatments and glazing, students will also be introduced to design issues as well as contemporary art/ceramics topics that influence our aesthetic sensibilities. No prerequisites.

#### **FNAR-558-403 Introduction To Clay: the Potter's Wheel and Beyond**

Ryan J Greenheck

Tuesday and Thursday: 1:30 – 4:30 pm

In this introductory clay class, students will learn all the fundamental skills needed to create three-dimensional forms in clay using a variety of methods: wheel throwing, handbuilding (such as coil building and slab construction), and press molding. Whether creating utilitarian forms or creating sculpture, projects are designed to strengthen both craftsmanship and individual creativity. In addition to developing a working knowledge of the ceramic process, including surface treatments and glazing, students will also be introduced to design issues as well as contemporary art/ceramics topics that influence our aesthetic sensibilities. No prerequisites.

#### **FNAR-559-402 Beginning Clay: Handbuilding and Casting Techniques**

Sumi Maeshima

Monday and Wednesday: 5:00 – 8:00 pm

Modeling and casting are fundamental methods of object-making. Students will learn basic handbuilding techniques such as coil building, slab construction, and mold making through assignments that incorporate conceptual and technical issues. Through experimentation with these methods, this course promotes an understanding of materials, processes, visual concepts, and techniques for creating three-dimensional forms in

space. In addition to using different water-based clays and plaster, other materials such as wax, plastiline, paper pulp, cardboard, and tar paper will be explored. No prerequisites.

#### FNAR-563-401 Advanced Wheel Studio

Ryan J Greenheck

Tuesday and Thursday: 5:00 – 8:00 pm

This course teaches students more advanced wheel throwing techniques while helping to develop their critical skills in other areas of ceramic work. Students will learn to throw, employing larger masses of clay, and to increase the complexity of their work by combining and altering thrown parts. There will be an emphasis on experimentation in surface treatment and design, the goal of which is to expand a student's ability to create more complicated and personalized clay works. In addition to learning the technical knowledge, there will be critical discussions of contemporary ceramics issues through image presentations, reading materials and field trips.

#### FNAR-661-401 Video I

David W. Novack

Monday: 1:00pm–4:00pm

This course provides students with the introductory skills and concepts related to producing short works that explore the language of the moving image. Students will learn the basics of cinematography and editing through a series of assignments designed to facilitate the use of the medium for artistic inquiry, cultural expression and narrative storytelling, through both individual and group projects.

#### FNAR-661-402 Video I

Emory B. Van Cleve

Wednesday: 10:00am–1:00pm

This course provides students with the introductory skills and concepts related to producing short works that explore the language of the moving image. Students will learn the basics of cinematography and editing through a series of assignments designed to facilitate the use of the medium for artistic inquiry, cultural expression and narrative storytelling, through both individual and group projects.

#### FNAR-661-404 Video I

Ellen W. Reynolds

Tuesday: 1:30pm-4:30pm

This course provides students with the introductory skills and concepts related to producing short works that explore the language of the moving image. Students will learn the basics of cinematography and editing through a series of assignments designed to facilitate the use of the medium for artistic inquiry, cultural expression and narrative storytelling, through both individual and group projects.

#### FNAR-661-404 Video I

Ellen W. Reynolds

Thursday: 5:00 – 8:00 pm

This course provides students with the introductory skills and concepts related to producing short works that explore the language of the moving image. Students will learn the basics of cinematography and editing through a series of assignments designed to facilitate the use of the medium for artistic inquiry, cultural expression and narrative storytelling, through both individual and group projects.

#### FNAR-661-402 Video I

Jenny L Perlin

Wednesday 2:00 – 5:00 pm

This course provides students with the introductory skills and concepts related to producing short works that explore the language of the moving image. Students will learn the basics of cinematography and editing through a

series of assignments designed to facilitate the use of the medium for artistic inquiry, cultural expression and narrative storytelling, through both individual and group projects.

#### FNAR-662-401 Video II

Jenny L Perlin

Wednesday: 5:00 – 8:00 pm

Video II offers opportunities to further explore the role of cinematic narrative technique, non-narrative forms, digital video cinematography, editing, and screen aesthetics. Through a series of several video projects and a variety of technical exercises, students will refine their ability to articulate technically and conceptually complex creative projects in digital cinema. In addition, one presentation on a contemporary issue related to the application of cinematic storytelling and/or the cultural context of digital video is required.

#### FNAR-662-402 Video II

Emory B Van Cleve

Monday: 10:00 am – 1:00 pm

Video II offers opportunities to further explore the role of cinematic narrative technique, non-narrative forms, digital video cinematography, editing, and screen aesthetics. Through a series of several video projects and a variety of technical exercises, students will refine their ability to articulate technically and conceptually complex creative projects in digital cinema. In addition, one presentation on a contemporary issue related to the application of cinematic storytelling and/or the cultural context of digital video is required.

#### FNAR-665-401 Cinema Production

Emory B Van Cleve

Tuesday: 1:30 – 4:30 p.m.

This course focuses on the practices and theory of producing narrative based cinema. Members of the course will become the film crew and produce a short digital film. Workshops on producing, directing, lighting, camera, sound and editing will build skills necessary for the hands-on production shoots. Visiting lecturers will critically discuss the individual roles of production in the context of the history of film.

#### FNAR-675-401 Image and Sound Editing

David W Novack, Nancy I Levy-Novack

Monday: 5:00 – 8:00 pm

This course presents an in-depth look at the storytelling power of image and sound in both narrative and documentary motion pictures. Students apply a theoretical framework in ongoing workshops, exploring practical approaches to picture editing and sound design. Students edit scenes with a variety of aesthetic approaches, and create story-driven soundtracks with the use of sound FX, dialogue replacement, foleys, music and mixing. Students not only learn critical skills that expand creative possibilities, but also broaden their understanding of the critical relationship between image and sound.

#### FNAR-523-401 Drawing I

Matthew Neff

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

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.



#### FNAR-523-402 Drawing I

Deirdre Murphy

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

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.

#### FNAR-523-403 Drawing I

Deirdre Murphy

Tuesday and Thursday: 1:30 – 4:30 pm

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.

#### FNAR-523-404 Drawing I

Andrea Hornick

Monday and Wednesday: 2:00 – 5:00 pm

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.

#### FNAR-523-405 Drawing I

John Weiss

Tuesday and Thursday: 4:30 – 7:30 pm

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.

### FNAR-635-401 3-D Computer Modeling

Scott G White

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

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-536-401 Digital Figure Modeling

Scott G White

Monday and Wednesday: 2:00 – 5:00 pm

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-526-401 Sequential Drawing

Jeremy A Holmes

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

Sequential drawing instructs in the visualization of storytelling through the exploration of visual narrative components (visual iconography, panel- to-panel transition types, picture/word relations) and their application to a narrative through the use of formal drawing techniques (composition, color, perspective, line, form). The class begins with various exercises in paneling, pacing and style development, and concludes with the student applying the concepts and techniques they've acquired to the creation of a graphic novel.

### FNAR-542-401 3-D Design

Nick Vidnovic

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

Students will make work that draws from and interacts with the three-dimensional world we live in. Formal strategies will explore principles of organization. Planar construction, modeling and assemblage methods will be used for investigations spanning from bas-relief to environmental art. This is a "learn by doing" process with no prerequisites.

### FNAR-649-401 Advanced Digital Photography

Brent Wahl

Tuesday: 9:00 am – 12:00 pm

In this studio course, students will become proficient in advanced techniques of image production while expanding their artistic process and refining their photographic work. With an emphasis on self-directed projects and research, students will further their knowledge of image control and manipulation, retouching and collage, advanced color management; become familiar with high-end equipment and develop professional printing skills. Class discussion, lectures and assigned readings will address the critical issues in contemporary art, media and photographic culture. Emphasis will be on integrating practice and critical dialogue.

### FNAR-685-401 Photography and Fiction

Jamie G Diamond

Thursday: 10:00 am – 1:00 pm

In spite of photography's traditional relationship with fact, the medium has been a vehicle for fiction since the very beginning. Fiction and photography encompass a broad range of meanings, from elaborately staging and performing for the camera, to manipulations using digital technology such as Photoshop to construct the work. This class will examine and trace the history of manipulated photography while paying special attention to the complex negotiations between the decisive moment, the constructed tableau, and the digitally manipulated image.

There will be a combination of class lectures, studio projects, assigned readings, visiting artists, film screenings, field trips, and class critiques.

#### FNAR-633-401 Digital Illustration

Scotty Reifsnyder

Monday and Wednesday: 1:00 – 4:00 pm

Digital Illustration is a course designed to expose students to the diverse techniques and approaches used in creating digital illustration for print publication. Course assignments will include two-dimensional animation storyboard rendering, figure illustration, technical diagram illustration, photographic retouching and enhancing. Digital applications will include morphing with layers, surface cloning, three-dimensional modeling and spatial transformation of scenes and objects. Students completing this course will possess the capability to design and plan creatively and skillfully execute finished artwork.

#### FNAR-636-402 Art, Design, and Digital Culture

Scotty Reifsnyder

Monday and Wednesday: 4:00 – 7:00 pm

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-636-403 Art, Design, and Digital Culture

Jason A Alejandro

Tuesday and Thursday: 5:00 – 8:00 pm

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-636-404 Art, Design, and Digital Culture

Keith W Fledderman

Monday and Wednesday: 7:00 – 10:00 pm

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-551-401 Printmaking: Etching

Ivanco Talevski

Monday and Wednesday: 5:00 – 8:00 pm

The class will challenge the possibilities of experimental drawing and ways of creating incisions and textures using copper plates as the matrix, which then will be printed on paper and other materials. The class offers full technical and historical description of each individual process: Dry Point, Etching, Hard ground, Soft Ground, Aquatint, Shine Cole', Spit-Biting, Sugar Lift, Color Printing and Viscosity printing.

### FNAR-580-402 Figure Drawing I

Ivanco Talevski

Tuesday and Thursday: 1:30 – 4:30 pm

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-572-401 Advanced Photography: Integrated Techniques and Strategies

Karen Rodewald

Tuesday: 5:00 – 8:00 pm

This studio course seeks to broaden each student's skills by experimenting with a wide range of photographic media. Advanced analog, digital and experimental lens-based techniques will be covered, as well as larger camera formats to expand their vocabulary as image-makers. Emphasis will be on an integrated experience of the photographic medium and the development of a body of work that is both theoretically and historically informed. The course will be a means to view and discuss various strategies of important contemporary photographers. Focused assignments, readings, slide lectures and gallery visits will supplement each student's artistic practice and research.

### FNAR-640-405 Digital Photography

Karen Rodewald

Wednesday: 10:00 am – 1:00 pm

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-553-401 Advanced Projects in Printmaking

Virgil M Marti Jr.

Wednesday: 10:00 am – 1:00 pm

This course will concentrate on expanding imagery in print media. The course requires the proposal of a directed final project to be developed during the semester. Three initial exploratory projects will culminate in the final. Projects are open to all print media, but there will be an emphasis on screen printing. Techniques will be addressed as they serve the needs of ideas rather than a set technical procedure. Through individual consultation, scheduled class critiques, and field trips, attention will be given to studio work in and out of printmaking so that

the technical and conceptual strengths of print media can serve as a worthwhile adjunct to an overall studio practice.

#### FNAR-622-401 Big Pictures: Mural Arts

Jane Golden, Shira Walinsky

Monday and Wednesday: 2:00 – 5:00 pm

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-640-403 Digital Photography

Tony Ward

Tuesday: 5:00 – 8:00 pm

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-640-409 Digital Photography

Tony Ward

Friday: 1:00 – 4:00 pm

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-571-402 Introduction to Photography

Tony Ward

Tuesday: 1:30 – 4:30 pm

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-571-403 Introduction to Photography

Gabriel Martinez

Thursday: 1:30 – 4:30 pm

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-571-403 Introduction to Photography

Anna Neighbor

Tuesday: 9:00 am – 12:00 pm

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-640-402 Digital Photography

Gabriel Martinez

Monday: 1:00 – 4:00 pm

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-640-404 Digital Photography

Gabriel Martinez

Wednesday: 5:00 – 8:00 pm

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-640-408 Digital Photography

Sarah Stolfa

Wednesday: 8:00 – 11:00 pm

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-640-407 Digital Photography

Sarah Stolfa

Friday: 10:00 am – 1:00 pm

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-640-401 Digital Photography

Michael J Bryant

Monday: 10:00 am – 1:00 pm

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-640-406 Digital Photography

Anna Neighbor

Wednesday: 2:00 – 5:00 pm

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-524-401 Drawing Investigations

Joan Wadleigh Curran

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

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 imagine construction, and the processes of synthesis and transformation in order to communicate ideas through visual means. Recommended for students in all areas.

#### FNAR-531-401 Painting Practices

Joan Wadleigh Curran

Monday and Wednesday: 2:00-5:00 pm

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-575-201 Drawing Seminar

Matthew E Freedman

Monday: 2:00 – 5:00 pm

This seminar examines the essential nature drawing has in an artist's process. Direct visual perception, self-referential mark making, the viability of space and understanding it, and drawing from one's own work are some of the drawing experiences encountered in the course. There are regular critiques and discussions based on the work and readings.

#### FNAR-547-401 Environmental Animation

Christopher Landau

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

This studio-based course examines intersections of landscape, art, and architecture through the medium of 3D animation. As our experience and understanding of environments is increasingly defined by digital systems of representation, this course will define connections between biological, psychological, poetic and computational perspectives. We will draw on different data to use as inputs and drivers for the articulation of environments, from formal navigation of raster, vector, and 3D data to scripting or narration of more interconnected or agent ecosystems. This course will allow for a range of entry points from different disciplines. Assignments will range from proposal-focused objectives to the designing open-ended representational systems. We will examine and discuss standard visualization typologies such as the architectural walk-through and animated diagrams as well as filmic strategies all as starting points for creative reinterpretation of space. We will primarily be using 3D Studio Max and After Effects with support from Rhino, Grasshopper, NextGen 3D-scanning, and, of course, scripting.xperience in landscape architecture, architecture, animation, programming, film, Photoshop, or graphic design is strongly encouraged but not required. This course will embrace a spirit of invention, experimentation and interdisciplinary cross-pollination.

#### FNAR-580-401 Figure Drawing I

Douglas Martenson

Monday and Wednesday: 5:00 – 8:00 pm

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-581-401 Figure Drawing II

Douglas Martenson

Monday and Wednesday: 5:00 – 8:00 pm

Figure Drawing II is an advanced class designed to further develop the student's skill and facility in capturing the human form. Content and conceptual issues will be explored through individualized projects concentrating on the figure. Students will also expand on their knowledge of drawing media and application.

#### FNAR-598-201 Graduate Sculpture Seminar

Massimo Bartolini

Wednesday: 1:30 – 4:30 pm

Visiting artist Massimo Bartolini will lead this studio course based on the improvisational approaches to developing individually made sculptural works, as well as works that are made in collaboration with others. As in Music or Theater, these works involve the collaboration of others, yet they are equally initiated by small thoughts, and carry those thoughts into a more public and interactive format of installation.

**FNAR-570-401 Graphic Design Practicum**

David Comberg

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

Practicum provides a real world experience for students interested in solving design problems for non-profit and community organizations. The studio works with two clients each semester, and previous projects have included print design, web design, interpretive signage and exhibit interactives. All projects are real and will result in a portfolio-ready finished product. Students will participate in a full design experience including design, client interaction, presentations, production, and project management. In addition, students will take field trips, meet professionals and go on studio visits.

**FNAR-637-201 Information Design and Visualization**

David Comberg

Tuesday and Thursday: 1:30 pm – 4:30 pm

Information design and visualization is an introductory course that explores the structure of information (text, numbers, images, sounds, video, etc.) and presents strategies for designing effective visual communication appropriate for various users and audiences. The course seeks to articulate a vocabulary of information visualization and find new design forms for an increasingly complex culture.

**FNAR-566-401 Graphic Design with Creative Technologies**

Mahir M Yavuz

Thursday: 4:30 – 8:30 pm

The aim of this course is to introduce students to 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. This 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-631-401 Interdisciplinary Studio: Sites of Color, Convergence, and Hybridity**

Jackie Tileston

Tuesday and Thursday: 1:30 – 4:30 pm

This course takes an experimental multimedia approach to investigating some of the boundaries in contemporary art making practices. Painting, photography, video, design and sculpture intersect, overlap, and converge in complicated ways. Projects will be designed to explore hybrid forms, collage, space/ installation, and color through a variety of strategic and conceptual proposals as students work towards unique ways of expanding their own work. Weekly readings, critiques, and presentations will be integrated with studio projects. This studio/seminar is appropriate for students at all levels and from all areas of Fine Arts and Design.

**FNAR-634-201 Web Design I**

Sebastian R Derroncourt

Monday and Wednesday: 5:00 – 8:00 pm

A course designed to introduce the student to web presentation, theory, techniques and current software applications, including Adobe Photoshop, Macromedia Dreamweaver and Macromedia Flash. Instruction will include web terminology, appropriate file protocolling, information architecture planning, menu-linking organization, communication strategies and www identity design. Upon completion of this course, students will possess a working knowledge of how to organize and design full web page content for interactive on-line user interfacing or control-group presentation.

### FNAR-678-401 Interfacing Cultures: Designing for Mobile, Web, and Public Media

Sebastian R Derroncourt

Friday: 10:00 am – 2:00 pm

This course introduces advanced topics related to contemporary media technologies, ranging from social media to mobile phones applications and urban interfaces. Students learn how to use new methods from interaction design, service design, and social media and work towards prototyping their ideas using new platforms and media. The class will cover a range of topics such as such as online-gaming, viral communication, interface culture, networked environments, internet of things and discuss their artistic, social, and cultural implications to the public domain.

### FNAR-550-401 Introduction to Printmaking

Marc E Blumthal

Tuesday and Thursday: 4:30 – 7:30 pm

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.

### FNAR-643-401 Language of Design

Sharka Hyland

Monday: 4:00 – 8:00 pm

The course will explore the changing relationship during the modern era between design (structure, model, plan of a work of art) and language (metaphor for a system of communication; speech, writing, literature). Our readings and visual presentations will focus on topics in the decorative arts, painting, architecture, typography and visual communication. We will focus on primary sources in order to situate our inquiry in a larger historical context. The discussion will center on claims about the inherent meaning of forms, discuss different roles for designs as an ideological statement, as an agent of societal change, and as an idiosyncratic expression. Topics will also include the search for a universal visual language, attempts at bridging the perceived gap between spoken and written language, and the impact of visual form on the meaning of literary texts (particularly when the author has been involved). Students can suggest additional topics related to their field of study.

### FNAR-569-201 Typography

Sharka Hyland

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

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-589-401 Mixed Media Animation

Joshua Mosley

Tuesday and Thursday: 1:30 – 4:30 pm

Mixed Media Animation is a contemporary survey of stop-motion animation concepts and techniques. Students use digital SLR cameras, scanners and digital compositing software to produce works in hand-drawn animation, puppet and clay animation, sand animation, and multiplane collage animation. Screenings and discussions in the course introduce key historical examples of animation demonstrating how these techniques have been used in meaningful ways. Students then learn how to composite two or more of these methods with matte painting, computer animation or video.

### FNAR-654-401 Printmaking Publications: Introduction to Independent Publishing and Artists' Publications

Kayla D Romberger

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

This course introduces students to independent publishing and artists' publications through print methods in letterpress, Risograph, and Xerox. The class will focus on the self-published artists' zine/book as an affordable, accessible, and easily reproducible format for exploring ideas, disseminating artists' work, and collaborating across disciplines. Students will learn a range of skills, including techniques in both mechanized and hand-pulled forms of printed media (Risograph, copy machine, Vandercook letterpress); short-run editions and binding; design and layout; pre-press and print production; and the web as it relates to and supports independent and democratic modes of distribution. Students will learn about and become acquainted with some of the most significant independent publishers working today and throughout history. Students will leave class having completed three individual projects: a 16-page booklet/zine; a carefully considered online publication, and a final collaborative book designed, developed and published as a class. The course commences with a field trip to New York City's Printed Matter, one of the oldest and most important nonprofit facilities dedicated to the promotion of artists' books, where students will be encouraged to submit a publication by semester's end.

### FNAR-545-4021 Sculpture Practices

Tom Bendtsen

Tuesday and Thursday: 1:30 – 4:30 pm

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-546-401 Sculpture II: Object and Installation

Tom Bendtsen

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

This course expands upon the skills and concepts developed in FNAR 145 Sculpture Practices. Students experiment with a variety of modes of production, while concentrating on the historical space between the art object and installation. In addition to these investigations, assignments relative to the history and social impact of these practices are reinforced through readings and group discussion.

### FNAR-660-401 Shared Culture: New Strategies for Artists in the Digital Age

Kenneth P Goldsmith

Wednesday: 5:00 – 8:00 pm

Our digital world has forced us to entirely rethink what it means to be an artist in the digital age, socially, economically, and politically. Ideas that have long been stable - including originality, creativity, and genius - are ripe for reexamination and redefinition in the twenty-first century. When the entire internet is copy- and-paste-able - and distribution moves swiftly - is anything off limits for the artist? Can we imagine our artistic production mimicking the meme, rippling through the networks for a day, then disappearing forever? Are we doomed to make works that are supposed to live for eternity or, in the face of environmental meltdown and collapsing financial markets, can we instead move our production toward the ephemeral? What would this look like? Can our output be steered toward the political? Can we frame these ideas as acts of resistance? Or compliance? Is there an inside? Is there an outside?