TABLE OF CONTENTS

3 Dean’s Letter
7 Administration
8 Faculty & Staff Listing
11 Undergraduate Study Abroad Programs
12 Undergraduate Degree Programs
14 112 Level Studio Description
   Bob Hansman, Associate Professor, Coordinator
   Don Koster, Senior Lecturer
   Dennis Hyland, Lecturer
   Mike Naucas, Lecturer
15 212 Level Studio Description
   Liane Hancock, Lecturer, Coordinator
   Valerie Greer, Senior Lecturer
   Kevin Le, Lecturer
   Stephen Perdue, Lecturer
16 312/412 Level Studio Description
   Gia Daskalakis, Associate Professor
   Iain Fraser, Professor
   Patty Heyda, Assistant Professor
   Zeuler R. Lima, Associate Professor
   Forrest Fulton, Visiting Assistant Professor
24 Graduate Degree Programs
32 Graduate Study Abroad Programs
41 Guidelines for Comprehensive Options Studios
42 500/600 Level Studio Descriptions
   Wendell Burnette, Visiting Professor
   Paul Donnelly, Rebecca & John Voyles Professor
   Sarah Dunn, Visiting Professor, MUD
   Martin Felson, Visiting Professor, MUD
   Catalina Freixas, Senior Lecturer
   Christof Jantzen, I-CARES Professor of Practice
   Derek Hoeferlin, Senior Lecturer
   Dorothée Imbert, Professor
   Ferda Kolatan, Visiting Professor
   Don Koster, Senior Lecturer
   Stephen Leet, Professor
   Robert McCarter, Ruth & Norman Moore Professor
   Andrew Metter, Visiting Professor
   Pablo Moyano, Lecturer
   Alfredo Payá Benedito, Ruth & Norman Visiting Professor
   Ken Tracy, Visiting Assistant Professor

Dean’s Letter
Architecture,
Washington University
in St. Louis
TABLE OF CONTENTS

Spring 2011

79    Architecture Course Listings
102   Studio Assignment & Selection Process
103   Message from the GAC
104   Digital Fabrication Information
105   Faculty Contact Information
109   Staff Contact Information
110   Lecture Series Schedule
111   Academic Calendar for Spring 2011
DEAN’S LETTER S/11, #9

ROLL CALL

Graduate Students 281
Undergraduate Students 204
485

MUD Students (in studio) 16
Students Abroad (Florence, Helsinki) 23

Tenured and Tenure Track Faculty 23
Professor of Practice 1
Visiting Faculty 7
Affiliate Faculty 44
Faculty Abroad 24
99

Faculty Emeritus 7

Staff 6

Studio Sections 35 in STL

New Courses 10

Dean’s Letter
Architecture, Washington University in St. Louis

The St. Louis Effect
Architect Alfredo Payá Benedito principal in the firm noname29 (http://www.alfredopaya.com/obras.html) joins us from Spain as the Ruth & Norman Moore Visiting Professor for the spring of 2011. Alfredo will be assisted by Pablo Moyano and their proposed studio asks, “everybody knows a site where they always ask themselves: what could be done here? How could I improve this site? How could this site be used?” Using a video shot by each student as a starting point the studio will explore a site that is “anywhere, a location on your route home... or where you walk the dog” that asks these questions. Often we are given programs or stated problems. Yet, the world is full of problems waiting to be discovered and addressed on every walk home. Architects can no longer simply wait to provide a service for clients. They must engage the world, or St. Louis, with passion and professional attention.

Joining Alfredo as a visiting professor is Wendell Burnette of Wendell Burnette Architects of Phoenix, Arizona. With over 30 years of professional experience, Wendell is known for beautifully detailed buildings that know where they are, with spaces drawn by light and material. His studio is titled, “Context As Material / How to Read Place.” Andrew Metter, alum and architect with Epstein Architects of Chicago will lead a studio titled, “Hunger: Food Pantry / Urban Farm Prototype.” The studio will focus
on sustainable methods of food production and distribution on an urban site in Chicago. Also from Chicago, UrbanLab, Sarah Dunn and Martin Felson will lead the MUD studio. Addressing the issues of public space, natural systems, and infrastructure, projects will explore the interdependence of these forces as design opportunities.

Ferda Kolatan of su11 architecture + design in Brooklyn, New York (http://www.su11.com/) will lead a studio titled “In_Formation: Institute of Geology on Wards Island in New York City.” Ferda states that his work is “motivated by the synergies expressed in the physical manifestation of a highly sophisticated coalescing between software, technique and materiality as well as its aesthetic and programmatic effects on contemporary culture.”

Professor Iain Fraser joins Professor Zeuler Lima in the Florence undergraduate studio and Visiting Professor Forrest Fulton will lead a design build studio in partnership with the Skandalaris Center for Entrepreneurial Studies and the Henry school, a preK – 8 St. Louis Public School. The studio, building on two previous semesters of work, will design and build a green house and outdoor learning space to support education in urban agriculture and nutrition.

Additional visitors include Justin Scherma who will teach a history theory seminar titled “Surveying the Regional” and “Ecology” in Landscape Architecture. John Geunther and Andrew Raimist will teach a new seminar “Mid Century Modernism in St. Louis 1930-1965.” The class will visit buildings in St. Louis as well as hear from architects and guests about an amazing period in the history of modern architecture in St. Louis. Deborah Fausch of Chicago will teach a new history and theory seminar titled “The Sixties.” Dr. Fausch has a PhD from Princeton University and was the Director of Undergraduate Studies at the University of Illinois Chicago. Bob Moore, historian for the Jefferson National Expansion Memorial will teach a history and theory seminar titled “Landscape Through Time” that explores the development of the urban core of St. Louis from the time of the original Native American settlers to the current day. Hank Webber, Executive Vice Chancellor for Administration and an expert in economic community development, will teach an interdisciplinary seminar with students from the Brown School of Social Work titled “Community Development.” Hank also has extensive experience in public education serving as founding chair of the Governing Board of the University of Chicago Charter School Corporation.
World = City
This provocative phrase comes from the back cover of the book Mutations: Rem Koolhaas Harvard Project on the City published in 2001. The Project on the City was founded on the basis of a double crisis: the “bewilderment” associated with accelerated urbanization that defies traditional description, and the second, the failure of the design professions to “cope.” Since then the world population for the first time is more urban than rural. More people now live in cities than not. It is fair to say that the world is urban and increasingly so and that the future of the city is the future of the world. The future of architecture and landscape architecture is sustainability and the future of sustainability is urban design.

A number of the courses and studios offered this semester address these issues. Two special events will address them specifically. Beginning on Feb 4 Oliver Schulze, urban designer with Jan Gael Architects of Copenhagen will offer a lecture and master-class. The master-class will precede a special 5 day workshop over spring break in Copenhagen that will focus on the transportation networks of the city. Next spring Oliver will lead the urban design studio which will focus on public space in Los Angeles. Oliver along with Gael, considered to be one of the preeminent urban designers in the world, was recently involved with the pedestrianization of Times Square in New York City. Gael writes, “In a Society becoming steadily more privatized with private homes, cars, computers, offices and shopping centers, the public component of our lives is disappearing. It is more and more important to make the cities inviting, so we can meet our fellow citizens face to face and experience directly through our senses. Public life in good quality public spaces is an important part of a democratic life and a full life... First life, then spaces, then buildings – the other way around never works.”

The second series of events will be associated with the Donnelly/Jantzen studio, the first I-CARES (International Center for Advanced Renewable Energy and Sustainability) studio, in partnership with the Technical University of Delft. Four workshops led by members of the Imagine Group and Professor Uli Knaack will explore radical approaches to sustainability with an emphasis on the adaptive use of existing buildings. These research-based workshops will be open to all students, will feature public presentations and lectures, and will include engineering students and faculty.
The Education of an Architect

The late architectural historian and teacher Collin Rowe described architectural education as follows:

“I presume architectural education to be a very simple matter; and the task of the educator I am convinced can be quite simply specified as follows:

1) To encourage the student to believe in architecture and modern architecture.
2) To encourage the student to be skeptical about architecture and modern architecture.
3) Then, to cause the student to manipulate with passion and intelligence the subjects of their conviction and doubt.”

As a part of the celebration of the school’s approaching 100th anniversary we will be hosting a short symposium on architectural education. In conjunction with the graduate open house and the 100th anniversary of the American Association of Collegiate Schools of Architecture, of which we were among the 10 founding schools in 1911, the symposium will feature speakers and guests discussing the legacy of the College and Graduate School as well as the future of architectural education.

While architectural education includes problem solving and skill development it is too much work not to be a passionate activity that includes invention and discovery. Discovery - which can be characterized by the generative power of precedent - organized persistence, and context, at once verify and extend existing knowledge. Donald Schön has said this is in the longstanding traditions for education in the “artistry of designing,” providing a setting for the “acquisition of a competence to perform” – to practice.

Have a great semester.

Sincerely,
Bruce Lindsey, Dean
ADMINISTRATION

College of Architecture, Graduate School of Architecture & Urban Design

Dean
  Bruce Lindsey, AIA, E. Desmond Lee Professor

Director, Undergraduate Program
  Professor Iain Fraser

Director, Graduate School
  Professor Kathryn Dean

Chair, Graduate Architecture
  Associate Professor Heather Woofter

Chair, Master of Urban Design Program, (MUD)
  Professor John Hoal

Chair, Master of Landscape Architecture Program, (MLA)
  Professor Doretheé Imbert

Director, Architectural Technology Program
  Senior Lecturer William Wischmeyer

Director of International Programs
  Adrian Luchini, Raymond E. Maritz Professor

Undergraduate Core Coordinator
  Assistant Professor Igor Marjanovic

Undergraduate Program Administrator
  Senior Lecturer Liane Hancock

Sam Fox School of Design & Visual Arts

Dean
  Carmon Colangelo, E. Desmond Lee Professor

Associate Dean
  Associate Professor Peter MacKeith

Washington University in St. Louis

Chancellor
  Mark Wrighton
**FULL-TIME FACULTY**

Kathryn Dean, Director Graduate School of Arch. & Urban Design
Paul Donnelly, Rebecca & John Voyles Professor
Iain Fraser, Director Undergraduate Program
Dorothée Imbert, Chair Landscape Architecture
Stephen Leet, Professor
Bruce Lindsey, E. Desmond Lee Professor / Dean
Adrian Luchini, Raymond E. Maritz Professor / Director International Programs
Robert McCarter, Ruth & Norman Moore Professor
Eric Mumford, Professor
Peter Raven, Landscape Architecture Professor

Christof Jantzen, I-CARES Professor of Practice

Gia Daskalakis, Associate Professor
Bob Hansman, Associate Professor
Sung Ho Kim, Associate Professor
John Hoal, Associate Professor / Chair Urban Design Program
Zeuler Lima, Associate Professor
Peter MacKeith, Associate Professor / Associate Dean
Heather Woofter, Associate Professor / Chair, Graduate Architecture

Patty Heyda, Urban Design Assistant Professor
Natalie Yates, Landscape Architecture Assistant Professor
Jenny Lovell, Assistant Professor
Igor Marjanovic, Undergraduate Core Coordinator / Assistant Professor
Christine Yogiaman, Assistant Professor

**VISITING FACULTY**

Alfredo Payá Benedito, Ruth & Norman Moore Visiting Professor
Wendell Burnette, Visiting Professor
Sarah Dunn, Visiting Professor, MUD
Martin Felson, Visiting Professor, MUD
Andrew Metter, Visiting Professor
Ferda Kolatan, Visiting Professor
Deborah Fausch, Visiting Professor
Andrew Cruse, Visiting Assistant Professor
Forrest Fulton, Visiting Assistant Professor
Eric Hoffman, Visiting Assistant Professor
Elyssse Newman, Visiting Assistant Professor
Ken Tracy, Visiting Assistant Professor
FACULTY & STAFF

AFFILIATE FACULTY
Janet Baum, Senior Lecturer
Catalina Freixas, Senior Lecturer
Valerie Greer, Senior Lecturer
Phil Holden, Senior Lecturer
Liane Hancock, Senior Lecturer
Derek Hoeferlin, Senior Lecturer
Rich Janis, Senior Lecturer
George Johannes, Senior Lecturer
Don Koster, Senior Lecturer
Gay Lorberbaum, Senior Lecturer
Michael Repovich, Senior Lecturer
Phillip Shinn, Senior Lecturer
Lindsay Stouffer, Senior Lecturer
Jodi Polzin, Senior Lecturer
Bill Wischmeyer, Senior Lecturer
Charles Brown, Lecturer
Randy Burkett, Lecturer
Denny Burke, Lecturer
Ben Fehrman, Lecturer
Jim Fetterman, Lecturer
Carolyn Gaidis, Lecturer
Tim Gaidis, Lecturer
John Guenther, Lecturer
HanHsi Ho, Lecturer
Esley Hamilton, Lecturer
Brok Howard, Lecturer
Courtney Howard, Lecturer
Dennis Hyland, Lecturer
Rick Kacenski, Lecturer
Andreas Kulterman, Lecturer
Kevin Le, Lecturer
Nick McFadden, Lecturer
Bob Moore, Lecturer
Pablo Moyano, Lecturer
Mikey Naucas, Lecturer
Brian Newman, Lecturer
Stephen Perdue, Lecturer
Zach Rousou, Lecturer
Hannah Roth, Lecturer
Megan Roy, Lecturer
Justin Scherma, Lecturer
Jim Scott, Lecturer
Jonathan Stittleman, Lecturer
Kelly VanDyck, Lecturer
Lily Wang, Lecturer
Tomislav Zigo, Lecturer

Dean’s Letter
Architecture, Washington University in St. Louis
Spring 2011

Carl Safe, Professor Emeritus
Gerald Gutenschwager, Professor Emeritus
Sheldon D. Helfman, Professor Emeritus
Udo Kultermann, Professor Emeritus
Leslie J. Laskey, Professor Emeritus
Donald Roys, Professor Emeritus
James Harris, Professor Emeritus
Thomas Thompson, Professor Emeritus

Constantine E. Michaelides, Dean Emeritus

Alejandro Achaval, Lecturer Abroad
Jeffrey Berk, Lecturer Abroad
Gerardo Caballero, Lecturer Abroad
Gustavo Cardón, Lecturer Abroad
Fernando Williams, Lecturer Abroad
Daniel Kozak, Lecturer Abroad
Clara Albertengo, Lecturer Abroad
Fabián Llonch, Lecturer Abroad

Matti Rautiola, Lecturer Abroad
Pentti Kareoja, Lecturer Abroad
Julie Scheu, Lecturer Abroad
Artturi Bjork, Lecturer Abroad
Sirkka-Liisa Jetsonen, Lecturer Abroad
Kimmo Friman, Lecturer Abroad
Juhani Pallasmaa, Lecturer Abroad

Elena Canovas, Lecturer Abroad

Sang Jun Lee, Lecturer Abroad
Jun Sung Kim, Lecturer Abroad
Hyungmin Pai, Lecturer Abroad
Daniel Oh, Lecturer Abroad
Sang Hun Lee, Lecturer Abroad
Mark Brosa, Lecturer Abroad / Coordinator

**STAFF**
Heather Atkinson, Administrative Assistant
Ellen Bailey, Administrative Assistant
Bruce Carvell, Registrar
Daphne Ellis, Assistant to the Dean
Kathleen O’Donnell, Graduate Admissions
Leland Orvis, Facilities Director
Erika Fitzgibbon, Career Development Director
UNDERGRADUATE STUDY ABROAD

Studios Abroad
The School has a number of international semesters for both graduate and undergraduate students. In this complex and interdependent world where borders are crossed daily it is important that future architects understand other places and their cultures. Therefore, we provide in-depth experiences on three continents and in both hemispheres.

Undergraduates who are obtaining the Bachelor of Science degree or the Bachelor of Arts degree can apply to attend the School’s Florence Program in the spring of their junior year, the School’s Buenos Aires Program in the fall of their senior year or the Denmark International Studies Program (DISP) in Copenhagen, Denmark in the fall of their senior year. They receive a full semester’s worth of credit.

Graduate programs abroad are described in conjunction with the graduate degree programs on page 31.

Dean’s Letter
Architecture, Washington University in St. Louis
Bachelor of Arts in Architecture Program

Year 1

fall
- Introduction to Design Processes I (AR111)
- Introduction to Architecture I (AR111A)
- Western Civilization I (L22 101C)
- Calculus (L24 131)
- General Distribution Requirement
- General Distribution Requirement

spring
- Introduction to Design Processes II (AR112)
- Introduction to Architecture II (AR112A)
- Writing I (L13 100)
- Western Civilization II (L22 102C)
- General Distribution Requirement
- General Distribution Requirement

Year 2

fall
- Introduction to Design Processes III (AR211)
- Issues in Design I (AR211A)
- Physics (L31 101A or L31 117A)
- General Distribution Requirement
- General Distribution Requirement
- Architectural or General Elective Requirement

spring
- Introduction to Design Processes IV (AR212)
- Issues in Design II (AR212A)
- General Distribution Requirement
- General Distribution Requirement
- Architectural or General Elective Requirement
- Architectural or General Elective Requirement

Year 3

fall
- Architectural Design I (AR311)
- Architectural Representation (AR321A)
- Architectural History I (AR3283)
- Architectural or General Elective Requirement

spring
- Introduction to Design Processes II (AR312)
- Architectural Representation (AR321A)
- Architectural History II (AR3284)
- Building Systems I (AR347)

Year 4

fall
- Case Studies 20th Century (AR333)

Note: students in their last two semesters of the Bachelor of Arts Program may take courses in:
- architectural or general electives;
- minor subject study; or
- second major study.

120 total credits
Bachelor of Science in Architecture Program

Year 1
- Fall: Introduction to Design Processes I (AR111) (5 credits)
- Spring: Introduction to Architecture I (AR111A) (5 credits)
- Introduction to Architecture I (AR111A) (5 credits)
- Western Civilization I (L22 101C) (3 credits)
- Calculus (L24 131) (5 credits)
- General Distribution Requirement (5 credits)
- General Distribution Requirement (5 credits)
- Introduction to Design Processes II (AR112) (5 credits)
- Introduction to Architecture II (AR111A) (5 credits)
- Writing I (L13 100) (5 credits)
- Western Civilization II (L22 102C) (3 credits)
- General Distribution Requirement (5 credits)
- General Distribution Requirement (5 credits)
- Introduction to Design Processes III (AR211) (5 credits)
- Issues in Design I (AR211A) (5 credits)
- Physics (L31 101A or L31 117A) (5 credits)
- General Distribution Requirement (5 credits)
- General Distribution Requirement (5 credits)
- Architectural or General Elective Requirement (5 credits)
- Architectural or General Elective Requirement (5 credits)

Year 2
- Fall: Architectural Design I (AR311) (3 credits)
- Architectural or General Elective Requirement (5 credits)
- Architectural Representation (AR321A) (5 credits)
- Architectural History I (AR3283) (3 credits)
- Architectural or General Elective Requirement (5 credits)
- Architectural or General Elective Requirement (5 credits)
- Architectural Design II (AR312) (3 credits)
- Architectural Representation (AR321A) (5 credits)
- Architectural History II (AR3284) (3 credits)
- Building Systems I (AR347) (3 credits)

Year 3
- Fall: Architectural Design III (AR411) (3 credits)
- Case Studies 20th Century (AR333) (3 credits)
- Structures I (AR447A) (5 credits)
- Site Planning (AR552B) * (5 credits)
- General Distribution Requirement (5 credits)
- General Distribution Requirement (5 credits)
- Architectural or General Elective Requirement (5 credits)
- Architectural or General Elective Requirement (5 credits)
- Architectural Design IV (AR412) (3 credits)
- Structures (447B) (3 credits)
- Climate and Light (AR546C) * (5 credits)
- History Theory Elective * (5 credits)
- Architectural or General Elective Requirement (5 credits)

Year 4
- Fall: Architectural or General Elective (5 credits)
- Architectural or General Elective (5 credits)
- Architectural Design IV (AR412) (3 credits)
- Structures (447B) (3 credits)
- Climate and Light (AR546C) * (5 credits)
- History Theory Elective * (5 credits)
- Architectural or General Elective Requirement (5 credits)

*Bachelor of Science in Architecture candidates must complete one of the following combination of courses:
1. Site Planning AND Climate and Light
2. Site Planning AND either a History/Theory or Urban Issues Elective, or
3. Climate and Light AND either a History/Theory or an Urban Issues elective

Total Credits: 120
UNDERGRADUATE STUDIOS

ARCH 112  INTRODUCTION TO DESIGN PROCESSES II
Bob Hansman, Associate Professor; Coordinator
Don Koster, Senior Lecturer
Dennis Hyland, Lecturer
Mike Naucas, Lecturer

Studio Description:
How do you draw space? How do you draw time? 112 is, on one level, a drawing course; but it is not “just” a drawing course. Students will work back and forth between 2-D and 3-D, constructing structures, building drawings; but the structures will be object scale, inhabitable; and many of the drawings will be similarly large-scale. Some of the drawings will be done with non-traditional materials. A major underlying theme of the course is the relationship of scale to material to joinery to idea to image to form. Another major theme of the course will be the design process itself, involving synthetic thinking, multiple variables and iterations. The emphasis, then, will be two-pronged: 1. to teach basic drawing and observational skills, and 2. to understand drawing as a metaphor for the design process, to see drawing as an exemplar of the complex interaction of design elements (material, form, idea, etc.) that apply to both 2-D and 3-D thinking and making.
ARCH 212  INTRO TO DESIGN PROCESSES IV
Liane Hancock, Senior Lecturer, Coordinator
Valerie Greer, Senior Lecturer
Kevin Le, Lecturer
Stephen Perdue, Lecturer

Course Description:
Introduction to Design Processes IV (212) uses the lens of perception to emphasize rigor of process and specificity in intent. Exercises from the first half of the semester move from the scale of the body to the urban environment to emphasize issues of scale and the building of community in conjunction with material and spatial investigations.

Students begin with an analysis of kindergarteners defining the dimensions of inhabitation, personal space and the space of interaction. The design outcome of this analysis is a speculative furniture piece relating to the kindergarteners’ proportion, size and behavior. Next, the students analyze the urban context of the site for the semester, studying the existing networks of connectivity and relational patterns within the neighborhood fabric.

The second half of the semester is spent designing a kindergarten, which presents a program that mediates between the scales studied in the first half of the semester. This program emphasizes the scale of designed spaces, both through perceptual understanding and actual measure, the relationship of the building to the neighborhood context and the relationship of the building to the body. The awareness of spatial perception developed in Design Process III (211), through the considered use of light, materiality and view, will be reinforced with the added complexity of negotiating between the urban fabric, environmental factors and the individual user.
In Urban Design, as in Architecture, no site has a single history, a single perspective from which it is experienced, or a single voice for whom it serves. Today’s metropolitan landscapes are shaped by increasingly complex dynamics involving struggles between residents, developers, businesses, governments, economies, and the environment, to name a few. An essential skill of the designer is to reveal and balance these layers, in order to generate designs that may serve interests of a client but that also meets the needs of the environment and the public good.

As an introductory Urban Design studio, this course will delve into such complexities shaping the site to ultimately ask, what defines a city and for whom are cities made and re-made?

The site for our study is Carrollton, a neighborhood in Bridgeton, St. Louis County just West of Lambert Field. Carrollton is a particularly pronounced manifestation of political layering and contestation of differentially valued terrain. One defining struggle has been over land use and the future, as the airport and region’s recent visions and decisions for the area have shifted towards a means of entering the global economy. This is in contrast to the community’s visions where local trajectories have followed civic and community life. These contrasting visions co-existed side by side until 1996 when the airport received federal approvals and funding to pursue construction of a new runway, W1W, on Carrollton’s land. Despite the ensuing media attention and legal battles, thousands of homes were cleared, paving the way for increased capacity at Lambert, and the possibilities that airport expansion might bring the region.

**Studio Description:**
Our studio will engage site conditions in the aftermath of expansion: the residents relocated, the runway completed, and projections of increased air traffic unfulfilled. The problem is layered and complex, regional and local, public and private. After a substantial research and analysis phase, students will build their own proposals for the remaining cleared area beyond the runway and existing surroundings. Proposals will integrate students’ own ideas for future program uses with the realities of
multiple visions and constituencies, while exploring what that might look and feel like spatially and materially. This will take the form of a strategic urban design plan/proposal.

**Discourses:**
The studio will explore design’s reach in the negotiation of conflicting histories and futures where urban space is tangled up in multiple definitions and agendas. The larger questions of the studio are therefore about identifying more broadly where new spaces might exist within the design professions so that urban and architectural thinking might be made more relevant than they have been traditionally in cases like this. How might current development trends be re-directed, re-imagined, re-designed? What are design’s limits in the aesthetics and politics of development?

**Skills and Techniques:**
This course will provide the vocabulary, techniques, historical and theoretical context, foundational research and design methods and skills necessary to operate as an urban designer and will equip any architecture student with skills fundamental for locating projects within their broader contexts.

This course fulfills the required Urban Design Studio option for undergraduates pursuing the Minor in Urban Design.

**Evaluation:**
Students will be evaluated based on their commitment and abilities as demonstrated in their work progress at daily desk crits, pin-ups and reviews. Particularly, students will be assessed according to: overall growth and development as seen through process, effort, productivity, rigor; responsiveness to criticism, understanding and the development of an ability to self-critique; the overall design, craft, work quality in models and representation; participation in reading/lecture discussions and studio; attendance.
ARCH 312/412  ARCHITECTURAL DESIGN II/IV
Iain Fraser, Professor
Zeuler Lima, Associate Professor

Course Description:
The last century saw the explosive growth of cities. Infrastructure was often stretched, even overwhelmed, and architecture became increasingly isolated from the urban flux, delivering huge buildings in the city centers and vast developments in their suburbs. With the modernization of much of the world just catching up, architects will have the opportunity to participate in many other ways. One of the most critical will be the insertion of modest yet surprising buildings into the existing city fabric, urban components that compliment yet challenge the evolution of existing cities. This is the realm of incremental architecture.

The intent of this studio is to build the city by designing small parts of it: single urban building complexes.

With this in mind, each project will be conceptually developed and critically viewed from three distinct perspectives. First, each project will be understood as a thing in itself: a coherent synthesis of purpose-driven and experientially profound decisions. Second, each project will be developed as an assembly of component parts: each element of the building fabric clearly articulated in its own right, yet intelligently and creatively integrated into the whole. And finally, and perhaps most significantly, each project will be understood as a component part of a larger construct - the city (or at least a small part of it). It is this latter aspect that will drive much of the studio discussion.

In order to exercise these perspectives, we will place our project in areas of the city that are in need of our attention and worthy of our affection. Our goal is not so much to reinvent these areas or totally redesign them, but rather, to enhance and invigorate them. We will pull forth from existing conditions frameworks of formal and experiential figuration that can guide the development of new interventions. Our intentions will be incremental.

Some additional topics will also be explored. One will be densification (that is, increasing density of activity and density of useful and meaningful place). In this way we will address issues of social amenity, convenience, communality and sustainability. Furthermore, as our second project will include several independent programs, we will emphasize the myriad gradations of proprietary layering - from very private to fully public. This charges the designer with the task of creating “a system of meaningful spaces” (Norberg-Schultz), thus defining thresholds from one kind of place to another, both within the project and
with its urban surroundings. Additionally, we will bring our focus down to the scale of the building fabric, to the level of tectonic development. Each project will be developed as an assembly of parts, and the key parts – structure, enclosure, fenestration, etc. – will be articulated as clearly designed components.

Project Descriptions
We will design urban street buildings. The project programs will be modified in response to site evaluation and opportunity - what is needed or valuable, how much, how big, etc., and with concern for public amenity as well.

We will work on two major projects. Several short exercises will be interspersed to explore certain relevant topics. Each project will address an archetypal urban site condition, and each will explore programs, which contribute, to the quality of life in the city. The first will focus on public use, service and amenity – a single use building. The intent is to focus our attention on internal organization and experiential quality on the one hand, and to the relationship between the external form of the building and its milieu on the other. The second project will contain complex, even unrelated, programmatic components: a multi-use urban street building. It will provide a mix of some or all of the following: places for private life (home), work (office), commercial activity (retail) and cultural/entertainment events. This mix is part of the densification objective mentioned above, as is determining size (area/volume/mass).

Course Goals
We will be working on sites in parts of the city that need invigoration, enhancement and evolution. Our programs will be developed to maximize life, vitality, amenity, and communality. They will create density and fullness, bringing life to the street and the common domain of the city.

Accordingly the goals of the course are to explore the relationship between the three scales of architectural responsibility: building as a thing; building as a synthesis of parts; and building as a component of the city. Developing formal frameworks that connect and articulate these levels of conceptualization and realization will be a major part of your studio effort. Exploring methods of representation that effectively model the issues, opportunities and refinement of the projects is expected.

Schedule
Exercise 1: Façade Design: 1 week
Project 1: Small public use building: 5 weeks
Project 2: Multi-use building: 7 weeks
ARCH 312/412  ARCHITECTURAL DESIGN II/IV  
Gia Daskalakis, Associate Professor

Course Description:
This studio will explore the relationship or interface between agriculture/ecology and the various professions engaged in the construction of the built environment: architecture, urbanism, and landscape. All cities have two footprints: the urban or constructed and then the ecological or natural one that extends beyond the urban, suburban, and surrounding agricultural areas. As urban sprawl expands to consume agricultural land, that land in turn increasingly encroaches on sensitive wilderness ecosystems.

We are now urged to rethink the traditional model of a dense inner city core surrounded by suburbs, ringed by sprawl and ex-urban construction, and eventually spilling out into agricultural fields and onto wilderness. The contemporary city is no longer a coherent and bounded urban entity; it should be viewed at the scale of the region and in the form of a dispersed field that dissolves the differences between the center and the periphery. This studio will focus on specific issues of our total environment as they relate to a blurring of center and periphery in programmatic, spatial and ecological terms.

Out of practical necessity today, as a consequence of environmental imperatives, a new paradigm of local cultivation, integration and density is emerging. The idea of a new urban agriculture that is intertwined with the fabric of the city is under careful consideration by a host of disciplines including architects, urban designers, landscape architects, biologists, scientists, agronomists, etc.

Background:
These initiatives stem from irrefutable facts related to land use and simple necessities such as food production and dispersion. Current analyses of the worldwide food shortage project estimates of dramatic population growth in relation to percentages of agricultural land use within the next 50 years. The projections suggest world population rising from 6 to 9 billion in the next 40 to 50 years. Everyday our world’s forests are cleared to increase available farmland that currently occupies 40% of the earth’s surface. Projecting to the year 2050, there simply will not be enough horizontal land available to feed the growing population nor will we have an ecosystem capable of sustaining life.

The repercussions are grave as our natural ecosystems are depleted and global warming escalates at astounding rates. In order to reverse this trend, we must plant enough carbon sequestering trees to counter the transformation of more and
more acres of forest into farmland. The result of the current studies leads to ideas of urban agriculture in the form of greenhouses, reforestation and even vertical urban farms.

These are visionary and speculative concepts that imagine present (but limited) practices of hydroponics (liquid medium and float systems), aquaponics, soil-less solid systems, and aeroponics taken to a new dimension. These notions envision possible vertical farming towers, occupying entire city blocks, capable of feeding 50,000 urban dwellers per year or forested landscapes interspersed with greenhouses. The benefits include the sustenance of urban growth, the year round supply of fresh produce and water, organically grown produce, the elimination of crop failures due to draught, floods, or pests, the restoration of ecosystems, and the elimination of petroleum based machinery for maintaining and transporting crops.

Urban agriculture reduces the need for sprawling suburbs, eliminates food travel distance, and creates a living architecture that is part of an urban ecosystem. Maintaining our food production where we live would allow us to oversee our own agricultural practices and ensure that they are safe. It would also curtail the further encroachment of agricultural landscapes into wilderness, and allow our forests and wetlands to regenerate. These ecosystems are not only great natural resources, but are essential to creating clean air and safe drinking water, as well as reversing climate change.

Project:
This studio will be comprised of a semester long project divided into a series of cumulative phases ranging from regional analysis, to urban to architectural specificity. The studio will experiment with these ideas in our low-density city, St. Louis. The intent is to offer St. Louis as a testing ground for these initiatives. With only 350,000 inhabitants and major contraction in terms both of people and occupied land since the 1950's, it lends itself to this exploration in a unique way. Interiorized agriculture through the use of empty, abandoned land to replant trees and therefore reconstruct a former ecology, we can speculate with the framework of this proposition. Typically peripheral programs will be transferred to the center as a montage of new activities, existing vacant buildings and voided land. These will be offered as a catalyst for the urban re-activation (appropriation and occupation) of marginalized and vacated zones throughout the inner city. We will propose spaces that blur the urban and the territorial, places that merge the general and the specific, the ordinary with the extraordinary in an attempt to construct dynamic and operative new landscapes.

Initially zones will be demarcated as potential sites capable of accommodating various interpretations of urban agriculture and landscape. These will be necessarily site specific in architectural
terms but also as ecological systems evolved from context and place. We will depart from both qualitative and quantitative assessments, using both scientific and artistic methods in parallel. From science we can borrow an experimental process that draws upon observation and an empirical approach to acquire a deeper knowledge of the physical world. These will require data collection for example as percentages of neighborhood populations and the strategic placement of projects in order to reinvent the urban, landscape, and ecological structures of the city. Quantitative understandings will be directed towards long-span / lightweight structures for the design of greenhouses. Also important will be quantification of light, thermal potential, and solar access among other criteria.

Perhaps we can bring food production back into the city. Keeping our food production where we live would allow us to oversee our own agricultural practices and ensure that they are safe. It would also stop the further encroachment of agricultural landscapes into wilderness, and allow our forests and wetlands to regenerate. These ecosystems are not only great natural resources, but are essential to creating clean air and safe drinking water, as well as reversing climate change.

Goals:
You are primarily required to THINK. In architecture, thinking is coincident with MAKING. Thinking is an activity that takes place when the mind is provoked by an encounter with the unfamiliar or the unknown. In other words, something in the world forces us to think. Thought is strategy: it is by necessity creative and critical: it is generative and productive. Thinking is experience and experimentation; it has the capacity to set forces into play. While knowing is the recognition of truths, the solution of problems, thinking is the creation of something new, the determination of problems.

Evaluation:
The studio will be necessarily speculative and interrogative. We will attempt to establish new interpretive paradigms (both receptive and propositional) capable of penetrating the contradictions and complexities of the current and projected situation of our environment in the broadest sense. Despite the more general implications of the studio, emphasis will be placed on the mediating role of the material presence of architecture as ground, surface, material, structure, volume. Students will be expected to work with a disciplined process that fully engages the project from initial conception through physical realization. Particular attention will be given to developing skills for decision-making, discernment, and self-critique. Projects must evidence conceptual, developmental, drawing and construction capabilities.
ARCH 312/412  ARCHITECTURAL DESIGN II/IV
Forrest Fulton, Visiting Assistant Professor

PATRICK HENRY DOWNTOWN ACADEMY DESIGN-BUILD

(Design-Build Studio)

This studio is devoted to the design and construction of:

“an outdoor, interactive learning space for the Patrick Henry Downtown Academy that will support their goal of becoming a “Green Model Pilot School” as well as creating a space that inspires active enthusiasm and unity in the community.”

The quote above is the mission developed by a self-initiated, interdisciplinary group of Washington University students with Principal Esperansa Veal of the Patrick Henry elementary school in downtown St Louis. This design-build studio continues the students’ pre-design research last semester.

Within this established framework, the studio will proceed in three phases.

Conceptual Design + Master Planning (3 weeks):
The studio will develop a broad vision for the grounds of the school to support outdoor learning, community engagement and service, and an overall positive identity within its urban fabric. The studio will work with the school to both address their established goals and imagine additional possibilities. The master planning phase will further define the framework for future development and construction for the rest of this studio and future studios. This master plan will likely include, but is not limited to, a greenhouse, garden, outdoor learning space, and landscaping. The studio will select a portion of the master plan to be further developed and constructed this semester.

Design Development and Construction Drawings (4 weeks):
Students will develop and detail the first phase of the master plan for construction this semester. Construction drawings will be drawn and submitted for a building permit.

Construction (7 weeks):
Students will fabricate and construct the first phase.
MArch 3 Program
as of Fall 2010

Year 1
- Fall:
  - 1: Architectural Design I (AR317)
  - 2: Concepts and Principles (AR339)
  - 3: Architectural Representation I (AR323A)
  - 4: Architectural History II (AR 4283)
  - 5: Media Workshop
- Spring:
  - 1: Architectural Design II (AR318)
  - 2: Architectural Representation II (AR323B)
  - 3: Architectural History I (AR4284)
  - 4: Environmental Systems I (AR438)
  - 5: Media Workshop

Year 2
- Fall:
  - 1: Architectural Design III (AR419)
  - 2: Structures I (AR447A)
  - 3: Building Systems (AR346)
  - 4: Architectural or General elective
  - 5: Media Workshop
- Spring:
  - 1: Architectural Design IV (AR511)
  - 2: Structures II (AR447B)
  - 3: Environmental Systems II (AR449)
  - 4: History/Theory Elective

Year 3
- Fall:
  - 1: Architectural Design V (AR512)
  - 2: Advanced Building Systems (AR538C)
  - 3: History/Theory Elective
  - 4: Architectural or General Elective
- Spring:
  - 1: Architectural Design VI (AR611)
  - 2: Design Thinking (AR580)
  - 3: Professional Practice (AR646)
  - 4: Architectural or General Elective

Year 4
- Fall:
  - 1: Degree Project (AR616)
  - 2: Urban Issues Elective
  - 3: Architectural or General Elective

Total credits: 105
MArch 2+ Program

Year 1

- Fall
  - Architectural Design III (AR419)
  - Environmental Systems I (AR438)
  - Structures I (AR 447)
  - History / Theory Elective
  - Media Workshop

- Spring
  - Architectural Design IV (AR511)
  - Structures II (AR447B)
  - Environmental Systems II (AR499)
  - Architectural or General Elective
  - Architectural Workshop*

Year 2

- Fall
  - Architectural Design V (AR512)
  - Advanced Building Systems (AR538C)
  - History / Theory Elective
  - Architectural or General Elective
  - Architectural Workshop*

- Spring
  - Architectural Design VI (AR611)
  - Design Thinking (AR550)
  - History / Theory Elective
  - Architectural or General Elective

Year 3

- Fall
  - Degree Project (AR616)
  - Professional Practice (AR646)
  - Urban Issues Elective

75 total credits

* or substitute one 3 credit General Elective
**MArch 2 Program**

### Year 1
- **Fall**
  - 5 credits: Architectural Design IV (AR511)
  - 2 credits: Environmental Systems I (AR448)
  - 3 credits: History/Theory Elective
  - 3 credits: Architectural or General Elective
- **Spring**
  - 3 credits: Architectural Design V (AR612)
  - 3 credits: Environmental Systems II (AR449)
  - 3 credits: Structures II (AR447B)
  - 3 credits: Urban Issues Elective

### Year 2
- **Fall**
  - 3 credits: Architectural Design VI (AR611)
  - 2 credits: Design Thinking (AR580)
  - 2 credits: Advanced Building Systems (AR538C)
  - 3 credits: Architectural or General Elective
- **Spring**
  - 3 credits: Degree Project (AR616)
  - 3 credits: Professional Practice (AR646)
  - 3 credits: History/Theory Elective
  - 3 credits: Architectural or General Elective

Total Credits: 60

---

**MUD Program**

### Year 1
- **Fall**
  - 4 credits: Elements of Urban Design (AR711)
  - 3 credits: Metropolitan Landscapes (AR654D)
  - 3 credits: Metropolitan Development (AR652H)
  - 3 credits: MUD Track Elective
- **Spring**
  - 3 credits: Metropolitan Design Elements (AR713)
  - 3 credits: Metropolitan Urbanism (AR656)
  - 3 credits: MUD Track Elective
  - 3 credits: MUD Track Elective
- **Summer**
  - 3 credits: Metropolitan Urban Design (AR714)

Total Credits: 36
### MLA Program

#### Year 1

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presemester</td>
<td>Ecology + Digital Workshop (A48.501)</td>
</tr>
<tr>
<td>Fall</td>
<td>Landscape Architecture Design Studio + Earth Workshop (A48.501)</td>
</tr>
<tr>
<td>Spring</td>
<td>Plants + Environment (A48.461)</td>
</tr>
<tr>
<td></td>
<td>Landform (A48.461)</td>
</tr>
<tr>
<td></td>
<td>Digital Representation II (A48.521-L)</td>
</tr>
<tr>
<td></td>
<td>History of Landscape Architecture I (A48.570)</td>
</tr>
<tr>
<td>Fall</td>
<td>Landscape Architecture Design Studio (A48.452)</td>
</tr>
<tr>
<td>Spring</td>
<td>Planting Design (A48.542-A)</td>
</tr>
<tr>
<td></td>
<td>Landscape Materials (A48.462)</td>
</tr>
<tr>
<td></td>
<td>Principles of Ecology (A48.561)</td>
</tr>
<tr>
<td></td>
<td>Landscape Technology (A48.465)</td>
</tr>
</tbody>
</table>

#### Year 2

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>Landscape Architecture Options Studio (A48.601)</td>
</tr>
<tr>
<td>Spring</td>
<td>History/ Theory of Landscape Architecture III (A48.572)</td>
</tr>
<tr>
<td></td>
<td>Electives*</td>
</tr>
<tr>
<td></td>
<td>Landscape Architecture, Urban Design, or Architecture Options Studio (A48.602)</td>
</tr>
<tr>
<td></td>
<td>Electives*</td>
</tr>
</tbody>
</table>

*Electives must include a minimum of 6 units in natural systems; and 3 units in professional practice. These courses must be approved by the program office.*

60 credits minimum
# Dual Degree

**MArch 3 + MUD**

## Year 1

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
<th>Course 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Spring</td>
<td>6</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Architectural Design I (AR317)
- Concepts and Principles (AR339)
- Architectural Representation I (AR323A)
- Architectural History II (AR 4283)
- Media Workshop

## Year 2

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
<th>Course 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>6</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Architectural Design II (AR318)
- Architectural Representation II (AR323B)
- Architectural History I (AR4282)
- Building Systems (AR346)
- Media Workshop

## Year 3

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
<th>Course 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Architectural Design III (AR419)
- Environmental Systems I (AR438)
- Structures I (AR447A)
- Architectural or General Elective
- Media Workshop

## Year 4

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course 1</th>
<th>Course 2</th>
<th>Course 3</th>
<th>Course 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall</td>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Elements of Urban Design (AR711)
- Metropolitan Landscapes (AR654D)
- Advanced Building Systems (AR538C)
- Metropolitan Development (AR652H)

- Metropolitan Design Elements (AR713)
- Metropolitan Urbanism (AR646)
- MUD Track Elective
- Urban Issues Elective

## Degree Project (AR616)
- Professional Practice (AR626)
- Architectural or General Elective

126 total credits
Dual Degree
MArch 2 + & MUD

Year 1

fall
- Architectural Design III (AR419)
- Environmental Systems I (AR438)
- Structures I (AR447A)
- Architectural or General Elective
- Media Workshop

spring
- Architectural Design IV (AR511)
- Structures II (447B)
- Environmental Systems II (AR449)
- History/Theory Elective
- Architectural Workshop

Year 2

fall
- Elements of Urban Design (AR711)
- Metropolitan Landscapes (AR654D)
- Advanced Building Systems (AR658C)
- Metropolitan Development (AR652H)

spring
- Metropolitan Design Elements (AR713)
- Metropolitan Urbanism (AR646)
- MUD Elective
- Architectural or General Elective

summer
- Metropolitan Urban Design (AR714)

Year 3

fall
- Architectural Design VII (AR611)
- Design Thinking (AR680)
- MUD Elective
- Urban Issues Elective
- Architectural Workshop

spring
- Degree Project (AR616)
- Professional Practice (AR626)
- Architectural or General Elective

96 total credits
MArch 2 & MUD
dual degree program

Year 1
- Fall:
  - Architectural Design IV (AR511)
  - Structures I (AR)
  - Environmental Systems I (AR438)
  - History Theory Elective

- Spring:
  - Architectural Design V (AR612)
  - Structures II (AR348)
  - Environmental Systems II (AR449)
  - Architectural or General Elective

Year 2
- Fall:
  - Elements of Urban Design (AR711)
  - Metropolitan Landscapes (AR654D)
  - Metropolitan Development (AR652H)
  - Advanced Building Systems (AR538C)

- Spring:
  - Metropolitan Design Elements (AR713)
  - Design Thinking (AR580)
  - Metropolitan Urbanism (AR646)
  - MUD Track Elective

- Summer:
  - Metropolitan Urban Design (AR714)

Year 3
- Fall:
  - Degree Project (AR616)
  - Professional Practice (AR646)
  - MUD Track Elective
  - Architectural or General Elective

81 total credits
GRADUATE STUDY ABROAD

Graduate semesters abroad are offered in the summer in Barcelona, Spain, and Shanghai; in the fall in Buenos Aires, Argentina and Seoul, South Korea; and in the spring in Helsinki, Finland. These programs are taught by local architects who are also members of our faculty. In each spring and fall location, students undertake a full semester’s worth of work or 15 credits. The summer studio and seminar in Barcelona offers a maximum of 9 units of credit. Students in all these programs share apartments.

MArch 2 students may take one semester or a summer abroad; they must spend a semester in St. Louis before they embark on these travels. MArch 3 students may take a maximum of two semesters, or one semester and a summer abroad upon completion of the three semester core studio curriculum. All graduate students must spend their final semester in St. Louis to pursue their degree project.

Students who are interested in spending time in these countries should work with their advisors and plan their academic work carefully. To assist with this, graphs have been prepared to show how curriculum can be worked out for semesters abroad.
MArch 3 Program
Study Abroad
Barcelona

Year 1

Fall
- 6 Credits
  Architectural Design I (AR317)
  Concepts and Principles (AR339)
  Architectural Representation I (AR323A)
  Architectural History II (AR 4285)
  Media Workshop

Spring
- 5 Credits
  Architectural Design II (AR318)
  Architectural Representation II (AR323B)
  Environmental Systems I (AR438)
  Architectural History I (AR4282)
  Media Workshop

Summer
- 4 Credits
  Structures I (AR447A) (summer)
  Structures II (AR447B) (summer)

Year 2

Fall
- 5 Credits
  Architectural Design III (AR419)
  Environmental Systems II (AR439)
  Building Systems (AR450)
  History/Theory Elective
  Architectural or General Elective
  Media Workshop

Spring
- 6 Credits
  Architectural Design IV (AR511)
  Environmental Systems II (AR439)
  Urban Issue Elective
  Architectural or General Elective

Summer
- 4 Credits
  Architectural Design V (AR612)
  History/Theory Elective
  Barcelona

Year 3

Fall
- 6 Credits
  Architectural Design VI (AR611)
  Design Thinking (AR580)
  Advanced Building Systems (AR586C)
  Architectural or General Elective

Spring
- 5 Credits
  Degree Project (AR616)
  Professional Practice (AR646)
  Architectural or General Elective

105 total credits
**MArch 3 Program**  
**Study Abroad**  
**Helsinki & Buenos Aires**

**Year 1**
- **Fall**
  - Architectural Design I (AR317)
  - Concepts and Principles (AR339)
  - Architectural Representation I (AR323A)
  - Architectural History I (AR4283)
  - Media Workshop

- **Spring**
  - Architectural Design II (AR318)
  - Architectural Representation II (AR323B)
  - Architectural History II (AR4284)
  - Environmental Systems I (AR438)
  - Media Workshop

**Year 2**
- **Fall**
  - Architectural Design III (AR419)
  - Structures I (AR447A)
  - Building Systems (AR346)
  - Architectural or General Elective
  - Media Workshop

- **Spring**
  - Architectural Design IV (AR511)
  - Environmental Systems II (AR439)
  - History/Theory Elective
  - Architectural or General Elective

**Year 3**
- **Fall**
  - Architectural Design V (AR512)
  - Advanced Building Systems (AR538C)
  - History/Theory Elective
  - Urban Issues Elective

- **Spring**
  - Architectural Design VI (AR511)
  - Design Thinking (AR580)
  - Structures II (AR447B)
  - Architectural or General Elective

**Year 4**
- **Fall**
  - Degree Project
  - Professional Practice

- **Architectural or General Elective**

---

**105 total credits**

*If Building Systems II (AR347) is taken twice, then the second course, Technology (AR540), will count towards general elective requirements.*
## MArch 2 Program
### Study Abroad
### Barcelona

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Fall</th>
<th>6</th>
<th>4</th>
<th>2</th>
<th>1</th>
<th>6</th>
<th>7</th>
<th>60 total credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Summer</td>
<td>Barcelona</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Fall</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

- Architectural Design IV (AR611)
- Environmental Systems I (AR438)
- History/Theory Elective
- Architectural or General Elective
- Architectural Design V (AR512)
- Structures II (AR447B)
- Environmental Systems II (AR439)
- Architectural or General Elective
- Architectural Design VI (AR611)
- History/Theory Elective
- Design Thinking (AR580)
- Advanced Building Systems (AR538C)
- Professional Practice (AR646)
- Urban Issues Elective
- Architectural or General Elective
- Degree Project (AR616)
MArch 2 Program
Study Abroad
Buenos Aires

Year 1

Fall
- Architectural Design IV (AR511)
- Environmental Systems I (AR438)
- History/Theory Elective
- Architectural or General Elective

Spring
- Architectural Design V (AR512)
- Design Thinking (AR580)
- Environmental Systems II (AR439)
- Architectural or General Elective

Year 2

Fall Buenos Aires
- Architectural Design VI (AR611)
- Advanced Building Systems (AR538C)
- History/Theory Elective
- Urban Issues Elective
- Degree Project (AR616)
- Structures II (AR646)
- Professional Practice (AR646)
- Architectural or General Elective

Spring
- Architectural Design V (AR512)
- Design Thinking (AR580)
- Environmental Systems II (AR439)
- Architectural or General Elective

60 total credits
# MArch 2 Program

**Study Abroad Seoul**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Architectural Design IV (AR511)
- Environmental Systems I (AR438)
- History/Theory Elective
- Architectural or General Elective

- Architectural Design V (AR512)
- Design Thinking (AR580)
- Environmental Systems II (AR439)
- Structures II (AR646)

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Fall Seoul</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Architectural Design VI (AR611)
- Advanced Building Systems (AR588C)
- History/Theory Elective
- Urban Issues Elective

- Degree Project (AR616)
- Professional Practice (AR646)
- Architectural or General Elective
- Architectural or General Elective

**Total Credits:** 60
GUIDELINES FOR COMPREHENSIVE OPTIONS STUDIOS

The role of the Comprehensive Options Studio is to expand the students’ abilities from an abstract design language to a tactile material engagement. The focus of the studio should be strong design experimentation that is implemented in a highly resolved architectural project. Students must develop structure and material systems, as well as appropriate design responses to climate and energy use demonstrated through plans, interior and exterior elevations, models, building and wall sections at appropriate scales up to $\frac{1}{4}''$ scale. This should provide the process and skills which will allow for expanded development in the Degree Project.
“For architecture to take a deeper role as a humanizing cultural factor that defends man, we need works cast in matter itself - no words can help. We need it to have monumental force that gives man hope, confidence, and self-discipline - we need it to have social awareness and compassion for human tragedy. Architecture must be deeply rooted in place and circumstance, it requires a delicate sense of form; it must support human emotions.”

excerpt from Alvar Aalto’s funeral oration for Eliel Saarinen, 1950.

Studio Description:
Context by definition is inconclusive and thus is always open to personal interpretation. PLACE and how one reads it is of course in the eye of the beholder but in my view, as architects it is our utmost responsibility to hone the necessary skills to interpret/ unearth/ re-present/ frame/ manifest meaningful, memorable, soulful place(s) for our clients, our constituents, and our communities; hopefully ones that possess the latent ability to sustain the whims of fashion and the test of time. Sustainable Design if first and foremost GOOD DESIGN that touches the hearts and souls of the people/community/ PLACE (S) that it serves. It is important to know that history teaches us that TIME is on the side of good building -- good place making.

As students of architecture, “how do you begin to read place?” First, you begin by observing and experiencing the world around you. Context and how we interpret it, is one of the malleable materials from which we construct architectural space, light is another. Peter Zumthor, the pre-eminent Swiss architect simply states, “I experience the world”. One of my central interests in teaching architecture is how do we as Professors of Architecture kindle the curiosity required for you as students of the world/architecture/life to begin to passionately engage the world around you, observe the realness of it all and start assimilating your own personal experience(s) into your own critical local/global view such that your eyes can touch PLACE and reinterpret it in architectural terms. In my experience, there is never excellence without passion.
In this studio, you will build an argument as you design. The Studio will begin researching specific aspects of the Tallgrass Prairie, concurrent with case study analysis of relevant projects with similar program, through large-scale models and other means. After completing this analysis, we will visit the Tallgrass Prairie National Preserve as a studio. The goal will be to work with the National Park Service, and private land owners (our constituents), to determine appropriate program and site selection, and then to return at a later date to present your individual arguments to our constituents and receive feedback before final reviews. The studio ethic will be to work at this problem through thinking, drawing and handcrafted three-dimensional making. A holistic project should confront a new paradigm for visitor center, library, gift shop, lodging and other programs in context. There is no patented definition for context; it is often up to you to perceive / imagine it and sell a different view. Art / Architecture is often simultaneously an act of resistance and an act of collaboration. As such, each student in this studio will be expected to passionately and actively engage a process of defining your own “context as the malleable material” for a successful solution. Architectural works will include: The Stata Center by Frank Gehry; Simmons Hall by Steven Holl; and The Brain & Cognitive Science Building by Charles Correa and Goody, Clancy Architects.
ARCH 500/600 ARCHITECTURAL DESIGN V-VI
Paul J. Donnelly, Rebecca and John Voyles Professor
Christof Jantzen, I-Cares Professor of Practice

TRANSFORMATION IN THE DIGITAL AGE
(Comprehensive Studio)

Studio Description:
The project for this semester’s studio will be the design of a 21st Century Digital Museum & Data Center at the historic Lemp Brewery in St. Louis. The focus of the studio will be on the adaptive-reuse of the monumental load-bearing Lemp Brewery silos, and the design of an addition/expansion to provide for approximately 100,000 square feet of exhibition and exhibition related support space. The museum is to support installations by the world’s foremost artists and curators, and engage 21st century technology to foster reflection, communication, and exchange. As Aaron Betsky, director of the Cincinnati Art Museum recently noted, “I want to get away from the museum as a machine for putting on exhibits and (toward) becoming a machine for bringing people and art together.”

In addition to serving the greater St. Louis community, the museum will also serve as a global Data Center for museums around the world. While promoting innovation in the arts and culture in the 21st century on a global level, it is also expected that it foster a deeper understanding of our own cultural history and that of St. Louis and the Lemp Brewery. It is intended that the facility support directed creativity related to contemporary means and methods across a range of contemporary media and technologies, and through the engagement of its creative resources advance creativity and innovation.

The load-bearing structure of most buildings lasts for centuries. It is the most enduring and ultimately sustainable portion of a building. Conversely, building façades and technical installations have a relatively short lifespan—typically thirty years. Likewise, building interiors are periodically reconfigured to accommodate our changing needs. Given the differential lifespan of building components and escalating constraints on energy and financial resources, building refurbishment is becoming an increasingly sustainable design option compared to building demolition and new construction.

Each design proposal should be of global significance and serve as a symbol of innovative adaptive-reuse in the 21st Century. Proposals must embody the rich cultural history of the Lemp Brewery and reflect the museums commitment to directing its intellectual resources to advancing contemporary culture. The
adaptive-reuse and addition should embrace all issues related to sustainability and contribute in a positive way to its immediate ecological environment. The architecture’s formal structure must foster creativity and innovation through social and cultural intersection.

It is anticipated that the building advance the art of contemporary architecture and building science, and incorporate innovative processes, materials, systems and technologies.

**Process:**
The studio is structured around 4-5, week long workshops, one of them conducted at the TU Delft in the Netherlands. We will be collaborating with faculty of the Imagine Group at the TU Delft who will be joining us during the workshops in St Louis and in Delft. Each of the workshops will be structured around a specific aspect of the studio. We will be traveling to Delft for one week to attend a two to three day workshop at the TU and we also plan to visit a number of architectural offices and architecture sites in Rotterdam, Amsterdam and Delft.

Emphasis will be placed on material investigations that track ideas through contemporary simulations. The studio will be an intensive, process driven exercise where proposals undergo rigorous investigations at multiple scales. The studio is a comprehensive studio, which will ultimately lead to architectural proposals with integrated technologies. Contemporary and emerging applied science related to both the design process and the making of architecture will be analyzed and engaged throughout the semester.

Contemporary digital technology now permits us to develop, represent and analyze building form and systems in ways that were previously beyond our reach. Given the pedagogical agenda of the studio, which seeks to advance innovative contemporary architecture, we will work with students from our School of Engineering, under the direction of Professor Ramesh Agarwal, PhD. Our engineering colleagues will develop preliminary energy analyses of design postulations for review as an integral part of the design process. The development of critical design details will also support this agenda and highlight the architectural potential of integrated design and contemporary craft.
It is expected that the studio environment be highly collaborative. Group exercises related to programmatic, environmental, cultural and technological precedent research will be integral to the design process. Each student in the studio will also be required to work with a Poolar Server that will be set up to continuously document the studio progress. The Poolar Server will enable us to not only document the entire studio but help students organize and monitor their own progress. It will be each student's responsibility to upload progress material weekly and to keep their work updated.

**Studio Goals:**
The studio has two primary goals: The first is to provide students with an opportunity to expand their knowledge and skills base related to the design and making of architecture engaging advanced processes and technologies. The second is to contribute in a positive and significant way to the advancement of the contemporary discourse related to innovative adaptive-reuse in the 21st century.
ARCH 500/600  ARCHITECTURAL DESIGN V-VI
Catalina Freixas, Senior Lecturer

REVERIES WITH WATER ALONG THE (RIVER) DES PERES

Project History:
This studio will focus on the exploration of the River Des Peres as both a natural landscape and a manmade condition that has changed the nature of its original character and left a mark on the existing urban fabric.

This River, with paved banks, runs on a 6 mile curve before reaching the Mississippi along the southwest edge of the city of Saint Louis. The bank forms a visual and physical boundary in the city and hides the backbone of the Saint Louis sanitary sewer and storm drain system deep underground. This natural waterway was transformed into a massive civil engineering project in the early Twentieth Century.

In the summer of 1993 water backed up from the Mississippi combined with local drainage to force the River Des Peres to flood.

Plans to restore its above ground flow through Forest Park are completed, relying on mechanical pumps to regulate flow and maintain a high water level. Today the return to its original condition is not feasible, but a renewed ecological life is blooming in the Carondelet area.

Objectives:
To envision is to imagine; conceive of; to see or picture in one’s mind. Re-envisioning landscape/architecture implies that the relationship between them needs to be re-imagined a number of times to convey an idea of the relationship between an object and its context, the way we perceive that relationship, the method with which it is made, and the technology used in making it.

Intentions:
The exploratory nature of the studio will raise certain questions that will be explored through design intervention. The process of knowing and perceiving space and place will determine how we re-envision its form and meaning in our work.
The studio will consist of a semester long project divided into very specific stages of the design process. The first segment of this studio will focus on research through mapping and diagramming the different conditions that existed and currently exist along the River Des Peres. In the second phase, the program will developed as a response to the previous abstract studies. A sustainable proposal will be asked as a responsible and sensitive response to the area.

Phase I: Observation, Experience and Awareness:

PART I

Observation: The result of an act, or of acts, of observing; view; reflection; conclusion; judgment. The act of recognizing and noting a fact or occurrence.

Attention, ascertainment, check, cognition, cognizance, conclusion, consideration, detection, estimation, examination, experience, heedfulness, information, inspection, investigation, knowledge, mark, measurement, mind, monitoring, note, notice, noticing, once-over, overlook, perception, probe, recognizing, regard, remark, research, review, scrutiny, search, study, supervision, surveillance, view, watching

Experience: the direct participation in events as a basis of knowledge; the act or process of having been affected by or gained knowledge through direct participation. Something personally encountered, undergone, or lived through.

Happening, acquaintance, action, actuality, background, caution, combat, contact, doing, empiricism, evidence, existence, exposure, familiarity, forbearance, intimacy, involvement, inwardness, judgment, know-how, maturity, observation, participation, patience, perspicacity, practicality, practice, proof, reality, savoir-faire, seasoning, sense, skill, sophistication, strife, struggle, training, trial, understanding, wisdom, worldliness

Awareness: having or showing realization, perception through body and mind.

Sensation, acquaintance, acquaintanceship, alertness, aliveness, appreciation, apprehension, attention, attentiveness, cognizance, comprehension, consciousness, discernment, enlightenment, experience, familiarity, information, keenness, mindfulness, perception, realization, recognition, sensibility, sentience, understanding.
Photographing the Site
The exercise involves the use of photography as an instrument to record what we see.

“... unlike memory photographs do not in themselves preserve meaning. They offer appearances... prised away from their meanings... Photographs preserve instant appearances.”

Susan Sontag, “Uses of Photography”

Mark a trajectory on a map and follow it throughout the site shooting pictures and film. The goal is to reinterpret through the manipulation of photographs and film your initial perceptual and experiential understanding of the site.

Mapping the Site
The exercise consists of recording what we know.

A map is a graphic representation, simulation or recreation drawn to scale, which transcribes in an abstract and objective manner the perceptual and experiential knowledge; or the particular aspects of an area. They address a type of research derived from reality. They construct not reproduce.

“... maps are able to adapt to (by transforming and altering) the particular and the specifics (the contingent)... it is not longer a question of describing shapes, but rather of describing potentials.”

Manuel Gauza, “the metapolis dictionary of advance architecture”

Research the site through maps and data. Make a graphic representation of specific aspects and ephemeral qualities. Keep in mind that a map is a static simulation of dynamic processes. Consider: grids, axes, directions, topography, land, infrastructure, orography, outlines, foresting, accidents, densities, figure/ground, solid/void, patterns, boundaries, continuity, rhythms, textures, uses, climate, winds, shadows, movement, time, senses, psychological aspects, echoes and noises.

Modeling the Site
The exercise intends to represent what we envision.

The deliverable will be an artifact that can be either a series of relief, or conceptual models in which you should reinterpret and project the information gathered in the photographing and mapping studies.
This study should focus on specific conditions that you identified in the previous stages. It involves the projection of your intentions and desires into the existing. You are allowed to modify the physical attributes, impose new relationships, alter form and appearance, and assign qualification and quantification to the existing.

Research the site through maps and data. Make a graphic representation of specific aspects and ephemeral qualities. Keep in mind that a map is a static simulation of dynamic processes. Consider: grids, axes, directions, topography, land, infrastructure, orography, outlines, foresting, accidents, densities, figure/ground, solid/void, patterns, boundaries, continuity, rhythms, textures, uses, climate, winds, shadows, movement, time, senses, psychological aspects, echoes and noises.

From the analysis of the area, select the site where the program will be developed.

Analyze the immediate surroundings to understand the relationship you have studied in a larger scale.

PART II

Case Study
Understand, comprehend and judge through analysis and comparison analogous conditions in other cities. Gather maps and record data. Examine the objective and abstract information. Consider: grids, axes, directions, infrastructure, densities, figure ground relationships, patterns, boundaries, distances, division, limits, continuity, position, rhythms, textures, uses.

Phase II: Build: hou.sys Along the (River) des Peres

PART I

Understand, comprehend and judge through analytical study existing housing examples and their relation to the urban context where they are located.

Diagrams
A diagram is not a thing in itself, but a description of potential relationships among elements. The variables in an organizational diagram include both formal and programmatic configurations: activity and form, space and event, force and resistance, density, distribution and direction.
Consider the following issues in relation to your study: program distribution, spatial organization, connections, relationships, circulation, access, grids, patterns, networks, axes, directions, outlines, accidents, boundaries, densities, juxtaposition/rhythms, regularity/variation, figure/ground, positive/negative, solid/void, additive/subtractive, open/closed, deep/shallow, presence/absence, continuity/discreteness, transition/stability, sequence/simultaneously, modules, textures, uses, shadows, movement.

PART II

The project and the site: reactive mechanisms

The path towards conceptual innovation in the majority of the housing proposals analyzed in part I relies in the combination of a rigorous functional approach and an experimental character, the concrete making of an abstract conceptual thinking.

You have been developing a logical approach towards the site and the program through a series of cumulative steps that included mapping, photographing, modeling and diagramming. You have recorded what you saw, know and envision. Now you are required to think. To use the power of reason by conceiving ideas, drawing inferences, and using judgment. This last part of phase II should be considered a continuum with the line of thought generated thus far.

The construction of a landscape that binds together the existing ground plane, infrastructure elements, and built form should be carefully addressed in the following housing project. The complexity of an existing land will necessary relate to issues of topography and geology.

The dwelling should be understood as a place closer to desire and versatility, to quality of life and the suggestive fantasy of leisure, of well being and of knowledge, rather than to habitual serenity or predictability of conceived only as mere social need or appearance. In sum, new housing needs to be conceived through diversity and plurality, rather than thru homogeneity and collectiveness. A multi- and inter-active space.

Manuel Gauza

Hou.sys implies an open system which generates residential diversity: types and subtypes, mixed programs, mutability and autonomous elements, based upon growth patterns or mechanisms. These mechanisms can be reactive, intrusive, intersecting, formal, perceptual, conceptual, or technical. They will transform the landscape into a new condition, through dynamic guidelines, complex formations and manipulated voids by dealing with infrastructural margins, boundary spaces, semi-natural landscapes, consolidated fabrics, etc.
Spring 2011

ARCH 500/600 ARCHITECTURAL DESIGN V-VI
Derek Hoeferlin, Senior Lecturer
(in collaboration with the University of Toronto Dept. of Landscape Architecture)

“One of Napoleon’s generals...was said to have come [to New Orleans] to check it out, looking for a place for his commander to seek refuge after Waterloo. He scouted around and left, said that here the devil is damned, just like everybody else, only worse. The devil comes here and sighs...New Orleans.”

-Bob Dylan, The Ghosts of New Orleans

montage from “Down By Law,” directed by Jim Jarmusch

More than five years after hurricanes Katrina and Rita, New Orleans continues to act as a crucible for dilemmas about infrastructure, landscape design, contemporary urbanism, recovery and rebuilding, and regional ecology. But I would argue architecture itself has been relatively absent in the conversation of how architecture can potentially transform and proactively integrate within these contexts. Brad Pitt’s “Make It Right” jacked-up houses tricked-out with solar panels are not the (only) model for the next iteration of architecture in New Orleans.

But the optimist architect in me believes if New Orleans can get its fundamentals straight – fundamentals that must begin with a reinstated understanding that the complicated ground we occupy cannot continue to be dominated with hard-line and static interventions, but rather begin to be respected with adaptive and dynamic negotiations – I truly believe New Orleans can be a new model for a 21st American city. But to get to this, architects must become better aware of architecture’s multi-scaled relationships, not just for architecture’s sake, but also more importantly for architecture’s multi-scaled integration within landscapes, urbanisms; and ultimately, the larger distribution contexts of watersheds that all architecture inhabits. In other words, the inevitable – and hopefully smarter – next step in the cause and effect evolution of human-manipulated environments.

Located between the Mississippi River and Lake Pontchartrain at the base of the continent’s largest drainage basin, New Orleans is a watery landscape. Until the late nineteenth century, the City’s development was confined to the Mississippi’s natural levees—the cypress swamps between the river and the lake were too wet to occupy permanently. In the last hundred years, though, mechanical pumping has enabled the drainage and urbanization of all of Orleans Parish, and today, water is almost nowhere to be seen. It is conveyed to the lake in underground canals below the
major thoroughfares in addition to bizarre above grade canals hidden behind massive concrete floodwalls. In fact, draining the city that all was once at or above sea level has caused it to sink. In addition, the City’s illogical planning districts and physical form have been subdivided as if New Orleans was built on dry ground. This denial of physical geography played a major role in the destruction by hurricanes Katrina and Rita; nearly caused another disaster from Hurricane Gustav in 2008; presents real challenges for rebuilding New Orleans; continues to wreak havoc on the existing crippled drainage and sewerage system; and maybe most importantly, manifests itself all too frequently in localized flooding from normal sub-tropical rain events. The City will remain vulnerable to flooding unless it expands its ability to accommodate water, from public rights-of-ways to private backyards, and its citizens will continue to court disaster unless they come to terms with the environment they inhabit. In other words, New Orleans demonstrates the impossibility of separating infrastructure and habitation from ecology.

Studying water in New Orleans demonstrates how the consideration of one phenomenon can lead to a synthetic approach to situate architecture within infrastructure, landscape and urban design. Water raises design issues that are rhetorical—what, for instance, should the image of water be in a soggy place, and how can that image help citizens to come to terms with where they live?—and practical—how does rainwater travel from the sky, to a roof and gutter, to the ground, through the city, and make its way to the Gulf of Mexico? Questions of expression and pragmatism come together around public safety. Limiting risk depends not only on adequate water storage but also on the development of a flood culture that recognizes the landscape’s basic tendencies. These issues cross disciplines and arenas: they engage policy, planning, urban and landscape design, architecture, engineering, economics, and politics. They demand reckoning with ecological systems from regional to residential scales.

The studio will focus on the transformation of the water infrastructure of a deltaic urbanism from urban obstacle to urban catalyst. It builds on the work of the two previous years, which developed tangible examples of how water might transform the everyday landscapes of the city and investigated the workings of the system that carries water through New Orleans. Building upon the “Water Taxonomy” and “nolaiswater.com” website developed by the Spring 2010 Gutter to Gulf studio, students will study, analyze, and document the way that water infrastructure functions today—usually without reference to other organizing factors in the urban landscape—and make architectural proposals to transform that infrastructure into civic space. The City’s contradictions are our sites.
New Orleans seems foreign to many...that’s part of its elegance, decadence and straight up funkiness. However, New Orleans is a valuable case study for architecture and landscape urbanist practice. Its circumstances are extreme but not unique: the presentation of everyday dilemmas in vivid terms is a means to pull latent ideas and opportunities to the surface, and the design approaches that develop in the studio are likely to translate to other places. In addition, New Orleans offers the chance to contribute to an important effort finally in progress, the development of a water strategy for the city. This studio and its partner studio at the University of Toronto department of landscape architecture, in tandem with the internationally recognized “Dutch Dialogues” effort, have played key roles in this water strategy advocacy and will continue to do so in the research, development, and testing of ideas about what might be possible.

This course aims to help students to understand how landscape processes focused on water and its infrastructure can be a means to examine and reshape architecture and cities, rhetorically and practically; to relate the historical, cultural, and ecological evolution of urban landscapes; to establish clear ties between documentary work and proposals for new designs; to extend possibilities seen for connection among architecture, landscape architecture, and urban design; to enhance skills at, and agendas for, design research; and to expand abilities to articulate ideas through various representation techniques.

Like all the previous studios, we will travel to New Orleans, approximately from February 6-12. Cost of travel, accommodation, food, etc. is responsibility of each student. We will have intense fieldwork and rigorous documentation across the New Orleans region, a mega-tour in effect. We will conduct this work in tandem with our Toronto counterparts and present the preliminary findings to local guest reviewers. In addition, there will be talks from experts in the water-strategy arena, such as the geographer Richard Campanella and architect David Waggonner, the principal of Waggonner & Ball Architects and co-founder of “Dutch Dialogues,” in addition to neighborhood activists. No doubt about it, we will thoroughly “experience” New Orleans – day and night.

For further reference see:

guttertogulf.com
nolaiswater.com
dutchdialogues.com
The Extraordinary vs. the Everyday Catastrophe
on archinect.com
ARCH 500/600  ARCHITECTURAL DESIGN V-VI
Ferda Kolatan, Visiting Professor

INFORMATION
Institute of Geology on Wards Island in New York City

“If one is sufficiently lavish with time, everything possible happens.”
- Herodotus

Topic:
Geology deals in the most fundamental way with the formation of matter over time. It provides an understanding of how all inanimate shapes emerge, grow, transform, and ultimately break down and dissolve. These complex processes are not autonomous as they depend on external pressures and lack the internal program (DNA) that distinguishes living organisms. As such, geological structures are an expression of the dynamic forces that mold them and cannot be sufficiently understood without the context of environment, climate, and most critically time. This becomes evident in the historical aspects of Geology such as Paleontology, fossil dating, and plate tectonics. Therefore, rocks are also the record keepers of the evolution of the earth.

Aside from the investigative methodologies that aim to unearth deep principles of what constitutes our world, Geology is also concerned with practical and applicable solutions that better or protect the world we live in. Structural Geology, Stratigraphy, Engineering Geology are just a few branches that deal with questions regarding natural hazards and environmental issues.

Project/Design Strategy:
The studio will propose designs for an Institute of Geology in New York City. The building will serve both as a research facility as well as an exhibition space to engage visitors in geological subjects. The students will experiment with morphodynamic modeling tools (in Maya), which emulate time-based formation
principles and seek to generate integrated yet authentic design solutions for the program and site. Formal, structural, and organizational patterns emerging from this experimentation will be tested against architectural constraints and for their ability to engage the specific properties of the site in an organic and non-intrusive fashion. The applied design methodologies will be nonlinear and multi-hierarchical, allowing for variability and adaptation while maintaining a high degree of resolution and finesse. The building site and adjacent landscape/river’s edge will be treated as a single contiguous field of operation.

Site:
The building site for the Institute of Geology is located at the southern tip of Wards Island in New York City. Wards Island measures about 255 acres (103 hectares) and is located at the northern end of the East River, facing Harlem to the west and Queens to the east. It is traversed by the Triborough Bridge and the Hell Gate Bridge and can be accessed by foot or bicycle via the Ward’s Island Bridge. Originally consisting of two islands, Wards and Randall became one by being connected through landfill.

After being purchased by New York (from private hands) in 1955, the island became the location for a number of “renegade” programs such as a hospital for destitute immigrants, an auxiliary immigration station, the City Asylum (a mental institution), the Manhattan State Hospital, and a men’s shelter. In 1937 the island became the site of the world’s largest sewage disposal plant. Today, the island consists of the Manhattan Psychiatric Center, the Kirby Forensic Psychiatric Center (serving the criminally insane) and a New York City Department of Environment Protection wastewater treatment plant. The rest of the island is used as a park with picnic grounds and athletic fields.

Program:
Institute: Research Laboratories, Classrooms, Offices, Utility Spaces/Restrooms, Circulation

Exhibition: Exhibition Spaces, Lecture Rooms, Cafeteria, Outdoor Gardens, Entrance/Foyer, Utility Spaces/Restrooms, Circulation
COMMUNITY DESIGN STUDIO:
A SCHOOL FOR SUSTAINABLE LIVING
(Comprehensive Studio)

Community Design Studio: A School for Sustainable Living
The St. Louis Public School System (SLPS), like many urban districts in the United States, has been mired in a state of dysfunction with falling enrollment, poor student performance, and fiscal concerns that have prompted a loss of accreditation and a takeover by state regulators. Recent attempts by the federal government to tie funding to academic performance, through legislation like No Child Left Behind, has been highly criticized by many as a penalty to systems that have been long neglected and already severely lacking resources. While there is much debate about the real and perceived problems with the public educational system in America, few disagree that there is a problem and that remedies are needed.

Research has indicated that the health and wellness of student populations attending local, community-based schools is improved due to basic daily activities like walking to and from school. It is also commonly accepted that high-achieving strong community-based schools are both necessary for and a product of strong communities. Unfortunately, while educators in St. Louis have begun to make this connection, emphasizing the value and importance of the neighborhood school, declining neighborhood populations have led to more school closings and more busing. The neighborhood school was eroded over the later part of the 20th century, as an unintended result of desegregation policies and the introduction of magnet schools that condoned the movement of students throughout the system and created a reliance on busing. The result was often the loss of a neighborhood’s strongest students and the further erosion of poor performing schools. Additionally, public school systems were saddled with increasing transportation expenses that have remained a major financial burden to many urban districts like St. Louis: the SLPS spent over $30 million dollars on transportation costs alone last year, according to district records.

Urban public school systems throughout the nation serve largely minority populations, many of whom are living at or below the poverty level: seventy-five percent of St. Louis’ public school children qualify for free or reduced lunch according to district leadership and it is not atypical for the public school to provide the only daily nourishment to many of its students. Simultaneously,
childhood obesity has reached epidemic proportions in the United States, linked to poor diet, lack of nutritional education, a general societal disconnection with food and a lack of adequate exercise. As a result, food producing gardens have been reintroduced to the schoolyards across the nation. Additionally, a growing farm-to-school movement is underway to support improved nutrition and access to fresh, locally grown foods. Current thinking also supports the reintegration of full service kitchens into all schools – once removed and replaced by private institutional vendors as a cost cutting measure.

Lacking current accreditation, the St. Louis Public School System, like others around the nation has been encouraged to pursue many alternative and experimental educational ideas and models, including privatization and the introduction of numerous charter schools and pilot programs with varying degrees of success. One model that has been inspiring educators, students and families across the country is the concept of the “green” school, where student performance is improved by a healthier learning environment, where students study, recreate, and socialize in naturally ventilated and daylight spaces that are built of ecologically responsible materials and operating costs are reduced for cash strapped districts through energy efficiencies and power generation.

This studio will engage in a period of intense research to study both the historical and contemporary thinking on school design and will seek the input and guidance of educators and administrators working in the field in order to understand the current conditions and formulate well founded architectural positions. Students will be asked to define and propose a new school for sustainable living that is comprehensive in nature; adheres to all codes and ordinances; is robust and cognizant of economies of means without sacrificing architectural quality; and is inspiring and accommodating of the needs of contemporary urban society, while providing for future adaptation. The studio inherently proposes a school that is didactic in nature, a living, learning laboratory, where students and teachers can expand their understanding of the environment, create an existential connection to the world, and promote ecological responsibility. Students will be expected to demonstrate the spatial qualities, function, material expression and construction through professional quality drawings, models and diagrams. A high standard of quality, professionalism, craftsmanship and execution will be expected of all.
 ARCH 500/600  ARCHITECTURAL DESIGN V-VI  
Stephen Leet, Professor

INCOMPATIBLE PARTNERS: 
A 21st century vertical monastery/convent + Kunsthalle 

(Comprehensive Studio)

“I must examine the site afresh, try to absorb the shape and feel of it as a whole; the architecture of the monastery is not made up of a collection of buildings – it is one complete massive block, like a sculpture.”
- Fernand Pouillon, The Stones of the Abbey
(a fictional account of the construction of the 12th century Cistercian abbey of Le Thoronet, written in the 1960s by the French architect Fernand Pouillon while serving a prison sentence)

Studio Description: 
This studio’s project is the architectural relationship between incompatible partners - a relic from the past and an international contemporary phenomenon – monastery and contemporary art center, vertically superimposed within the historic center of Florence, Italy.

The two programs, monastic reflection and the exhibition of contemporary art seem to have little in common – the former is inherently conservative, pious, insular and rooted in liturgical traditions and spiritual beliefs, the latter is public, secular, and preoccupied with change, spectacle, and novelty. The monastic community is an anachronism in the 21st century. Its inhabitants are citizens of the monastery, a community of shared religious beliefs and not of the contemporary world. In this case, not only requiring separation from the world outside but also separation within the walls, a programmatic and physical disconnection from the secular space of contemporary art.

Formal distributions of monastic spaces are liturgically derived from centuries old traditions and from specific typological and morphological precedents. It is a program of silence and purpose, with each day organized to address three aspects of human nature – the physical, the psychological and the spiritual.

As cultural institutions the types of architectural spaces preferred in kunsthalles differ from those of the monastery – these spaces privilege flexibility over specificity, in response to contemporary art’s capability to operate as an open ended and evolving question. Contemporary art is defined primarily by artists and curators, less so by tradition. Divergent elements also extend to the choice and appropriateness of materials. Materials
are foreground in monastic architecture, but background in contemporary art spaces, in deference to the presence and materiality of installed and exhibited contemporary art.

Despite differences in form and purpose the studio will also establish and examine shared characteristics between the two programs. Contemporary art can be transgressive, but it can also be transcendent, with some contemporary art spaces and installations serving as the secular equivalents of churches, chapels and cathedrals, Philip Johnson’s and Mark Rothko’s Rothko Chapel and Renzo Piano’s Cy Twombly Gallery, for example. For the serious and devoted international audience of contemporary art, the contemporary art galleries and kunsthalles are spaces of contemplation, reflection and questioning. However different, both share an atmosphere devoid of color, ornament and narrative decoration.

**Setting:**
The city (Florence, Italy) the site (Piazza del Carmine, more car choked parking lot than public “piazza”) the geographical setting (Tuscany) and the cultural identity and history (Renaissance art and architecture) are all inherently inhospitable to the program and identity of a 21st century kunsthalle’s contemporary art space, and to vertical buildings. No “contemporary” building of any consequence has been built in the historic center of Florence in over 80 years, with the exception of Giovanni Michelucci’s S. Maria Novella train station in the 1930s, and since the 15th century, no building in Florence has exceeded the height of the medieval city’s historical center.

The historic city center of Florence prohibits contemporary architecture. It has resisted the presence of the contemporary for centuries, as it is seen as an incompatible irritant disturbing the historic fabric of the preserved medieval city. In this studio, the theme of incompatibility is nested in several scales: at the scale of the city as an insertion of vertical contemporary architecture that challenges a city that has preserved its historically correct character in the service of several pressures and constraints: national cultural identity (Tuscany as Italy) western cultural history (renaissance art and architecture) and finally the most intractable blockade of the contemporary, a prohibition based solely on economics of cultural tourism, the primary industry of Florence since the 19th century (tourists outnumber Florentines 25 to 1).

**Inquiry:**
The design of a 21st century monastic building and kunsthalle will confront the antagonism of this historical city towards contemporary architecture, and examine the philosophical differences and similarities between contemporary art and monastic reflection.
The typological transgression of the studio is the idea of a vertical monastery. By tradition, monasteries are organized as horizontal enterprises, not unlike cities, with residential quarters, shared liturgical spaces, and the bounded outdoor spaces of their cloisters. How can a program type whose landscape has been horizontal for centuries become vertically organized? And, at the same time nested within a building displaying contemporary art? What is its relationship to the historical city, to international tourism? How does one add to the city by building in this historically charged place, going toe to toe with Brunelleschi, Alberti and Michelangelo, working with an inherently conservative program informed by tradition and rich architectural heritage, but at the same time cohabiting with a program supporting and informed by the inquisitive international culture of contemporary art?

Research:
As research, the studio will examine the role and influential architectural history of the monastery as an urban organism within the city – from the individual cell of the monks, to the shared liturgical spaces of chapels and refectories, to the cloisters and loggias – all a model of a city within a city. Included in this research, while few in number, will also be several monastic projects by contemporary architects. In addition, students will analyze examples of vertical contemporary art institutions.

Research will also include the development of the monastic program (the Rule) based on a selection of the monastic orders (Dominican, Cistercian, Franciscan and Carthusian). A 1 week trip to Florence led by the professor is scheduled in late February with visits to the building site, to several monasteries within and outside of Florence, to vertical projects within the historical center, and, weather and schedules permitting, to Rome to visit the most recent example of a contemporary art center in Italy, Zaha Hadid’s recently completed Maxxi.

Disegno: Development And Goals:
The studio will privilege the section over the plan, the ceiling over the floor, and physical models over 2d representation. Initial vertical/spatial proposals will be developed and supported by preliminary 3dimensional conceptual studies thru model making. These will be explored in the first weeks of the semester, concurrent with research into monastic architecture and contemporary art spaces.

Fundamentally, the studio and the program will address the ongoing, perennial and elemental concerns of architecture: How to build space, qualify light and materials, and transform the city.
ARCH 500/600  ARCHITECTURAL DESIGN V-VI
Robert McCarter, Ruth and Norman Moore Professor

ALTERNATE REALITY:
An (Other) Addition To Louis Kahn’s Kimbell Art Museum
(Comprehensive Studio)

“The sins of architects are permanent sins.”
– Frank Lloyd Wright

Pedagogical Objectives:
This design studio will engage four fundamental conceptions and questions:

• Most importantly, that as we begin the 21st century, every architectural project should be understood and conceived not as an isolated, self-referential object of aesthetic speculation, but as an addition to a pre-existing inhabited context, whether urban, suburban, or rural. What is an appropriate addition?

• What matters in architecture is not what a building looks like from the outside, but how its spaces are ordered, how it is built, and how these affect what the building is like to be in, to live in—how it is experienced in inhabitation by many people over many years. How can the interior spaces become the focus of design?

• Kahn’s Kimbell Museum is acknowledged to be the most perfectly resolved museum of art of the 20th century, and therefore is the ideal starting point for exploring both the evolution and contemporary interpretations of the art museum as a type, with its emphasis on light and structure, space and material. What are the characteristics of a 21st century art museum?

• A graduate studio project should offer the individual student the opportunity to begin again, to re-establish their philosophical, technical, and formal grounds for architectural design, as well as to rediscover the fundamental principles of their discipline of architecture. How can a student become an autodidact?

“From what the space wants to be, the unfamiliar may be revealed to the architect. From order he will derive creative force and power of self-criticism to give form to this unfamiliar. Beauty will evolve.”
– Louis I. Kahn
Project Description:
This studio will allow students the opportunity to engage a design project at once ideal and real, in that the addition to Louis I. Kahn’s Kimbell Art Museum, Fort Worth, Texas, 1966-72, is an actual commission, recently awarded to Renzo Piano, and now in construction. The student projects in this studio will serve as design “answers” to a series of questions regarding the idea of making an addition to the Kimbell Museum: How can an addition be made to the Kimbell that will maintain the experiential qualities that have led to the building being recognized as the greatest museum of the 20th century? What part does the Kimbell’s relationship to the park to the west, the only landscape onto which the building opens, and through which entry is made, play in the experience of the building? Most importantly, what is the right thing to do in this situation? How can we, as a society, avoid constructing an addition that will be seen by future generations as one of Wright’s “permanent sins”—causing irreparable damage to the experience of the Kimbell Museum and its integral landscape?

It is the premise of this studio that, due to the canonical position the Kimbell Museum holds in the history of 20th century architecture, any proposed addition to it should be subjected to the most intense scrutiny and questioning. The studio project will therefore be to develop alternative designs for an addition to the Kimbell Museum. The design process will begin with questioning all of the assumptions, past and present, regarding making an addition to the Kimbell Museum. It is intended that the studio will be a vehicle for developing and testing alternate sites, massing, site circulation/entry strategies, building morphologies and interior spatial organizations, with the results—in the form of the student design projects—being presented to the museum director and staff.

In the tradition of Kahn’s graduate studios, to which he often assigned the projects then being undertaken by his professional office, students in this studio will employ the actual program of spaces and functions being used by Piano’s office in making their design for an alternate addition. In the same spirit of paralleling the professional practice, students will also be involved in all aspects of the design of the proposed addition, including site analysis; typological and technical precedent analysis; visits to both the Kimbell Museum and a number of other more recent internationally-recognized museums; and, most importantly, the design of a highly developed and detailed project, with an emphasis on the experience of interior space, the engagement of natural light, and the deployment of both traditional and emerging materials and methods of construction. Almost forty years have passed since the opening of the Kimbell Museum, and new materials and construction methods, lighting strategies, and programming requirements (such as the dramatically increased
scale of contemporary works of art), have come into being, all of which will need to be engaged by students in this project in order that their proposals will serve as true alternate realities.

The larger agenda of the studio will be to explore the issue of making additions to buildings in a responsible and appropriate manner. A particularly pertinent precedent for this studio is the fact that, twenty-five years ago, a proposal to make an addition directly connecting to the north and south ends of the Kimbell Museum was halted by an international protest, due to the fact that it was believed the addition would irreparably damage the experience of the museum. Yet additions that are now universally recognize as damaging failures – as Wright's “permanent sins” – have been realized, including the addition to Kahn's Salk Institute, the addition to Saarinen's Dulles Airport, the addition to Rudolph's Art and Architecture Building at Yale, and the addition to Scarpa's Querini Stampalia. The premise of the studio is that architects should learn from these irreparable architectural mistakes, but that they should also learn from successful additions, such as Piano's addition to the Chicago Art Institute, Chipperfield's addition to the Venice Cemetery, Piano's addition to the High Museum, Holl's addition to the Pratt Institute architecture school, and Ruusuvuori's addition to the Helsinki City Hall, all of which will be examined. One of the most successful recent examples is Steven Holl's brilliant addition to the Nelson Atkins Museum in Kansas City, which the studio will also visit. Despite the competition program requiring that the building be set directly in front of, and on axis with the existing building, Holl chose to place the addition to the side of the existing building, effectively fusing the landscape garden by Dan Kiley, the main museum building, and the addition into one integrated place-form.

Similar alternate sites are possible for the addition to the Kimbell Museum, including the site that the professor was commissioned by the museum staff to study in a 2007 studio taught at Washington University. Despite the positive results of this studio, in recent discussions regarding the addition to the Kimbell Museum, it has stated that the alternate sites considered for the addition “could not be made to work;” that the site selected—in the park to the west, directly in front of, and on axis with the Kimbell—is “the only one that will work.” It is the fundamental premise of this studio that an architect should never accept the idea that the right thing to do “cannot be done,” or that the appropriate site “cannot be made to work.” This studio assumes it is the task of the architect to find a way to do the right thing, to do what is appropriate and responsible, and that it is the architect's task to creatively re-think the problem, the site, and the program.
Field Trip:
As an integral part of this studio, the professor will lead a field trip (February 10-13, four days, three nights) to Fort Worth, Dallas, and Houston, Texas, during which we will tour the Kimbell Museum, perform a site analysis for the addition, and visit a series of recent museums and cultural buildings, including Tadao Ando’s Museum of Modern Art, Renzo Piano’s Nasher Sculpture Museum (with landscape by Peter Walker), Rem Koolhaas’s Wyly Theater, Brad Cloepfil’s High School of the Arts, Norman Foster’s Opera House, Richard Meier’s Rachofsky Gallery, Renzo Piano’s Menil and Twombley Museums, the Rothko Chapel, Thomas Phifer’s student center at Rice University, Rafael Moneo’s Museum of Fine Arts, Mies van der Rohe’s Art Gallery, Isamu Noguchi’s sculpture garden, and three light/sky spaces by James Turrell, among others.

Studio Resources:
The studio will benefit from consultations, arranged as needed by the professor:

- Patricia Loud, Curator of Architecture for the Kimbell Art Museum;
- William Whitaker, Curator of the Louis I. Kahn Archives;
- Sue Ann Kahn, professor of music, daughter of Louis I. Kahn.

The design work of the students will be supported by

- readings from books on Kahn, including: Louis I. Kahn, Robert McCarter; Louis I. Kahn: Building Art, Building Science, Thomas Leslie; The Art Museums of Louis I. Kahn, Patricia Loud
- readings from monographs on the Kimbell Art Museum;
- readings from books on light and shadow
- readings from more general works, such as: Theoretical Practice, David Chipperfield; The Eyes of the Skin, Juhani Pallasmaa; For an Architecture of Reality, Michael Benedikt; and Studies in Tectonic Culture, Kenneth Frampton.
ARCH 500/600  ARCHITECTURAL DESIGN V-VI
Andrew Metter, Visiting Professor

HUNGER : FOOD PANTRY / URBAN FARM PROTOTYPE

(Comprehensive Studio)

Studio Description:
The studio will propose a project to design Urban Solutions which address a more sustainable method for the production and distribution of Food For The Hungry in the City of Chicago. Most of the existing large scale Urban Food Depositories / Pantries, are based on a model of food production, and distribution which has not changed in the last forty years. It is essentially the same model used by large private Grocery Chains, involving off-site food acquisition (either through production or donation) and dissemination to large distribution centers. In some cases, these distribution centers are then accessed by either individuals or organizations which truck the goods to smaller, local urban distribution points. In other cases, patrons are required to visit the large facility, which is typically in a suburban, less accessible, location. Moving forward, this model will be unsustainable, and requires rethinking and re-design, from food production techniques and location, to more innovative, mobile, and finer-grained distribution strategies. This Studio proposes to examine this issue, through the design of a prototype Food Pantry / Urban Farm, which will examine design options with regard to three issues:

- Food production
- Food distribution
- Scalability

Food Production: From technical issues associated with Food production, such as hydroponics, inflatable greenhouses, and waste heat re-use, to soil remediation-- we will examine technical constraints on urban farming proposals.

Food Distribution Typology: We will examine the design of a Neighborhood Food Pantry consisting of approx 30,000 S.F.

The studio will attempt to develop a kit-of-parts solution which can be adapted to varying urban conditions.

Scalability: From a vacant infill lot, to a corner urban condition, to city-block tracts of land, the studio will examine the scalability of the design proposals. Program elements will adjust to varying site conditions.
**Project Description:**

- The project is an investigation of the constraints and opportunities which will inform a design for a Food Pantry / Urban Farm proposal and the production of a prototype design. The site will be in the City of Chicago. Site Visit to Chicago and a minimum of one additional Chicago Visit required.
- A prototype design for an Urban Farm/Food Pantry which will be documented through drawings describing the architecture, outlining prototype options, structural systems and mechanical strategies. The studio will consist of two groups, each addressing a different prototype site.
- The program will consist of a food pantry, community room, food storage, admin offices, nutrition class areas, community kitchen, volunteer lockers, 15 emergency SRO rooms, and Urban Farm plot.

As a comprehensive building design, the Studio will include:

- **Pre-Design (two weeks)**
  - Precedent: Case Studies
  - Site research and documentation including computer and physical modeling
  - Context: Land Use, existing building stock and infrastructure, local demographics, base maps, Sustainable Strategies/LEED
- **Programming and Research Analysis (one week)**
  - Program Review with officials from the Northern Illinois Food Bank
  - Field Trip to Northern Illinois Food Bank and Greater Chicago Food Depository
- **Design Concept (two weeks)**
  - Including strategies for Urban Farm, and proposed Building program integration
- **Schematic Design (four weeks)**
  - Individual building design project
- **Design Development (six weeks)**
  - Building design project and documentation.
ARCH 500/600  ARCHITECTURAL DESIGN V-VI
Alfredo Payá Benedito, Visiting Professor
Pablo Moyano, Lecturer

THE ST. LOUIS EFFECT:
Inserting Projects Into New Situations

Environment. Atmosphere:
I would like to encourage the students to work together. They are the main characters of the course, and its success depends on them. The students are the main actors of this film that is the course.

Working Method:
We will work in two ways, on the one hand individually developing a project and on the other hand in a joint team project. Students will look for affinities and relationships between their own project and the other ongoing projects, in order to achieve the creation of a collective project throughout the course.

The personal project should form part of the team work and structure the collective discourse of this spring semester.

The aim of the course is to manage to create a PRODUCT that originates from an environment of research, inquiry and a continuous exchange of ideas. The idea is to generate a degree of interrelation between the students, capable of producing an atmosphere of collective research.

My interest is to promote the students to work, not the things that they already know, but the things that they still do not know.

Theme - Thinking About Public Space:
After analyzing the site and its needs, which we will define as the “new situations”, the students propose programs, identify activities and think about public space interventions.

Interventions from direct projects onto public space to public facility buildings or even actions on existing buildings. Anything is possible, but I want the students to think. The proposals are in relation to the chosen site and the student´s criteria.

All cities have situations that are repeated: access roads with wasted spaces, run down outskirts of town, parking requirements, areas that need to be improved, ... The overall objective would be to have a number of candidate sites where the “new situation” identified could be repeated as a kind of “franchise” proposal, extrapolating it to other parts of the city.
The subject is broad enough for the free elections of the new situations. In that sense the possible themes could be as diverse as: the creation of a strategy to generate social facilities, a new network of mixed-use buildings: complementary facilities buildings such as kindergarten with old people’s home,... signaling a tourist route, research on growth systems, the development of a catalog of space occupation tactics, the creation of new social cultural facilities network, spaces for events and spontaneous activities,...

The intentions of the course is that the proposals come from the needs of each new situation chosen and that the students understand the relation between a determined site and social context with the architecture.

**The Site. Context. New Situations:**
Everybody knows a site where they always ask themselves: what could be done here? How could I improve this site? How could this site be used?

Anywhere, a location on your route from home to the university, a familiar place where you walk with your dog, somewhere you go with your girlfriend or boyfriend, ... a place on which you have done some reflection, where you are interested in solving some problem,...

The site may be a run down area, a piece of unfinished city, a problematic intersection, a neighborhood,... These new situations must be significant and special that the students know very well and also know the problems and needs.

Site selection should be based on the objective needs of the intervention: integration problem areas, special or iconic places of the city, areas lacking basic public facilities, contexts that have raised some controversy in the city, places with strong social demands, new places of leisure or work or both, ... In short, new situations that, according to the students, need an intervention.

The intention of the course is to generate a map of “franchiseable” new situation projects on the city of Saint Louis.

**Material For The First Day:**
Each student will shoot a video of the chosen new situation and describe its problems, its attributes and those aspects that have motivated their choice. The Video can incorporate music, messages or slogans that help to understand the place and explain its current situation.
The video will be made from the point of view of the architect who will work on the site and detects problems and offers solutions.

The film should reflect a personal reading of the place and express a specific intention. The aims and ideas will be of more value than the film quality itself. The duration of the video and the explanations will be three to five minutes.

**Data, Plans, Programs, Activities:**
Once the new situations are validated, students must gather the necessary graphical information for their project: plans, drawings, photographs,... and all information about the site: history, texts, statistics, surveys, studies, data, reports... to help understand the site and the project to be carried out.

Later, students make a list of activities to introduce into the site, programs and developing opportunities.

**Personal Work + Collective Work:**
In conclusion, each student will work on a different site, with different programs and therefore on different projects but the tools, themes, topics, strategies and tactics to approach the projects will be issues to be addressed collectively.

The process of generation of the proposals will be submitted to different correction groups to be held throughout the semester. These sessions will be in charge of finding affinities and relationships between the different management proposals.

Each student will bring their own project and this will form part of the collective project and which will finally be presented as a team effort.

The “photo-finish” of the course will be a map of diverse franchises introduce into the city.

In short, the objective of the course would produce useful material for the City of Saint Louis and its inhabitants.
ARCH 500/600  ARCHITECTURAL DESIGN V-VI  
Kenneth Tracy, Visiting Assistant Professor

APERIODIC PRIMITIVE (HUT):  
Fabricating a Garden Pavilion in STL

(Digital Fabrication Studio)

Beginning with a pre-scripted, aperiodic geometric primitive this studio will design, fabricate and install a pavilion for a community garden in the city's Tower Grove neighborhood. Students will use the garden's proposed program, site and cultural context to manipulate the geometric primitive. The design will then be refined and prototyped. Once finalized the pavilion design will be realized through both prefabrication and site work.

The studio will be a collaboration between the WashU, Marc Fornes of Theverymany and Sarah Gibson of Central Design Office. Marc Fornes is principle of Theverymany an innovative firm in New York City who's progressive work expands the fundamental spatial potential of architecture through algorithmic techniques and digital fabrication. Theverymany will design and modify a rhino scripted, geometric primitive specifically for the project. The geometric primitive will constrain the topology, tectonic strategy and scale of the pavilion. This will allow students to concentrate on the overall spatial strategy, detailing and realization of the project. Once the design is finalized Marc will aid the students in creating individual part files for fabrication.

Sarah Gibson is a partner in both Urban Improvement Construction and Central Design Office. UIC+CDO are a design and construction collaborative who have undertaken the redevelopment of the neighborhood west of the St. Louis Botanical Garden. Their efforts include the addition of a community garden. This liminal garden will be the site for the pavilion. Sarah, along with the area's community board will be the client for the project. Sarah will also help provide construction and architectural support.

Continuing in this spirit of collaboration the studio will work in small groups to complete research and design as a team. Because of this working arrangement students will be evaluated on team work and communication as well as their individual design contributions. The studio will start with site research and documentation. Students will design the entire community garden site as well as the pavilion.

The studio will go on a short 4 day trip to New York City at the end of the fourth week of studio. The optional, though encouraged trip will include tours of several park pavilions, as well as visits to architecture firms and fabrication shops.
ARCH 500/600 ARCHITECTURAL DESIGN V-VI
UrbanLab - Sarah Dunn, Visiting Professor
UrbanLab - Martin Felson, Visiting Professor

(Urban Design Studio)

“Make big plans; aim high in hope and work, remembering that a logical diagram once recorded will never die.”
- Daniel H. Burnham, 1907

“I like thinking big. I always have. To me it’s very simple: if you’re going to be thinking anyway, you might as well think big.”
- Donald Trump, 1987

Studio Description:
This studio addresses the issue of contemporary public space and public natural resources through the twinning of infrastructure and a complex program on a dense urban site. It assumes that opportunities for design invention emerge through the solicitation of varied constraints: in this case, the interdependent (natural and artificial) systems that characterize the Midwestern metropolitan context, a challenging mix of public/private program requirements, and a diverse (and often conflicting) range of constituencies and special interest groups. As a synthetic design and research problem, the direction of the studio will be toward the translation and architectural materialization of specific ecological and cultural forces with technical infrastructural demands. Given the scope and location of the project, the studio will engage the possibilities in moving between diverse scales of urban planning and architectural design.

Studio Project:
Design a BUILDING + LANDSCAPE to separate the Chicago River from the Mississippi River. The primary program of the BUILDING + LANDSCAPE is double: a Dam (as an ecological separator) and a new Great Lakes Board of Trade (as a private and public program). The site is the Chicago River adjacent to the Loop in downtown Chicago.

Studio (and City of Chicago) Problem:
In 1899, the Chicago River was reversed in a herculean act of design and engineering. This reversal connected the Chicago River through a series of canals and channels to the Mississippi River enabling Chicagoans to flush their waste down to the Gulf of Mexico. The legacy of that decision is that the Mississippi, Illinois and Chicago Rivers have become prime pathways for invasive
species. Specifically, Asian Carp are swimming their way up the rivers toward the Lake Michigan shoreline. If the carp are allowed to enter Lake Michigan and the Great Lakes, they could devastate the fragile Great Lakes ecosystem and the seven billion dollar fishing industry. So, Chicago is determining ways to reconstruct the barrier (once natural) between the Great Lakes and the Mississippi basins that reversing the Chicago River destroyed so long ago. Each student in the studio will design a BUILDING and LANDSCAPE (or BUILDING LANDSCAPE or LANDSCAPE BUILDING) to function as this infrastructural barrier.

**Studio Context:**
The studio will attempt to invent new cultural and ecological urban architectures to accommodate 21st century environmental security problems. It will explore ways to leverage new infrastructural systems that hybridize architecture and landscape systems. It will integrate proposed systems into existing urban fabrics and communities, generating new architectures and landscapes in the process. The studio will speculate on programmatic, performative, and formal possibilities, and deploy these new hybrid architectures as a new “thick urbanism.”

The studio will consider and explore the value of infrastructure not merely as an engineering endeavor, but as a robust design opportunity to strengthen and revitalize the city. Unlike infrastructure projects from the 20th century, the studio’s projects will require surgical integration into existing urban fabric, and will work by intentionally linking systems of points, lines and landscapes, hybridizing economies with ecologies and overlapping architecture with planning.

**Site:**
The project site is in Chicago at the Chicago River between Van Buren Street to the south and Lake Street to the north.
Phase 1:
Case Study Research: What is “Hybrid Architecture?”

Hybrid Architectures are design ideas and designed realities that, through nested scales, catalyze a larger and more visible public benefit to urban communities. Hybrid Architectures are designs that:

- are embedded with added value (multifunctionality, imageability, public benefit)
- represent potential prototypes, adaptable for use in numerous locations
- are locally self-regulated and controlled (i.e. which “unlock” the grid)
- strategically attract investment and/or generate community stability generate new sustainability practices.

The studio, and this first assignment, will focus on the design of Hybrid Architecture and the reciprocal integration of the large-scale public building and landscape within this framework. The role of nature and the environment, with all of its emerging questions of social and performance criteria will underpin the studio.

How can new conceptions of the role of the environment and ecological processes reformulate our ideas of urban infrastructure, programmatic relationships, open space networks, social constructs, and site history? What role can public building play as a vital component to this larger urban framework? Through a multi-scalar and multi-directional approach, students will formulate their own synthetic conceptions of Hybrid Architecture.

From a list of precedents (see below), students (2-person teams) will develop and present an analysis of urban design Hybrid Architecture examples. All analyses should be formatted within the given template so that precedents can be compared across the studio and included as studio referents. Analysis should include:

1) Data for cover page: Project name, year, location with basic climate data (temperature, precipitation), size/scale, author, density given in site FAR (list surrounding density for open spaces projects), constituencies, bibliography.
2) Core diagrams: figure ground (figure/field for open spaces) showing surrounding urban fabric, circulation/transportation networks, daylight/shadow analysis, hydrology (canals, rivers, tides, stormwater), program, habitat, topography/geography, section, and phasing (if applicable). Provide title and scale for all drawings.
3) Synthetic diagrams (3 minimum per group, newly drawn diagrams—not simply copy/pasted from books/websites): analyze the conceptual strategies for each project. For instance, in diagram form, the following should be answered:

- What is the dominant strategy in the project?
- What tactics are deployed to achieve this strategy?
- If the strategy is hierarchical, what element is dominant?
- If the strategy is non-hierarchical, how is synthesis achieved?
- In what way does the project relate to its context (social, formal, economic, ecosystemic)?

Provide title, scale and orientation (i.e. north arrow) for all drawings.

4) City of Chicago Overlay (scale comparison): The final page(s)

**Case Study Projects:**
(choose one, or choose one group per notes below)

- Parc Andre Citroen (1992) Gilles Clement and Alain Provost

(choose 3 out of 4)

- Rockefeller Center, NYC (1931) Raymond Hood
- wos 8 . A8ernA, NL Architects
- BasketBar, NL Architects
- Fresh Kills, Staten Island (2003) Field Operations/Jamie Corner

(choose 3 out of 4)

- Lafayette Park, Detroit (1963) Mies, Hilberseimer
- Paju Book City (1999) Seung H-Sang, Florian Beigel, ARU
- Parc de La Villette competition, Paris (1982) Tschumi, OMA, Krier, etc.
- Governor's Island competition, NYC (2006) REX/Designe, DS+R/West 8, Maltzan/Hargreaves, etc.
(choose 3 out of 4)

- Green Archipelago, Berlin (1977) O.M. Ungers
- Den Haag Ypenburg (1994) MVRDV, etc
- Breda Chasse Campus (2000) OMA
- Flushing Meadows Corona Park Masterplan, Queens (2006) Smith Miller and Hawkinson

Phase 2:
Case Study Research 2: Conceptualizing Green Infrastructure and Macro Living Machines

Green infrastructure is any network of open spaces and conservation land — parks, wetlands, preserves, bioconduits and native landscapes — that naturally manages stormwater, and improves water and air quality. At the scale of a city, green infrastructure might be understood as a giant “living machine,” or an ecological treatment system that uses bio-remediation processes to remove contaminants from rivers, storm water and waste water.

At the metropolitan scale, the studio will explore design and planning strategies that are dimensional, scalable and accessible to support a synthesis of urban and green agendas. A green infrastructure approach repositions the role of nature in and around the city from optional amenity and aesthetic ornamentation to valued purveyor of ecosystem services and catalyst for more compact, vibrant communities.

The studio will explore planning and design frameworks based on six interdependent systems embedded in Hybrid Architectures:

- Social System: Exterior habitat for people, and the diversity of exterior activities people desire and value.
- Metabolic System: Energy or flows related to power supply, food supply, and waste disposal.
- Hydrologic System: Water and stormwater management, and sustainable stormwater design strategies.
- Circulatory System: Elements that connect communities and move people and goods into, out of, and around the region. The circulatory system is inextricably linked to land use planning (zoning and development controls), as well as impacting human health through air/water quality and fitness.
• Biologic System: Plant, vegetation and the elements/areas of a green/blue infrastructure network preserved or designed primarily for their benefits to wildlife and biodiversity.

• Geologic System: Dynamics and physical history of the earth, the rocks of which it is composed, and the physical, chemical, and biological changes that the earth has undergone or is undergoing.

Phase 3:
Conceptualizing a Hybrid Architecture DAM

What role does the Hybrid DAM play in the larger environmental agenda of the city and the Midwest? Through the reciprocal exploration between site and building, the studio will focus on the architectural scale with the idea that it can impact the urbanism of the larger site. As an open ended program that bridges landscape and architecture in the interest of the public good (by leveraging private interests), the DAM in Chicago will take on the program of both ecological separator and the new Great Lakes Board of Trade. Each student will start with the ‘core’ program and through specific site and program explorations expand upon this with his/her own inflections and specificities. In its expanded role, the DAM will house such programs as cultural center, aquatics center, university outpost, research center, job training center, etc.

The goal of the effort will be to depart from the model of urban analysis and subsequent building design in favor of a more simultaneous generation of both an urban framework and the public building in a reciprocal process. For instance while an urban framework can be devised and a building sited within it, simultaneously the building can be thought of as generating the urban framework. Through this inside-out /outside-in feedback, the polarities between urban/nature, and city/building can be questioned and balanced.

Phase 4:
Hybrid Building Macro-Sites and Documentation

As the previous exercises will have produced nuggets of research that span across scales, the latter part of the semester will look at the idea of feedback of the previous exercises as they interrelate across scales. For instance, programmatic development could project back onto the urban framework to refine relationships in the city. Likewise ideas about the ground could re-inform the envelope. The purpose of this phase is to refine a cohesive thesis argument that defines the position on the nature and the city and how the public building is the pivotal artifact that brings to light the philosophical urban premise at the scale of architecture.

Dean’s Letter
Architecture, Washington University in St. Louis
The Spring studio forms a series of interdependent exercises of varying scale and complexity leading to design proposals for the Danforth campus at Washington University in St. Louis. Through this process, students will gain an understanding of the relationship of landscape to architecture at both site and urban scales; consider the effects of construction and ground manipulation on the perception and experience of space; and explore the possibilities of layering and transparency, enclosure and adjacencies, “in-between” spaces and connectors. Ultimately, the studio will investigate the intersection of landscape design, architecture, and planning in the making of spaces within a campus. It will also serve as a means to explore the possibilities for landscape architecture to structure the campus and provide identity that goes beyond architectural definition.
ARCHITECTURE COURSE LISTING

INTRO TO DESIGN PROCESSES I
This is the first semester of a two-semester sequence that includes both two-dimensional and three-dimensional work each semester. Two-dimensional work includes freehand drawing, various methods of representation of form and space, graphic design, and layout. Three-dimensional work includes issues of problem definition, problem solving, materials, structure, fracture, spatial relationships, and systematic processes of design. Students will alternate between two- and three-dimensional work and develop connections between them. Same as F20 211, Section 01. 3 units

01 TuTh 5:00p-8:00p Stouffer

INTRO TO DESIGN PROCESSES II
This is the second semester of a two-semester sequence that includes both two-dimensional and three-dimensional work each semester. Two-dimensional work includes freehand drawing, various methods of representation of form and space, graphic design, and layout. Three-dimensional work includes issues of problem definition, problem solving, materials, structure, fracture, spatial relationships and systematic processes of design. Concurrent registration in ARCH 112A required for architecture students. Non-architecture students must receive permission of the Associate Dean of the School of Architecture. 3 units

01 MW 2:00p-5:00p Hansman
   Koster
   Hyland
   Naucas

INTRO TO ARCHITECTURE II
Continuation of Arch 111A. Prereq: Satisfactory completion of Arch 111A or permission of the Dean of the School of Architecture. 1 unit

01 F 12:00p-1:00p Lindsey
   Lorberbaum

Discussion sections:
A F 10:00a-11:00a Lorberbaum
B F 11:00a-12:00p Lorberbaum
C F 1:00p-2:00p Lorberbaum

INTRO TO DESIGN PROCESSES IV
Studio which initiates architectural and building issues such as: building analysis, structure, organizational systems, and programming. Prereq: Arch 211 and concurrent registration in Arch 212A. 3 units

01 MF 9:00a-12:00p Hancock
   Greer
   Le
   Perdue

ISSUES IN DESIGN II
Lectures presenting design concepts that form the focus of exercises presented in Arch 212. Prereq: Satisfactory completion of Arch 211A or permission of the Dean of the School of Architecture. 1 unit

01 W 10:00a-11:00a Hancock
COMMUNITY DYNAMICS

This course is designed to build upon the investigations of Arch 121, Community Building, Building Community, and will explore the economic, political, and social dynamics of place. The course will focus on dynamics of economy, politics, health, and physical space. In order to ground discussions in reality, the class will take advantage of the urban laboratory of St. Louis while relating local issues to broader trends. The case study pedagogy will be used to challenge students to identify, analyze, and describe complex urban systems. The course will be structured around directed readings, guest lectures, and films. The culmination of the semester will be a critical understanding of a single Saint Louis community, substantiated with thorough research and detailed morphological mapping. 3 units

01  Th 1:00p-4:00p Faulkner

INDEPENDENT STUDY

Prereq: Sponsorship by an instructor and permission of the Dean of the School of Architecture. Each independent study must be approved by the end of the first week of classes. 1 unit

01  TBA [TBA]
05  TBA Hansman
12  TBA Lorberbaum

AR STATUS

All students majoring in the architecture program but are not enrolling in a regularly scheduled design studio should register for this course as an audit for internal use of the School. 0 units

01  TBA Hancock

ADVANCED FREEHAND DRAWING (AND PAINTING)

Drawing unplugged. 302B is essentially a collection of independent studies. All the students in the class have had the basic 302 course (or its equivalent) and are returning for more individualized direction and exploration. Huge drawings, tiny drawings, long and short drawings; line, tone color... you will learn to think on your feet and figure out the relevant questions before positing answers, using only our eyes and your hands. Students frequently work in color and/or expand into painting, but the discussion always takes place in the context of “architectural” ideas, such as material, systems simultaneous resolution of multiple issues, etc.. Moreover, because the course can involve nontradtional and unexpected materials, a major theme of the course is the interaction of image/idea and material; the influence that material has on image/idea and the influence that image/idea has on material choices. The course frames “art “ in the language of architecture, not the other way around. sometimes the body of work stands on its own, other times the pieces are specifically architectural and perhaps even tied to studio work. Each week the student brings in a piece; all the students participate in each other’s crits, and then each student is given a direction to pursue for the following week. Readings are introduced into the class on an as-needed basis. 3 units

01  W 9:00a-12:00p Hansman

ARCHITECTURAL DESIGN II

Prerequisite: Satisfactory completion of Arch 311. Twelve hours of studio work a week. 6 units

01  MWF 1:30p-5:30p Fraser
    Fulton
    Heyda

SECT 07: This studio is part of the Florence, Italy Study Abroad Program.

07  TBA Lima
ARCHITECTURAL DESIGN II (M.ARCH. 3) A46 318 ARCH
The second of a three-semester sequence of core design studios. Continues examination of issues raised in Arch 317. Prereq: M.Arch.3 students only. Students enrolled in this studio are also required to enroll in A46 408B, Digital Visualization Workshop: Advanced 3-D Modeling. 6 units
  01  MWF 1:30p-5:30p
        Woofter
        Marjanovic
        Yogiaman

ARCHITECTURAL REPRESENTATION II (UNDERGRADUATE) A46 320B ARCH
Representation is the means by which architectural form, space, and ideas are explored, conveyed and studied. This course is intended to bring a fundamental understanding of the capacity and possibility for representation to affect the process and outcome of the architectural endeavor. While it is expected that students will gain proficiency and knowledge of a broad range of techniques and convention, greatest emphasis will be placed on the ability to recognize how, when, and why different representational means are appropriately employed at various points in the design process, and to easily move between them. The course will work simultaneously with both the convenience of known elements and the exploration of unknown or ‘envisioned’ concepts and spaces. 3 units
  01  TuTh 2:30p-5:30p
        Horvath
        McFadden
        Smith

ARCHITECTURAL REPRESENTATION II (M.ARCH 3) A46 323B ARCH
The course examines the practice of representation, specifically the systems of drawing used in architecture. The objective is to develop the requisite discipline, accuracy, and visual intelligence to conceptualize and generate a relationship between space and form. We will see that, rather than a translation of reality, representation operates between perception and cognition as a transcription of reality and is a powerful instrument in the design and making of architecture. The relationship between the drawing forms and the tools used to produce them are brought into focus as manual, digital, photographic and physical applications driven by drawing intentions. Emphasis is on participation and excessive absences will be noted. PLEASE NOTE: The second half of the semester will focus on computing, for which each student is required to have a laptop computer. 3 units
  01  TuTh 2:30p-5:30p
        Yogiaman
        Van Dyck
        Newman

ADVANCED CONCEPTS IN ARCHITECTURAL COMPUTING: DYNAMIC MATERIALISM A46 326C ARCH
The current developments in digital technology allow mathematical expressions to transform complex generative systems which have shifted the formal discourse of architecture. The new digitally based techniques are being invented to inform creative processes in architecture through the manipulations of complex geometrical and topological forms. This course will focus on developing new techniques that translate these mathematical developments into diagrammatic design strategies. The generative modeling software GRASSHOPPER Plug-in for RHINO 4.0 will be deployed by the students for the investigation. Students will be taught GRASSHOPPER with a conceptual development for defining and inventing dynamic based architectural proposals with multiple perceptions in spatial formations. 3 units
  01  W 6:00p-9:00p
        Van Dyck
DIGITAL FABRICATIONS  A46  326G ARCH
A primer in the use of computers in art and design, this course will focus on fabrications both real and virtual. The ubiquity of computers in design, studio art, communications, construction, and fabrication demand that professionals become comfortable with their use. It is also important in a group of ever-specializing fields that one know how to translate between different software and output platforms. This comfort and the ability to translate between platforms allow contemporary artists and designers to fabricate with ever-increasing freedom and precision. This course will introduce students to 3D software with a focus on 2D, 3D, and physical output. Through a series of projects, students will learn to generate work directly from the computer and translate it into different types of output. Starting from first principles, this course will cover the basics from interface to output for each platform used. The course will be broken into three projects. In the first part, students will focus on computer-generated geometry and control systems. In the second part, students will generate physical output and line drawings. The final project will focus on rendering, cinematic effects and video. The software covered in this course includes, but is not limited to: Rhinoceros 3D, Maya, Illustrator, Photoshop, and Adobe Aftereffects. Additionally, students will use the 3D printer, laser cutter, and other digital output tools. This course welcomes students from other disciplines, both graduate and undergraduate. 3 units
  
  01  Tu 6:00p-9:00p  Tracy

ARCHITECTURAL HISTORY I: ANTIQUITY TO BAROQUE  A46  3280 ARCH
This lecture course will introduce major historical narratives, themes, sites and architecture from ancient Greece to the end of the Baroque period. We will take an extended look at the dawn of the modern period in the 15th and 16th centuries though a global perspective, turning eastward from Renaissance Europe to the Ottoman, Mughal, Chinese, and Japanese empires. The great chronological and geographical span of this course will be pulled together around the themes of 1) classicism and its subsequent reinterpretations, and 2) the pursuit of the tectonic ideal. Our aim is to recognize how these ideological pursuits of modern architecture evolved out of longer historical processes. We will also pay close attention to major sites of landscape and urban-scale work. Requirements will include a mid-term, final exam, and a series of short papers. 3 units
  
  01  TuTh 10:00a-11:30a  Newman

BIOMIMICRY: TOWARD A SUSTAINABLE DESIGN  A46  336C ARCH
The construction and operation of buildings consume the majority of the world’s natural resources and energy, and contribute to expand the landfills. Buildings have diverse effects on the environment during their entire life cycles. Although the tangible impacts are visible only after construction begins, the environmental consequences can be prevented in the first stages of design. The building form and envelope should respond to specific site conditions to help achieve environmental sustainability in architecture. The seminar will be a collaborative studio that welcomes students from disciplines such as Biology, Engineering, and Architecture, among others. The goal of this course is to create environmental awareness; understanding building ecosystems, and increase the ability to design sustainable buildings from an interdisciplinary perspective. Based on scientific principles, concepts, and methodologies required to understand the relationships of the natural world, the students will analyze alternative solutions for resolving and/or preventing specific environmental problems. The aim of this seminar is to prepare the students to participate in cross-disciplinary design teams that can develop working methods to study complex architectural problems and challenges, and facilitate a technical, as well as aesthetically successful, durable and sustainable design. This course will research and study the structure and function of biological systems as models for the design and engineering of materials for buildings. It will involve the study of nature’s design and processes as a tool to bring a solution to an architectural problem that will push technology forward while helping us minimize our environmental impact. 3 units
  
  01  W 9:00a-12:00p  Freixas
BUILDING SYSTEMS I  A46  346  ARCH
This course is for Undergraduates only. The course progresses from a survey of the physical and structural properties of building materials through an analysis of building assemblies and systems. Structural systems are examined relative to their performance characteristics and issues related to manufacturing and construction. Structural systems in wood, steel and concrete along with masonry systems are reviewed in this class. Additionally, the primary and secondary performance characteristics of enclosure systems are identified and analyzed. This course also covers the design of egress systems and vertical transportation systems in buildings. Though the course focuses primarily on the underlining principles associated with these building systems, industry standards and building code requirements are an integral part of the review.  3 units
  01   MF 10:00a-12:00p   Hoffman

BUILDING SYSTEMS II  A46  347  ARCH
The course progresses from a survey of the physical and structural properties of building materials through an analysis of building assemblies and systems. Structural systems are examined relative to their performance characteristics and issues related to manufacturing and construction. Structural systems in wood, steel and concrete along with masonry systems are reviewed in this class. Additionally, the primary and secondary performance characteristics of enclosure systems are identified and analyzed. This course also covers the design of egress systems and vertical transportation systems in buildings. Though the course focuses primarily on the underlining principles associated with these building systems, industry standards and building code requirements are an integral part of the review.  3 units
  01   TBA   Friman

INDEPENDENT STUDY  A46  382  ARCH
Prereq: Sponsorship by an instructor and permission of the Dean of the School of Architecture. Each independent study must be approved by the end of the first week of classes. Credit variable, max 5 units ** See start of this departmental entry or contact department directly for details on faculty/sections and enrollment.
  01- 24   XXX   TBA

MEASURED REPRESENTATION  A46  402A  ARCH
This course proposes to investigate and create a series of measured drawings. The drawings, as architectural objects, configure architectural knowledge, perception and vision. We will begin by studying precedent drawings in relation to each architect’s theoretical framework, project description and technique. The range of works will relate different types of construction (perspectives, axonometrics, diagrams, ideagrams, assemblages, montages, descriptive geometry, and mapping) with integral and symbiotic theoretical agendas. Each student will learn the techniques of representation in their case study and from this example construct an interpretation of a specified site in this language. With a collection of theoretical frameworks and workshops on various techniques, the class will qualify a series of sites through drawing/interpreting the shadows present. Shadows may be thought of as reductions of the real object - in this sense, the drawings will act as abstractions or reductions that promote vision. Instead of simply discussing qualities of space, narratives of metaphor, intangible phenomena, implications of constructed geometry, this architectural research project attempts to propose methods of seeing such that the representation may play a more active role in the shaping of design. This course centers on the creation of imaginative processes of representation.  3 units
  01   W 9:00a-12:00p   Woofter
ADVANCING INTEGRATED SUSTAINABILITY

This course welcomes students from all disciplines in the university. Students will learn to apply and integrate into the built environment a holistic range of social, economic and technical systems inspired and optimized by models in the natural world. A foundation in natural and bio-mimetic systems will be overlaid with analysis of corporate mission, principles, and triple bottom line thinking in order to learn how to build defensible, value-based arguments for implementation of well-designed sustainable systems. With the expressed intent of achieving net positive outcomes for advancing integrated sustainability in the built environment, the following topics will be addressed: the eco-structure, atmosphere, water, food, materials and shelter, energy, transportation, culture, health, education, governance, commerce, and public outreach. Lectures, case studies, readings, and discussions will support real-world application exercises. Complementing leading edge theory with practical outcomes will be provided with the intention that students will develop valuable skills to be incorporated in their other academic projects as well as their future employment pursuits.

01 Tu 9:00a-11:30a
T. Gaidis
Lorberbaum
Stigge

FURNITURE DESIGN FOR THE ARCHITECT

The seat is an intimate interface between the building and the body. It embodies a complex set of structural conditions, material opportunities, and possibilities for expression. Architects, artists, and industrial designers covet opportunities to make the chair. The result is that seemingly infinite perfect solutions exist -- and still the seat remains a provocative challenge. In this course, students will design and build a chair. Emergent technologies will be combined with traditional techniques of metal fabrication, woodworking, and plastic forming in the design and making of the work. The course objective is for students to learn how to work directly with machinery and materials in the realization of their design. It is expected that students have basic shop skills which are addressed in the course prerequisites. Advanced techniques will be introduced in the course, and students will select those most appropriate to their work to build upon. There is an opportunity this semester for students to elect to design a seating device for the campus butterfly garden. This would be a funded opportunity and will be discussed in greater detail on the first day of class. Prereqs: Completion of Fabrication Workshop Safety and Orientation seminar and Arch 211 or equivalent. Permission of the instructor may override course requirements. $50 materials fee. Lab, materials fee: $50.00.

01 TuTh 10:00a-12:00p
Stouffer

FURNITURE DESIGN IN FINLAND

This course is taught in Helsinki as part of the Study Abroad Program.

01 TBA
Scheu

DIGITAL VISUALIZATION WORKSHOP: ADVANCED 3-D MODELING

This workshop is an introduction to complex digital modeling in RHINO 4.0 with basic NURBS Surface, Poly Surface, Solids, and Plug-in T-Spline for Subdivision modeling techniques. These skills are needed for Rapid proto-typing outputs such as 3D Printing and CNC Milling. The workshop will introduce students to layer and object organization with file size management allowing complex and detail modeling. Required for all 318 students.

01 Sa 9:00a-12:00p
1/18/11 - 5/20/11
McFadden
BIM 101 WORKSHOP

The future of the design and construction industry is going to be driven by the use of technology. The best example emerging today is the use of three-dimensional, intelligent design information, commonly referred to as Building Information Modeling (BIM). BIM is expected to drive the AEC industry towards a “Model-Based” process and gradually move the industry away from a “2D-Based” process. The BIM 101 workshop is for future designers who recognize that this future is coming and who are looking for a way to begin preparing themselves in order to be ready when it arrives. We will explore how BIM is being used today and learn the basics of one of the leading BIM tools, Autodesk Revit Architecture 2009. This workshop is intended for senior undergraduate students and graduate students at the 500 level and above. The workshop will meet on Saturday, January 23, 30, Feb. 6, 13, and 20. 1 unit
SECT 01: This workshop will meet on five Saturdays TBA.

01 Sa 12:00p-3:00p
1/18/11 - 5/20/11 Howard

ARCHITECTURAL DESIGN IV

Prereq: Satisfactory completion of Arch 411. Twelve hours of studio work a week. 6 units
01 MWF 1:30p-5:30p Fraser
Heyda
Fulton

MESO-MERICAN ARCHITECTURE

The first half of the course will trace the major civilizations of central Mexico from 1500 BC until the Spanish conquest after 1400 AD, focusing on developments in architecture and landscape, calendrics and cosmology, ceramics, the ballgame and sacrificial rituals, gods, myths and legends, language and hieroglyphics, and political, religious, and social organization. The survey will feature detailed and extended tours of specific sites by means of drawings, maps, slides, and digital images, we may even attempt a couple of virtual tours on-line. In the second half we will deal with the Mayan area, ranging from the lowland jungles of Chiapas and Yucatan to the Peten and the highlands of Belize and Guatemala. High points include the Jaguar dynasty of Yaxchilan, the reign of Pacal at the hybrid site of Palenque, and the demise of 18 Rabbit in the city of Copan, Honduras. Tikal will be featured as the culmination of Mayan culture, and the Chenes, Rio Bec and Puuc styles will also be examined. See a complete and independent cultural development going back at least 7000 years, and equal in greatness to Egypt, Greece, or Rome. This is also a chance to examine civilizations existing at the margins of ecology and sustainability, and how they may at times succumb when the limits have been reached. Students will be encouraged to focus on a particular area of interest for further inquiry, to be developed into a paper or a project. Fulfills the History/Theory elective requirement. 3 units
01 Tu 6:00p-9:00p Kultermann

ARCHITECTURAL HISTORY I: ANTIQUITY TO BAROQUE

This lecture course will introduce major historical narratives, themes, sites and architecture from ancient Greece to the end of the Baroque period. We will take an extended look at the dawn of the modern period in the 15th and 16th centuries through a global perspective, turning eastward from Renaissance Europe to the Ottoman, Mughal, Chinese, and Japanese empires. The great chronological and geographical span of this course will be pulled together around the themes of 1) classicism and its subsequent reinterpretations, and 2) the pursuit of the tectonic ideal. Our aim is to recognize how these ideological pursuits of modern architecture evolved out of longer historical processes. We will also pay close attention to major sites of landscape and urban-scale work. Requirements will include a mid-term, final exam, and a series of short papers. 3 units
01 TuTh 10:00a-11:30a Newman
MATERIALS RESEARCH SEMINAR: 
COLLABORATIVE DESIGN & MATERIAL PRECEDENT  A46 434P  ARCH
This course uses precedent analysis to examine the processes by which materiality and tectonic expression are developed within architectural design. Emphasis will be placed on documenting relationships among designer, engineer, fabricator, manufacturer and consultant that result in innovative material applications for highly individuated works. Precedent analysis will build upon the current formats developed by the MRC, and will include text that reveals the internal workings of the design team and technical drawings of building details that focus upon tectonic resolution. Students will engage in primary source research, directly contacting design team members. In the future, these precedents will be developed as a searchable dataset available to the Washington University design community. 3 units
01  Tu 9:00a-12:00p  Hancock

INFORMATION MODELING & TECHNOLOGY  A46 436A  ARCH
This foundation-level course will introduce students to the digital tools of Geographic Information System (GIS), Building Information Modeling (BIM), and Building Performance Analysis (BPA). Its goal is to equip the student with the ability to gather information, analyze it, and make decisions within the information-rich environment of architectural design and construction. Students will develop an understanding of these three seemingly distinct approaches and their role in preserving the quality and quantity of accumulated information for ‘upstream’ use. The topics addressed in the course will be further developed in more advanced courses during subsequent semesters. The introduction of information-gathering principles within GIS will expose students to the wealth of information, such as maps and census data, that is already available, as well as methods of turning raw data into analytical material for use in their design work. This segment of the course not only provides a foundation to ArcGIS, but also leads toward use of this information within applications like Revit Architecture. Creating and managing an information pool of digital GIS and design and construction data and making it available throughout the lifecycle of a project is commonly referred to as BIM. In the second part of this course, we will explore how BIM is being utilized today and learn the basics of one of the leading BIM compliant applications, Autodesk Revit Architecture 2010. During the third part of this course, students will be introduced to BPA, a process that embodies a holistic approach toward the integration of sustainability and design. By understanding when and how to apply sets of analytical exercises via applications like Ecotact Analysis within the context of Information Modeling, students will develop an understanding of how design decisions have a profound and lasting impact on the overall building sustainability and performance. 3 units
01  F 9:30a-12:30p  Ho
Ho
Howard
Zigo

ENVIRONMENTAL SYSTEMS I  A46 438  ARCH
This course outlines and addresses fundamental passive strategies that can be employed to both respond to, and maximize, the possibilities of specific climates and context - to enable building form to work with, not against, those ground and environmental conditions. A proactive engagement of the environment at both the scale of the body (Micro) and the scale of the building (Macro) will be outlined, establishing base strategies and rules of thumb for fundamentally integrating passive systems to balance human comfort and sustainable strategies, toward an enduring architectural response. 3 units
01  MW 11:00a-12:30p  Cruse
ENVIRONMENTAL SYSTEMS II  A46 439 ARCH
We as architects have to analyze and address complex issues and relationships, synthesize them, and then make them manifest through clear design strategies. Building systems must reconcile: solar heat gain, glare control, daylight levels, thermal insulation, ventilation, acoustics, air quality, structure and fabrication - all in relation to the scale and comfort of the human body. The development of environmental systems into a clear, comprehensive, and elegant design solution cannot be an afterthought; it must be a synthesized and integral part of the design process, with a clear strategy that operates at multiple scales. Building upon the passive strategies explored in Environmental Systems I, this course will lay the foundation for the integration of active environmental systems with enclosure, space, and the requirements for human occupation. This will be done through the study of climate, air, temperature, water, light, sound, and energy. Each topic will be assessed against problems, principles, possibilities and potential. This course focuses on how important it is to consider active systems as part of an integrated design strategy addressing both FORM and PERFORMANCE throughout the design process.
Prereqs: Environmental Systems I & Building Systems I  3 units
   01  W 10:30a-12:00p     Lovell
       Burkett
       Wang

Discussion Sections:
   A  Th 8:30a-10:00a
   B  Th 8:30a-10:00a
   C  Th 12:00p-1:30p
   D  Th 12:00p-1:30p
   E  Th 4:30p-6:00p
   F  Th 4:30p-6:00p

STRUCTURES II  A46 448A ARCH
Continuation of Arch 447A with consideration of the effects of forces on structural members of various materials. Intro to the design of structural members in steel, reinforced concrete and wood.
Prereq: Arch 447A  3 units
   01  W 6:30p-9:00p     Shinn

PUBLIC SPACE AND CITY LIFE  A46 454 ARCH
The redefinition of the role and form of public space is fundamental to contemporary architecture and urbanism. The current debate ranges from the need to re-establish public space based upon historic precedent or sociological principles to the notion that “public space is dead”. This course will explore this debate through readings from philosophy, social and architectural theory, and the investigation of select public spaces. Fulfills Urban Issues elective requirement. Open to 400 level students and graduate students.
   01  Th 6:00p-9:00p     Hoal

THE SIXTIES  A46 457A ARCH
This seminar will examine the architecture and urbanism of the nineteen-sixties in Europe and America. At the high point of Modernism’s implementation in the built environment, architects and urbanists began to confront the effects of context, communication, precedent and social forces on the form of the building and the city. These considerations would lead to a shift toward stylistic Post-Modernism in the seventies and eighties. However, many of the issues raised in this fertile period, from sustainability to the nature of the post-urban environment, are still vital to architectural practice today. Fulfills History/ Theory elective requirement. Fulfills Urban Issues elective requirement.
   01  Th 1:00p-4:00p     Fausch
INFORMATION MODELING FOR SUSTAINABLE DESIGN  A46 462H ARCH
This course will focus on the principles of sustainable design as examined through Building Performance Analysis (BPA) and applied Building Information Modeling (BIM) methodology. The foundation for this course will be an introduction to BIM and BPA and the significance of both for the future of sustainable architectural design practice supported by analytical modeling. This emphasis on the suitability of building modeling for analytical purposes and on the interpretation of such data will provide the basic knowledge necessary for the second phase of this course, in which students will use a previous or current studio project for an in-depth study of their building's performance in the context of its chosen site. Exploring the interaction between the simulated environment (climate, isolation) and the virtual building with its physical characteristics (materials, assemblies, passive design strategies, heat transfer, daylighting, embedded energy), we will attempt to confirm and test the principles of sustainable design at the schematic level of project development. The model analyzed by each team will provide sufficient comparative information for a design approach whose desired goal is carbon neutrality in the lifecycle of the building. Students will be encouraged to investigate the suitability of analytical modeling software, in the context of critical design methodology. Prereqs for this course are a basic understanding of BIM methodology and insight into sustainable design practices. 3 units
  01 Th 6:00p-9:00p  Zigo

ARCHITECTURE & PHOTOGRAPHY  A46 464A ARCH
Seminar that deals with issues raised by use of photography by architects, historians, and critics. Seminar will confront the assumption that our knowledge of notable buildings and architectural space is based primarily on the photographic image. Photographs are tacitly accepted as objective facts, and the pervasiveness of photography in magazines, books, and exhibits as substitute for direct experiences are rarely questioned. Goal of seminar: to foster a healthy skepticism of photographs, and to investigate the role of photography as a means of record and convey complex spatial conditions by the ordering conventions of the frame. While not technical, the course will introduce students to technical aspects of photography that are particularly relevant to architectural photography: parallax, lighting, lens distortion, depth of field, format and grain, cropping, photomontage, and point of view. Fulfills History/Theory requirement. 3 units
  01 W 9:00a-12:00p  Leet

SUSTAINABLE DEVELOPMENT  A46 472 ARCH
This seminar is an introduction to the basics of small- to medium-scale development. It will begin with a series of introductory lectures covering the principles and tools of development, such as creating a project performa, basic tax credits, TIFs, and financial structuring of a project; exploring methods of implementing sustainable practices and designs into development-driven projects through marketability, cost-savings, tax credits and other incentives; and investigating the process of real estate development through the use of sustainable ideas and practices in buildings. It will continue with a series of case studies in which the class will examine models of existing developers in terms of these base elements. Finally, students will be asked to develop a project in order to understand the architect-client relationship and how to stimulate recognition of the value and importance of sustainable design in real estate development. Same as U19 SUST 472. 3 units
  01 W 5:30p-8:30p  Repovich
LANDSCAPES THROUGH TIME:  
THE HISTORY OF ST. LOUIS' BUILT ENVIRONMENT  
A46 475D ARCH

From the Mississippian mound builders to the urban conditions of the present day, this course will investigate the different approaches of various cultures to creating built environments that meet the needs of their time in terms of landscapes and structures. Using the City of St. Louis as an example, the course will examine the layout and infrastructure of the city at various periods, discussing the effects of technological changes in the creation of structures, improvements to transportation, facilitation of trade and the effects of these forces on the cultural and built landscape of the city. Each class session will discuss the structures and landscapes that defined individual eras in the history of the city, and the ways in which these were successful or unsuccessful.

01  Tu 6:00p-9:00p  Moore

3 units

MID-CENTURY MODERNISM IN ST. LOUIS 1930-1965  
A46 478A ARCH

St. Louis is home to many significant architectural works of Mid-Century Modernism, design by local, national, and international architects of great repute. One of the most powerful ways to understand and appreciate architecture is to experience it firsthand. In this course, we will tour significant extant works after brief presentations of the design architect’s work by the course lecturers or visiting lecturers. In addition to site visits, the course will involve architects and historians (to the greatest extent possible) who have firsthand knowledge and experiences of Mid-Century Modernism of St. Louis through lectures and site visits, culminating in a round table discussion with the class able to ask questions after a semester of exploration, discovery and focused investigation. Each week, students will document their observations of each site visit through writing, photography, sketching, diagramming concepts, and additional research of the architecture, architect or historical context. A private blog site will be created to post information and assignments so that all in the class may read and contribute to the body of research being developed. Also, each student will be expected to research a topic of their choice from a list of 20 or so buildings selected by the instructors. This semester project will culminate in a thirty-minute class presentation and subsequent discussion. Ultimately, the weekly and semester projects will be documented in an 8.5” x 11” format to be incorporated into a booklet documenting the student’s cumulative efforts. Fulfills History/Theory elective requirement.

01  Tu 1:00p-4:00p  Guenther  
Raimist

3 units

CASE, TRACE, DISPLACE: DIALOGUE BETWEEN RIVER AND CITY  
A46 480A ARCH

This seminar will explore methods of sensing, recording, interpreting, translating, and visualizing environment data with particular emphasis on experience at the human scale. The focus topic will be on the relationship between river and city. In the first phase of the seminar, students will begin by researching precedent projects, technologies, and techniques for sensing and gathering data from the environment. These may include, but are not limited to, GIS techniques, DIY devices, and processing methods. A combination of analog/digital and traditional/innovative explorations is encouraged. In the second phase, students will develop a strategy to record, interpret and translate environment data for the purpose of analyzing relationships between the landscape and human experience. In the final stage, students will test their ideas and develop a method to express these relationships through prototypes that can be deployed into the landscape. The course will consist of lecture/discussion sessions, field research, and working sessions. Students will be expected to conduct and document research based on the information presented in class, to create theoretical proposals, develop simulations and visual documentation, and craft prototypes inspired by a site at the St. Louis riverfront. Same as home course A48 LAND 480.

01  Tu 6:00p-9:00p  Yates

3 units
INDEPENDENT STUDY

A46 482 ARCH
Prereq: Sponsorship by an instructor and permission of the Dean of the School of Architecture. Each independent study must be approved by the end of the first week of classes. Credit variable, max 9 units ** See start of this departmental entry or contact department directly for details on faculty/sections and enrollment.

01  22  XXX  TBA

SPACE, SOCIETY & THE DIGITAL

A46 484D ARCH
This course will study the contemporary questions raised by the history of the digital revolution in the domain of art and architecture. Images and our imagination are closely linked to the tools we use. In the past decades, computers, digital networks and the various tools associated with the emergence of the information age are increasingly under examination. But what at first appears to be a recent phenomenon has a relatively long history. From the beginning of the machine age to the emergence of the “human motor” and the mid-century exploration of virtual worlds through computer-aided simulations, the presence of a digital revolution asserts itself long before our current age of information. Fulfills the History/Theory elective requirement. Same as F20 ART 484D.

3 units

01  Tu 1:00p-4:00p  Newman

NOMA NATIONAL DESIGN COMPETITION

A46 486A ARCH
This course will allow students to work collaboratively to develop a comprehensive body of work (including presentation boards, physical models, and animated digital graphics) in response to a design challenge located in Atlanta, GA. The general design criteria will be based on a forthcoming program in association with the 2011 NOMA National Student Design competition. During the first half of the semester, there will be an optional overnight field trip to Atlanta, GA to visit the site and gather other information relevant to the project. Students will work in pairs to develop thorough schematic level solutions. After the midterm review, the class will select the strongest overall team project and use that as a basis to develop highly detailed plans, elevations, sections, details, 3D views (animation optional), cultural, sustainable, and accessibility design concepts. Not only will this activity culminate into a final review, but the students will submit and formally present their design solution at the National NOMA Conference to be held next year in Atlanta, GA; Fall 2011. Ultimately, the course will be crafted in such a way that the time/work demands on students will not compromise their core studio and class responsibilities. The students will be competing against at least 15 design teams from other nationally respected universities. A cash award will be given to the top 4 team finalists (note: Washington University participated for the first time in 2009 and placed 3rd in the national competition; beating out teams from Cornell U. and Georgia Tech). The National Organization of Minority Architects (NOMA) is a 38-year old organization that has worked collaboratively with the American Institute of Architects (AIA) to further diversity awareness in academia and the design profession, and encourages the inclusion of all students to participate in all of its student and professional activities. Open to both undergraduate and graduate students. Each student must submit $35, which covers the NOMA membership fee.

3 units

01  Tu 1:00p-4:00p  Brown

ARCHITECTURE SERVICE LEARNING PRACTICUM

A46 490 ARCH

2 units.

01  W 12:00p-1:30p  Lorberbaum
EXPLORE & CONTRIBUTE:
COLLABORATION BETWEEN WASHINGTON UNIVERSITY &
HENRY ELEMENTARY SCHOOL

Principal Esperansa Veal of Henry Elementary School is creating a remarkable place for her students who live in the neighborhood of the Cochran Gardens Federal Housing Project in downtown St. Louis. Principal Veal is clear in her conviction to provide each of her students with both literal and academic nourishment, and is working unceasingly to make the Henry School a safe and creative oasis for children ages pre-school through grade six. Her goal is to have the Henry Elementary School students explore sustainable ways to live during the 21st century. To this end we will emphasize ecological sustainability, environmental health, personal responsibility, leadership and a comprehensive, high quality academic program. With an emphasis on the environmental sciences, energy alternatives and conservation, recycling, organic gardening and the food sciences, and the emerging ‘green’ economy, students will focus on developing the math, science, writing, and hands-on skills that will make them successful leaders to make a difference in improving the environment for humanity. This course invites undergraduate and graduate students from different fields of study to apply their discipline to the goal of designing and teaching hands-on problem-solving projects for students at the Henry Elementary St. Louis Public School, located across the street from Cochran Gardens Housing, at 1220 N. 10th Street. Gay Lorberbaum, with advising from Principal Veal, will work individually with each WU student to develop the right fit between the creative contribution each WU student wants to offer and the vision Principal Veal has for each age group of students at Henry Elementary School. Students enrolled in this course will work on-site at Henry Elementary School during the scheduled meeting times. 3 units

SECT 01: This section will meet at the Henry Elementary School during its scheduled meeting time.
   01   M 9:30a-11:00a    Lorberbaum

SECT 02: This section will meet at the Henry Elementary School during its scheduled meeting time.
   02   M 1:00p-2:30p    Lorberbaum

COMMUNITY DEVELOPMENT & AMERICAN CITIES

Registration Information: Enrollment in this course is limited to 12 Social Work students and 12 Architecture students. To ensure that balance, all students must initially join the waitlist to enroll in this course. Registrars will persistently check the waitlist and add the correct number of students from each School to the course roster, based on order of joining the waitlist. Both Architecture and Social Work begin registration at the same time. Waitlisted courses do not count toward your total credit total, so are not subject to the 16 credit WebStac registration limit for Social Work students. Class dates: 1/20/11-5/5/11. No class 3/1/11. Course Description: Throughout recent American history there has been considerable attention paid to the distinct problems of poverty of place, of poor rural regions and poor neighborhoods in large cities. In part this concern reflects the realities of American politics. Political representation is local, reflecting the votes of residents of neighborhoods and regions, not interest groups. The goal of this course is to analyze and suggest interventions that improve the quality of life of poor Americans by improving their neighborhoods. Primary focus will be on alleviating urban poverty. The course will begin with a comprehensive introduction to strategies to redevelop distressed urban neighborhoods in America. Attention will be paid to strategies that target the development of community organizations, the strengthening of key services such as schools and safety and the role of physical changes through excellent design in neighborhood improvement. Course pedagogy will emphasize intense interaction between students and between the students and instructor, using lectures, small group discussions and presentation of student projects. Class assignments will include two short analytical papers (3-5 pages) and a major analytical or urban design project. Thursdays: 5:30-7:40 pm. Class Dates: 1/20/11-5/5/11. No class 3/17/11. Class will be held in Kemp Auditorium within the School of Architecture. This course may be substituted for S60-5016 Community Development Practice: Basic Concepts and Methods as an SED concentration practice methods course within the Social Work MSW Program SED concentration. Same as home course S60 SWCD 5079. 3 units

SECT 01: Registration Information: Enrollment in this course is limited to 12 Social Work students and 12 Architecture students. To ensure that balance, all students must initially join the waitlist to enroll in this course. Both Architecture and Social Work begin registration at the same time. Class dates: 1/20/11-5/5/11. No class 3/17/11. Class will be held in Kemp Auditorium in the School of Architecture.
   01   Th 5:30p-7:40p    Webber
ARCHITECTURAL DESIGN V
Prereq: Satisfactory completion of Arch 419 or equivalent. Twelve hours of studio work a week. 6 units
01  MWF 1:30p-5:30p
  Burnette
  Donnelly
  Dunn
  Felson
  Freixas
  Jantzen
  Hoeferlin
  Imbert
  Kolatan
  Koster
  Leet
  McCarter
  Metter
  Moyano
  Payá
  Tracy

ARCHITECTURAL DESIGN VI
Prereq: Satisfactory completion of Arch 511. Twelve hours of studio work a week.
01  MWF 1:30p-5:30p
  Burnette
  Donnelly
  Dunn
  Felson
  Freixas
  Jantzen
  Hoeferlin
  Imbert
  Kolatan
  Koster
  Leet
  McCarter
  Metter
  Moyano
  Payá
  Tracy

DYNAMIC ARCHITECTURAL VISUALIZATION
Spatial animation for architecture urban design, landscape and interior design is being used as an everyday design process. This powerful dynamic media allows designers to fully understand and comprehend the totality of natural phenomena and spatial perception within the digital environment. This course explores the basic aspects of design and producing digital animations. Students develop storyboards in terms of clarity of storyline, time curves, motion paths, and advanced rendering techniques. Key frame and interpolation techniques are developed to aid the editing process. This course also covers video editing as a creative tool combining audio and visual manipulation. Each student will engage in dynamic perception through assemblage of time, space, and emotional aspects of cinemetic experience.
01  Tu 6:00p-9:00p
  Smith

3 units
BUILDINGS & THEMES IN FINNISH ARCHITECTURE

Fulfills History/Theory elective requirement.

SECT 01: Helsinki International Semester students only

01 TBA Jetsonen

LAND ARCH URB: LANDSCAPEARCHITECTUREURBANISM

New Disciplinary Dynamics: Blurs and Exchanges. Over the past decade, the various professions engaged in the construction of the built environment have been investigating (both in theory and practice) a specific and deliberate blurring, hybridization, and expansion of the traditional semantic and historical categories of landscape, architecture, and urbanism in an attempt to confront changing situations, environments, and cultures. Across geographical and cultural boundaries, the proliferation of projects (speculative and built) and essays appearing in recent years makes this phenomenon more than a passing trend or the product of individual reflection. Architecture, for example, as a conventional discipline with its own tasks, internal logic, and modus operandi has become so heterogeneous that it can no longer adequately authenticate its products from within the limits of its historical category. The same holds true of the allied fields of landscape and urbanism. Strict disciplinary boundaries are no longer capable of attending to the complexity of contemporary demands produced by mobility, density, de-urbanization, hybrid programs, changing uses, and ecological concerns. The contemporary world forcibly imposes the need for greater flexibility and indeterminacy and for new techniques of practice that are anticipatory, receptive to change, and capable of opening an aperture to the future. This course will explore these disciplinary slippages and hybrid contacts between until now distinct categories through essays and built or speculative works. Fulfills History/Theory elective. Fulfills Urban Issues elective.

01 Tu 1:00p-4:00p Daskalakis

LOUIS KAHN & ALVAR AALTO: CRITICAL STUDIES

This intensive seminar will examine the two signal architects of the late 20th century, through focused examinations of their biographies, written statements and significant buildings: the Salk Institute and the British Art Center, among others, by Kahn and the Saynatsalo Town Hall and the Villa Mairea, among others, by Aalto. The course structure will intertwine the progress of each architect's career and production with the other's, and place them both as well in their historical and theoretical contexts. Thematic issues of site, tectonics, purposes, and formal principles will be addressed, and the subsequent critical interpretations of the built works will be reviewed. Selected works will be the subject of analysis through surveys of archival drawings and constructed models. An overview of the legacy of Kahn and Aalto as represented in contemporary architectural culture will conclude the seminar. Field trips to selected buildings of Kahn in the United States are planned; an optional field trip to Finland for the experience of Aalto's works is also envisioned. Pre-requisite: Architecture 4283/4284 or equivalent. Fulfills History/Theory requirement.

01 Th 1:00p-4:00p MacKeith

ARCHITECTURAL ASSOCIATION, 1971-1990: TEXTS, BUILDINGS, AND DRAWINGS

This seminar will examine the convergence of curatorial, publishing, and professional practices at the Architectural Association (AA) in London under the chairmanship of Alvin Boyarsky. Through a focused study of the international network of AA notables in the 1970s and 80s -- Zaha Hadid, OMA/Rem Koolhaas, Bernard Tschumi, Daniel Lebeskind, Peter Eisenman, John Hajduk, Peter Cook, Robin Evans, and others -- the seminar will establish a broader relationship between architectural theory and practice. The course will integrate a set of primary theoretical texts with a selection of AA Publications, illuminating the relationship between architecture and theories of image production, collection, and dissemination. Course requirements include weekly reading summaries, discussions, in-class presentations, and a research paper. Open to graduate and upper-level undergraduate students. Fulfills History/Theory elective requirement.

01 W 9:00a-12:00p Marjanovic
TECHNOLOGY TRANSFER

The course will explore design, manufacturing, and production strategies employed for the development of technology in industries typically outside of the architectural domain. The performance characteristics of these technologies will be considered as they relate to desired impact, technical theory and process. The course will investigate the role of computation in design and production through an analysis of industry techniques related to Computer Modeling, Performance Analysis, CADD-CAM, Rapid Prototyping and Robotics. The class will explore recent developments in the automotive, aerospace and shipbuilding industries among others for this research. In addition to analysis, students will be asked to develop and critique postulations related to the appropriate engagement of these technologies, design methodologies and production techniques in the “making” of architecture. Students will be asked to participate in discussions regarding their findings, write a report and make a formal presentation of their work.

3 units

CLIMATE AND LIGHT

This course focuses on the principles of climate control and active and passive climate control systems for buildings. Lectures and projects are organized to follow the design process, with emphasis on the architectural implications of technological systems. Where possible, students’ design studio projects are used as the vehicle for class assignments. Climate and region are approached as a context for design. Principles of thermal comfort, regional design strategies, and bioclimatic design theory are covered. Systems for heating, cooling, and lighting are addressed wholistically. Class exercises focus on schematic design strategies.

3 units

MAPPING: APPLIED THEORY

Mapping reveals the complex relationship between representation and thinking, technology, culture and aesthetic practices. Embedded in the discussion are the general terms of cartography and how mapping re-constructs a three-dimensional world onto a surface. We address the map both as a text and as an object of historical explanation from which we can gain a better understanding of current spatial practices. The course is divided into nine sections: an introduction and eight sections corresponding to a term referenced from mapping procedures, but also articulated within architecture. Each section associated with a term includes one or more case studies. The projects we examine in the course position themselves in relation to the project of the city through the map; specifically, how mapping reveals the dialectic between spatial constructs and their potential meaning. Students will produce several de-constructions of maps in addition to working on a larger mapping. The objective of the course is to analyze and thereby instrumentalize maps and mapping procedures. Fulfills History/Theory elective requirement. Fulfills Urban Issues elective requirement.

3 units
THE ARCHITECTURE OF MEDICINE  
This seminar will offer students in architecture and engineering an overview of issues involved in the planning and design of facilities for medicine and the problem-solving design process required in projects of this type. Medical-based building uses include: Laboratories (biomedical sciences, instrumentation, clinical, etc.); In-patient facilities (hospitals, rehabilitation centers, in-patient surgery, blood bank, pathology, etc.); and Medical facilities (out-patient surgery and procedure, radiology, etc.). The course will examine the problem-solving process and specific design issues of buildings designed for medical science and treatment. It will show the opportunities for integrating sustainable principles in the design. The problem-solving process will start with programming, follow with planning exercises, and focus on engineering issues for the design process. Students will go on 5 tours to see interesting local facilities that provide good examples of functional design for medical uses listed above. Examples of potential local tours include: WUSM’s Mallinckrodt Institute of Radiology, BJC Hospital facilities, and SLU-SOM’s new clinical research laboratory (J. Baum designed). The course will review examples of buildings for medicine by notable national and international architects, as well as interesting well-executed buildings of note and where sustainable design has been incorporated into the design. The objective of reviewing existing buildings will be to investigate the technical challenges posed by the function and use of the building. Because we will generally not be able to find much on the problem-solving process and specific design issues of these buildings, the students’ investigations will be limited to what is published. 3 units

01  TuTh 10:00a-11:30a  Baum

PUBLIC HEALTH & THE BUILT ENVIRONMENT  
The built environment has contributed to and advanced public health and safety since the era of 2200 B.C.E. when Hammurabi, the founder of the Babylonian Empire, proclaimed the “Code of Hammurabi.” This code called for construction of “firm houses” that would not collapse on their owners and for imposition of severe penalties on constructors whose buildings collapsed. The same basis of care and prudent practice is in force today in building design, construction, and environmental engineering in order to protect public health and safety and the natural environment. This seminar will investigate issues in the U.S. and within a global context of housing, healthy communities, sustainable design, environmental quality considerations in public health, and occupational health and safety in workplace facilities. 3 units.

01  TuTh 4:00p-5:30p  Baum

SYNTHESIS FOR FUTURE PRACTICES  
The seminar will offer a forum to judge our vast and long experiment in innovation and synthesize a new set of ideas for the practice of architecture and design. Multi-disciplinary theoretical texts and built/unbuilt work from the primitive to the contemporary which address relationships between ideas and reality, nature and technology, power and politics, the local and the global, nostalgia and utopia, preservation and duration will be of prime interest. We will reread this history in the context of the present in order to project future practices. The format of the course will be a series of discussions of these texts and cases. Discussions will follow presentations by groups of students and the instructor. Students will be expected to develop a revelatory presentation, participate in discussion, and submit either an essay on some aspect of a text or analytical drawings on a built/unbuilt work. The broad nature of this seminar reflects the instructor’s belief that simple political, technological, and representational justifications do not open up architecture to new, robust means of practice. Debate and collaborative thinking are encouraged. Students should expect to develop skills to formulate and articulate well-informed, yet imaginative positions and speculate about corresponding techniques. 3 units

01  TuTh 4:00p-5:30p  Fulton
PAINTING INTO ARCHITECTURE: SHARED SPECULATIONS
ON THE NATURE OF MODERN SPACE, 1900-PRESENT  A46 575 ARCH
A graduate seminar exploring the rich tradition within the Modern arts since 1900, where shared concepts of space, order and perception have been engaged in parallel developments in the pedagogy and practice of painting and architecture. The major part of the course will consist of the examination of these shared principles through their educational deployment in selected schools of art and architecture around the world, as well as in their practical implications and applications, exemplified through a series of selected pairings of architects and painters, from the early Modern period and from contemporary practice. Three types of parallels between individual painters and architects are proposed to be found within the Modern tradition: parallels in practice, an actual relationship of contemporary equals; parallels across time, an actual albeit one-way relationship of chronologically distant practitioners; parallels of principle, a purely speculative relationship of contemporary equals on non-crossing paths. Introductory lectures and required readings will examine the pattern of shared principles through their critical engagement in the writings of Jose Ortega y Gasset, Sigfried Giedion, Colin Rowe, Robert Slutzky, Yves Alain Bois, and John Berger, among others. Following the introductory lectures, each class will consist of a student presentation on educational deployment, and two presentations on practical implications and applications (artist/architect pairings), one by a student and one by the professor. Among the painters and architects to be examined are Le Corbusier, Paul Klee, Carlo Scarpa, Richard Diebenkorn, Steven Holl, Ben Nicholson, David Chipperfield, Richard Paul Lohse, Aldo van Eyck, Robert Slutzky, Peter Eisenman, Georges Braque, Alvar Aalto, Josef Albers, Louis Kahn, Piet Mondrian, Tod Williams and Billie Tsien, Sean Scully, Herzog and Du Meuron, Mario Radice, Giuseppe Terragni, Fritz Glarner, Henri Ciriani, etc. Students, working in teams of two, will be responsible for researching and analyzing one example of practical implications and applications, and one example of educational deployment (from list provided); preparing two in-class presentations, and providing summary documentation. The course, and the syllabus of examples that will be engaged in the classes, originates in the book-length study, Spatial Speculations, currently being written by the professor. Open to graduate students in architecture, art, and art history. Fulfills Graduate Architecture History/Theory elective requirements; enrollment limited to 20. 3 units

01  M 9:00a-12:00p  McCarter

DESIGN THINKING: RESEARCH AND DESIGN METHODS  A46 580 ARCH
Covers the fundamentals of project planning, proposal writing and alternative research and design methods. This course is a prerequisite for Arch 616 Design Project. Grade of “B” or better required in preceeding two studios. 3 units

01  Tu 1:00p-4:00p  Hoeferlin
    Faulkner
    Fehrmann
    Kim
    Moyano
    Luchini

INDEPENDENT STUDY  A46 582 ARCH
Prereq: Sponsorship by an instructor and permission of the Dean of the School of Architecture. Each independent study must be approved by the end of the first week of classes. Credit variable, max 9 units

** See start of this departmental entry or contact department directly for details on faculty/sections and enrollment.

01  23  XXX  TBA
SUSTAINABLE SITES

Using the guidelines from the “Sustainable Sites Initiative” as a base idea, this elective course will provide interdisciplinary methodologies related to recent technologies involving landscape ecology, green infrastructure, habitat and wetland restoration, green roof design systems, soil structure and remediation, urban agriculture, storm water remediation through topographical manipulation, bioswale and rain garden sizing and design, arboriculture and other systems that assist in creating and maintaining micro- and macro-balanced ecosystems. The course is divided into topics promoting landscape, urban design and architecture as systems not in isolation from each other, but intertwined and interdependent. The class will focus on applying the technology to sites of varying typologies. Aiming to combine technological/scientific knowledge, research, and practical applications, the course will include lectures, supported by assigned readings and class discussion, and concise weekly exercises to be done by the students. Class attendance and participation is mandatory. 3 units

01 F 9:00a-12:00p Gaidis

PROFESSIONAL PRACTICE I

Develops awareness and understanding of architectural practice including the relation of the profession to society as well as the organization, management and documentation of the process of providing professional services. Covers the areas of 1) project process & economics, 2) business practice & management, and 3) laws and regulations. Prereq: 500 level studio placement or above. 3 units

01 TuTh 10:30a-12:00p Johannes
02 TuTh 9:00a-10:30a Johannes

ADVANCED PROFESSIONAL PRACTICE:
ADVANCED FIRM & PROJECT MANAGEMENT

Advanced study of professional practice topics focusing particularly on firm management and project management. Firm-related topics will include starting a practice, financial management, marketing, staffing and risk management. Project-related topics will include fee negotiation, project structures and participants, scheduling, use of AIA contracts and management documents, and construction document systems. 3 units

01 TuTh 4:00p-5:30p Johannes

PROJECT DESIGN REALIZATION: FROM CONCEPT TO CONSTRUCTION

Advanced study of professional practice topics focusing particularly on project management, construction documents production, and construction phase services and responsibilities of the architect. Students will select a project which they have produced previously in design studio and will create construction documents for this project. Likewise, the individual projects will be used to discuss project management processes and construction administration. This is not a technology course, but rather focuses on concepts and systems used by the architectural profession to describe architectural designs for the purpose of bidding the project, and creating a legally binding document on behalf of architectural clients. 3 units

01 Th 1:00p-4:00p Johannes
ARCHITECTURAL DESIGN VII
Prereq: Satisfactory completion of Arch 512. Twelve hours of studio work a week.
01 MWF 1:30p-5:30p

ARCHITECTURAL DESIGN VIII
Prereq: Satisfactory completion of Arch 611. Twelve hours of studio work a week.
01 MWF 1:30p-5:30p

DEGREE PROJECT
Independently initiated design and research projects based on Design Thinking (Arch 580) proposal to fulfill final requirements for professional degree award. Prereq: Design Thinking (Arch 580). PERSONAL COMPUTER REQUIRED IN STUDIO. Twelve hours of studio work a week.
01 MW 1:00p-7:00p
**METROPOLITAN DEVELOPMENT: WHAT'S IN A PLAN?**  
This course explores pluralist, pragmatic and progressive planning strategies for American urbanism. It will provide students with an introduction to the design and planning of American cities in the context of this country's democratic tradition, its multi-cultural society, and the particular morphology of its urban areas. Contemporary American cities have urbanized in unprecedented and distinctive ways that suggest the creation of a unique urban culture, despite the seeming globalization of urban trends, or the apparent universalization of urban forms. Identifying the role design can play in this culture requires a lucid appraisal of the context in which metropolitan development takes place. Four study modules will introduce basic issues in planning law, real estate finance, urban economics and environmental planning through lectures and research projects, as well the presentation of Metropolitan St. Louis development case studies by professional and political leaders.  

3 units  
01  F 9:00a-12:00p  
Heyda

**CONTEMPORARY PRACTICES OF SUSTAINABLE URBANISM**  
This seminar will investigate those contemporary practices of Sustainable Urbanism that exemplify a concern for locality, place, culture, community and authenticity. Sustainable urbanism is understood not as a pre-defined goal or form, but as a contested territory involving socially constructed processes, conflicting values and competing interests that dictate urban change and the consumption of urban space all mediated through the practice of urban design. To this end, different methodological approaches to urban sustainability will be investigated, including LEED ND, ZED Cities, Regenerative Urbanism, The Natural Step, Eco-Urbanity, Resilient and Smart Cities. The research project of the seminar will focus on the Delmar Loop/ Parkview Gardens neighborhood, which was recently awarded a HUD/DOT Sustainable Communities Grant with the intent that the students develop a Sustainable Urban Design Plan and Code for the area. This course will be augmented with presentations by local practitioners of sustainability plans and include an optional site visit to Portland, OR and/or Vancouver, Canada to fully investigate and understand the respective city's implementation of sustainable urbanism. This course fulfills the Urban Issues elective requirement for the M.Arch degree. Undergraduate enrollment is allowed by arrangement with the instructor.  

3 units  
01  Th 9:00a-12:00p  
Hoal

**SURVEYING THE REGIONAL**  
Lacking the iconic presence and legibility of site-based work, regional design and planning projects have historically lacked for visibility. Regions--units larger than the city, defined more by environmental and cultural unities than administrative ones--have proven difficult to define and manage. However, in an era increasingly defined by large-scale infrastructure and concerned with ecological systems, it has become impossible to ignore the regional. The omnipresence of methods of imaging the large-scale—from satellite photography and GIS data to real-time sensing—is redefining the ability of the designer to conceive and constitute regions. At the same time, breakdowns in centralized planning make the prospect of authoring change on the macro level more difficult to imagine than before. The mechanics of regional-scale work provide a unique opportunity to examine the mores and methods of spatial design. Such projects unite design's most pragmatic and most visionary modes, synthesizing vast amounts of data into gigantic interventions; when they actually succeed, they often result in projects of uncommon power and prescience (such as the Appalachian Trail). As such, this seminar seeks to trace the genealogy of regional work as it has developed over the course of the century: from Lewis Mumford, Benton MacKaye, and Clarence Stein's Regional Planning Association of America to CIAM, from the experiments of Buckminster Fuller to the determinism of Ian McHarg, the scientific work of Richard Forman to the artistic interpretations of Anuradha Mathur and Dilip da Cunha. Through a historical transect ranging from Patrick Geddes to today's ecological urbanism, we will gain an understanding of select currents in the last century of design, from representation to ideology. In addition to weekly readings, students will select a regional project to re-envision or revisit it through design, as well as interrogating its intellectual underpinnings in writing. Fulfills History/Theory elective requirement.  

3 units  
01  M 9:00a-12:00p  
Scherma
**HISTORIC PRESERVATION/URBAN DESIGN**  
This course will explore the history and current practice of historic preservation in the United States and will relate it to broader principles of contextual architectural design and urban design. Emphasis will be placed on practical knowledge needed to participate professionally in historic preservation, including how to evaluate the associative and architectural significance of a property or district, how to provide legal protection for historic resources, how to appropriately restore, rehabilitate, and add to historic buildings, and how to incorporate historic preservation into the broader framework of urban planning and design. The course will focus on readings and student discussions but will draw extensively on real preservation situations in the region. A field trip will be organized if possible. Fulfills History/Theory elective requirement.  

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HISTORIC PRESERVATION/URBAN DESIGN</td>
<td>A46 664 ARCH</td>
<td>3</td>
</tr>
</tbody>
</table>

**INDEPENDENT STUDY**
Prereq: Sponsorship by an instructor and permission of the Dean of the School of Architecture. Each independent study must be approved by the end of the first week of classes. Credit variable, max 9 units

** See start of this departmental entry or contact department directly for details on faculty/sections and enrollment.

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDEPENDENT STUDY</td>
<td>A46 682 ARCH</td>
<td>9</td>
</tr>
</tbody>
</table>

**M.U.D. STATUS**
All students who are in the Master of Urban Design program should register for this course as audit. This will allow the school to keep track of students in this program.

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.U.D. STATUS</td>
<td>A46 710 ARCH</td>
<td>0</td>
</tr>
</tbody>
</table>

**METROPOLITAN DESIGN ELEMENTS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>METROPOLITAN DESIGN ELEMENTS</td>
<td>A46 713 ARCH</td>
<td>6</td>
</tr>
</tbody>
</table>

**PLANTING DESIGN I**
The Planting Design module builds upon the Plants and Environment class, applying and expanding the vocabulary of plant material to understand the definition and construction of landscapes. Students will gain an awareness of planting typologies and strategies through function (micro-climate control, water consumption, hardiness) and perception (shade, color, density, texture). A series of design exercises will inform strategic plants specification in order to suit, define, or reinvent landscape typologies—from parks and gardens to green roofs and restorative landscapes. Conceptual thinking and an understanding of management and sustainability are emphasized.

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLANTING DESIGN I</td>
<td>A48 452 LAND</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**LANDSCAPE MATERIALS**
This module serves to fully establish and exercise the materials palette of the landscape architecture student, creating a basis for informed and creative design at the site scale. Students will conduct explorations and research on materials, new and traditional; build their understanding of construction techniques and suitable applications; and exercise their faculties through conceptual design and details.

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANDSCAPE MATERIALS</td>
<td>A48 462 LAND</td>
<td>1.5</td>
</tr>
</tbody>
</table>
Throughout the world of spatial design, there has been a strong resurgence of interest in landscape methods as a comprehensive and innovative approach towards defining and engineering sites. Techniques of working the land engage dynamic processes, molding conditions and creating forms in order to control erosion, conserve water, and minimize human impacts. As such, landscape methods have created new standards of performance for sites of all sizes and circumstances. Accordingly, this course, intended for students across disciplines, presents an integrated approach to site planning through the intensive study of applied landscape systems. The material covers the spatial and functional systems of designed landscapes and their associated computational and technical aspects: micro- and macrograding, path alignment, and drainage calculation. Through studying these techniques, students will learn to implement and quantify water management, micorclimate manipulation, and low-impact circulation, parking, and servicing. The principles and methods are presented through short lectures and supported by case studies, class workshops and design exercises, tying theory to practical applications. 3 units

CASE, TRACE, DISPLACE: DIALOGUE BETWEEN RIVER AND CITY A48 480 LAND
This seminar will explore methods of sensing, recording, interpreting, translating, and visualizing environment data with particular emphasis on experience at the human scale. The focus topic will be on the relationship between river and city. In the first phase of the seminar, students will begin by researching precedent projects, technologies, and techniques for sensing and gathering data from the environment. These may include, but are not limited to, GIS techniques, DIY devices, and processing methods. A combination of analog/digital and traditional/innovative explorations is encouraged. In the second phase, students will develop a strategy to record, interpret and translate environment data for the purpose of analyzing relationships between the landscape and human experience. In the final stage, students will test their ideas and develop a method to express these relationships through prototypes that can be deployed into the landscape. The course will consist of lecture/discussion sessions, field research, and working sessions. Students will be expected to conduct and document research based on the information presented in class, to create theoretical proposals, develop simulations and visual documentation, and craft prototypes inspired by a site at the St. Louis riverfront. Same as A46 ARCH 480A. 3 units

LANDSCAPE ARCHITECTURE DESIGN STUDIO II: PLANNING & PRESERVATION A48 502L LAND
The final studio in the core sequence operates within an expanded spatial and conceptual framework. Students will engage the complexities of the large-scale site to explore, critique, and re-engineer ecological, architectural, socio-economic, and ideological systems. A studio site characterized by environmentally sensitive conditions, culturally significant features, and encroaching urbanization will lead to choices between the management of existing resources and development. To achieve this, students will progress from the analysis and mapping of the site to the generation of innovative program strategies. Finally they will develop those strategies into schematic design proposals. Throughout, landscape is treated as figure instead of ground, serving as a agent to structure and mediate between natural and human communities. 6 units

PRINCIPLES OF ECOLOGY A48 551 LAND
The course serves as an introduction to the principles and methods of ecology, particularly as applied to the character, form, and function of landscapes. Studying the theory and findings of landscape ecology will allow students to gain familiarity with ecological research and begin to integrate that knowledge into design practice. Topics include the interaction of natural and built systems (forest, wetland, fields, roads, corridors, patches), the morphology of habitats, the movement of organisms and nutrients across ecosystems at different scales, and the dynamism of landscapes in time. 3 units
STUDIO ASSIGNMENT & SELECTION

Undergraduate Studio Assignments and Selection
All 411 and 312/412 (upon approval) undergraduate level students are required to attend a meeting on Wednesday, January 19th at 1:30pm in Kemp Auditorium. Studio professors will present their programs for Spring 2011 at this time and be available for questions concerning their studios.

ALL 411 and 312/412 undergraduate students ARE REQUIRED TO ATTEND THIS MEETING. Studio Preference Sheets will be provided at the meeting and students must rank and submit their choice of studios following the presentations by 4:00 p.m. on Wednesday, January 19th, 2011.

No preference sheets will be considered before this meeting.

Graduate Studio Assignments and Selection
All 500/600/MUD graduate level students are required to attend a meeting on Wednesday, January 19th at 1:30pm in Steinberg Auditorium. All 500/600/MUD studio professors will present their programs at this time and be available for questions concerning their studios.

ALL 500/600/MUD graduate students ARE REQUIRED TO ATTEND THIS MEETING. Studio Preference Sheets will be provided at the meeting and students must rank and submit their choice of studios following the presentations by 4:00 p.m. on Wednesday, January 19th, 2011.

No preference sheets will be considered before this meeting.

* * * * * * * * * *

Studio assignments and locations for students at the 318, please watch your email for more information.

Degree Project desk selection will take place on Wednesday, January 19th at Noon.

Desk selections for vertical studios will take place Thursday, January 20th at 9pm. Individuals will select their desk based on an order determined via random lottery proctored by a GAC representative.
MESSAGE FROM THE GAC

A Greetings from the GAC,

Fall semester brought forth exciting developments within Givens. The addition of the GAC information boards on the second floor of Givens seeks to better inform students of happening within and around Givens and St. Louis. The GAC also took a lead role in realizing a more fairly proctored desk selection and celebrates the addition of an influential position of Health & Wellness to the GAC council, whose main purpose is to promote a healthy and balanced life within the School of Architecture. Last year saw the first Degree Project Exhibition. This year with the assistance of the exhibitions committee, we look forward to continuing this new tradition with an even bigger and better exhibition.

This semester our focus will continue to be on fostering a strong community within Givens. The GAC, with active input from the student body and faculty, continues to revise and update the Studio Culture Policy for the School of Architecture in a joint effort to better define our architectural practice and beliefs here at Givens. We agree with Bruce Lindsey as he wrote in last semesters Dean’s Letter, the document is a shared commitment to promote an enabling learning environment for everyone here at Givens.

I am excited to report substantial student participation in the GAC’s most recent survey to the student body. Our results show over 90% of students wanting to support and celebrate the accomplishments of Degree Project students through their attendance of a Degree Project Exhibition. A majority of responding students further showed support of a pens-down system at the end of the semester as a representative aspect of our Studio Culture. The GAC looks forward to further developing these ideas using the student input received so far.

I hope that this survey will encourage further student feedback in the coming semester. The GAC is a voice for the Graduate Student Body in the School of Architecture, and your continued participation in student and academic life is indispensable.

Those interested in a more direct role in student life at Given’s should consider running for next year’s GAC council. Elections will be held in mid-March.

Your GAC President,

Elizabeth Wehr
DIGITAL FABRICATION INFORMATION

Digital Fabrication Lab (FabLab)

Lasercutters
The School has three Lasercutter Machines, two of which are posted on the Schedule and available for sign-up. To sign-up:

- go to http://officenet.samfox.wustl.edu/sites/digfab/SitePages/Home.aspx
- sign-in using your SamFox email username and password
- fall 2010 entering students, sign-in with your WUSTL Key
- sign-up with your full name and cell phone number
- sign-up is limited to 1 hour per student per day max.

The third Lasercutter remains off the schedule and is used as a fall-back incase any of the machines experience problems or if the schedule gets backed-up.

All students within the SamFox community are eligible to use these machines. Students will be charged $2.50 for every 15 minutes of lasercut time.

If a student fails to show up for three scheduled appointments, he/she will not be allowed to lasercut until a $15 penalty is paid via Papercut.

A walkthrough of how to set up your Lasercut files properly and basic information can be found in the Courses > FabLab Drop > Guides > Lasercutting101.

3D Printers and CNC Mill
The School has two 3D Printers, one with a water-soluble support material and the other with a break-away support material. It also has a CNC Mill for model-making. A walkthrough of how to set up your 3D Print / Mill files properly and basic information can be found in the Courses > FabLab Drop > Guides > 3DPrint101 and CNCMill101.

To sign up for 3D Printing and CNC Milling, or to run a test on your model, please contact Christian at christianC@samfox.wustl.edu.

Priority for the 3D Printer and CNC Mill is given to students in the Digital Fabrication Studios.

Digital Initiative Lab (DIL)
The School has a 5'x8' CNC Router, 1sq m. Thermaforming Oven, and a 4'x8' Frame Press. These machines are to be used by students in digital fabrication studios and courses. Permission for individual student use may be granted by contacting Ken Tracy, kentracy@samfox.wustl.edu.
CONTACTS: FACULTY

Andrew Cruse
Visiting Assistant Professor
Office: Givens 212
Email: cruse@samfox.wustl.edu
Voice: +1 314.935.6200

Gia Daskalakis
Associate Professor
Office: Givens Hall 209
Email: giad@samfox.wustl.edu
Voice: +1 314.935.6282

Kathryn Dean
Director, Graduate School
Office: Givens Hall 107
Email: kathryn@dean-wolf.com
Voice: +1 314.935.6210

Paul J. Donnelly
Rebecca & John Voyles Professor
Office: Givens Hall 111
Email: donnelly@samfox.wustl.edu
Voice: +1 314.935.6262

Iain Fraser
Professor/Director, Undergraduate Program
Office: Givens Hall 107
Email: fraser@samfox.wustl.edu
Voice: +1 314.935.6210

Catalina Freixas
Senior Lecturer
Office: Givens Hall 209
Email: freixas@samfoxwustl.edu
Voice: +1 314.935.6282

Liane Hancock
Lecturer / Undergraduate Program Administrator
Office: Givens Hall 212
Email: hancock@samfox.wustl.edu
Voice: +1 314.935.4202

Bob Hansman
Associate Professor
Office: Bixby Hall 116
Email: hansman@samfox.wustl.edu
Voice: +1 314.935.7221

Derek Hoeferlin
Senior Lecturer
Office: Givens Hall 212
Email: hoeferlin@samfox.wustl.edu
Voice: +1 314. 935.4202
CONTACTS: FACULTY

Patty Heyda
Urban Design Assistant Professor
Office: Givens Hall 210
Email: heyda@samfox.wustl.edu
Voice: +1 314.935.9299

Sung Ho Kim
Associate Professor
Office: Steinberg Hall 206
Email: sungho@samfox.wustl.edu
Voice: +1 314.935.9292

Phil Holden
Senior Lecturer
Email: holden@printmail.com

Dorotheé Imbert
Chair, Master of Landscape Architecture Program
Office: Givens 112
Email: imbert@samfox.wustl.edu
Voice: +1 314.935.6200

Christof Jantzen
I-CARES Professor
Office: Givens Hall 111
Voice: +1 314.935.6200

George Johannes
Senior Lecturer
Email: gjohannes@wustl.edu

Donald Koster
Senior Lecturer
Office: Bixby Hall 118
Email: koster@samfox.wustl.edu
Voice: +1 314/935.9297

Stephen Leet
Professor
Office: Givens Hall 211
Email: leet@samfox.wustl.edu
Voice: +1 314.935.6251

Bruce Lindsey
Dean/ E. Desmond Lee Professor
Office: Givens Hall 108
Email: blindsey@wustl.edu
Voice: +1 314.935.4636
CONTACTS: FACULTY

Gay Lorberbaum
Senior Lecturer
Office: Bixby Hall 122
Email: lorberbaum@samfox.wustl.edu
Voice: +1 314.935.9299

Jenny Lovell
Assistant Professor
Office: Givens Hall 11
Email: lovell@samfox.wustl.edu
Voice: +1 314.935.6200

Adrian Luchini
Raymond E. Maritz Professor
Office: Givens Hall 211
Email: luchini@samfox.wustl.edu
Voice: +1 314.935.6251

Seng Kuan
Architecture History Assistant Professor
Office: Givens Hall 112
Email: skuanatsamfox@gmail.com
Voice: +1 314.935.6213

Peter MacKeith
Associate Professor\ Associate Dean
Sam Fox School of Design and Visual Arts
Office: Givens Hall 105-B
Email: mackeith@samfox.wustl.edu
Voice: +1 314.935.9300

Igor Marjanovic
Assistant Professor/Undergraduate Core Coordinator
Office: Givens Hall 111
Email: marjanovic@samfox.wustl.edu
Voice: +1 314.935.6262

Robert McCarter
Ruth & Norman Moore Professor
Office: Givens Hall 109
Email: mccarter@samfox.wustl.edu
Voice: +1 314.935.6226

Eric Mumford
Professor
Email: mumford@samfox.wustl.edu
### CONTACTS: FACULTY

**Phillip Shinn**
Senior Lecturer  
Office: Givens Hall 110  
Email: phillip.shinn@jacobs.com  
Voice: +1 314.935.6275

**Kenneth Tracy**
Visiting Assistant Professor  
Office: Bixby 118  
Email: kentracy@samfox.wustl.edu  
Voice: +1 314.935.6200

**Bill Wischmeyer**
Senior Lecturer/Director, Architectural Technology Program  
Office: Givens Hall 110  
Email: wischmeyer@samfox.wustl.edu  
Voice: +1 314.935.6275

**Heather Woofter**
Assistant Professor / Graduate Chair  
Email: woofter@wustl.edu

**Christine Yogiaman**
Digital Assistant Professor  
Office: Given 209  
Email: yogiaman@samfox.wustl.edu  
Voice: +1 314.935.6200
CONTACTS: STAFF

Heather C. Atkinson
Administrative Assistant
Office: Givens Hall 105
Email: atkinson@samfox.wustl.edu
Voice: +1 314.935.7215

Ellen Bailey
Administrative Assistant
Office: Givens Hall 105
Email: ebailey@samfox.wustl.edu
Voice: +1 314.935.6200

Bruce Carvell
Registrar
Office: Bixby Hall 1
Email: carvell@samfox.wustl.edu
Voice: +1 314.935.6205

Daphne Ellis
Assistant to the Dean
Office: Givens Hall 108
Email: ellis@samfox.wustl.edu
Voice: +1 314.935.4636

Erika Fitzgibbon
Career Development Director
Office: Givens Hall 120
Email: efitzgibbon@samfox.wustl.edu
Voice: +1 314.935.4187

Brian Higginbotham
Financial Aid Awards Associate
Office: Bixby Hall 1
Email: higginbotham@samfox.wustl.edu
Voice: +1 314.935.3642

Kathleen O’Donnell
Administrative Coordinator
Office: Givens Hall 105
Email: odonnell@samfox.wustl.edu
Voice: +1 314.935.6227

Leland Orvis
Facilities Director
Office: Givens Hall 3
Email: orvis@samfox.wustl.edu
Voice: +1 314.935.6230

Dean’s Letter
Architecture, Washington University in St. Louis
# LECTURE SERIES SCHEDULE—SPRING 2011

<table>
<thead>
<tr>
<th>January</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24 Monday</td>
<td>SFS Lecture, Ed Ford, arch.</td>
<td></td>
</tr>
<tr>
<td>31 Monday</td>
<td>SFS Lecture, Kathryn Dean arch.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>February</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Wednesday</td>
<td>SFS Lecture, Richard Meyer, art</td>
<td></td>
</tr>
<tr>
<td>7 Monday</td>
<td>SFS Lecture, Pascal Quintard-Hofstein, arch.</td>
<td></td>
</tr>
<tr>
<td>16 Wednesday</td>
<td>SFS Lecture Christophe Cherix, kemper</td>
<td></td>
</tr>
<tr>
<td>21 Monday</td>
<td>SFS Lecture, Rick Joy, arch.</td>
<td></td>
</tr>
<tr>
<td>23 Wednesday</td>
<td>SFS Lecture Victoria Vesna, art</td>
<td></td>
</tr>
<tr>
<td>28 Monday</td>
<td>SFS Lecture, Rafael Moneo, arch.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>March</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Wednesday</td>
<td>SFS Lecture, William Kentridge, art</td>
<td></td>
</tr>
<tr>
<td>7 Monday</td>
<td>SFS Lecture, Jens Hoffman, art</td>
<td></td>
</tr>
<tr>
<td>21 Monday</td>
<td>SFS Lecture, Andrea Cochran, arch.</td>
<td></td>
</tr>
<tr>
<td>23 Wednesday</td>
<td>SFS Lecture Dan Nadel, art</td>
<td></td>
</tr>
<tr>
<td>28 Monday</td>
<td>SFS Lecture, Michael Maltzen, arch.</td>
<td></td>
</tr>
<tr>
<td>29 Tuesday</td>
<td>SFS Lecture, Fuensanta Nieto, Enrique Sobejano, arch.</td>
<td></td>
</tr>
<tr>
<td>30 Wednesday</td>
<td>SFS Lecture, Cornelia Butler, art</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>April</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Friday</td>
<td>Grad. Open House Lecture, Juhani Pallasmaa</td>
<td></td>
</tr>
<tr>
<td>4 Monday</td>
<td>SFS Lecture, Alan Weber, arch. business</td>
<td></td>
</tr>
<tr>
<td>6 Wednesday</td>
<td>SFS Lecture, Francis Kere, arch.</td>
<td></td>
</tr>
<tr>
<td>11 Monday</td>
<td>SFS Lecture, Mike Davis, arch.</td>
<td></td>
</tr>
<tr>
<td>12 Tuesday</td>
<td>SFS Lecture, Ian Monroe, art</td>
<td></td>
</tr>
<tr>
<td>20 Wednesday</td>
<td>SFS Lecture, Andrew Metter, arch.</td>
<td></td>
</tr>
<tr>
<td>25 Monday</td>
<td>SFS Lecture, Sarah Dunn, Martin Felsen, arch.</td>
<td></td>
</tr>
</tbody>
</table>

**All lectures are held in Steinberg Auditorium, and are preceded by a reception in the Steinberg Lobby at 6:00 PM**
# ACADEMIC CALENDAR—SPRING 2011

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>17 Monday</td>
<td>Martin Luther King Day (holiday)</td>
</tr>
<tr>
<td></td>
<td>18 Tuesday</td>
<td>First day of class</td>
</tr>
<tr>
<td></td>
<td>19 Wednesday</td>
<td>Studio presentations, 1:30, Steinberg</td>
</tr>
<tr>
<td></td>
<td>25 Tuesday</td>
<td>Curriculum Cmt. 12:00</td>
</tr>
<tr>
<td></td>
<td>28 Friday</td>
<td>All School meeting, 4:00 Steinberg</td>
</tr>
<tr>
<td>February</td>
<td>1 Tuesday</td>
<td>Architecture Faculty Meeting, 11:30 (lunch)</td>
</tr>
<tr>
<td></td>
<td>2 Wednesday</td>
<td>Arch Cabinet meeting, 12:30</td>
</tr>
<tr>
<td></td>
<td>16 Wednesday</td>
<td>Arch Cabinet meeting, 12:30</td>
</tr>
<tr>
<td></td>
<td>17 Thursday</td>
<td>Tenured, Tenure Track Faculty meeting, 12:00-1:00</td>
</tr>
<tr>
<td></td>
<td>22 Tuesday</td>
<td>Curriculum Cmt. 12:00</td>
</tr>
<tr>
<td></td>
<td>23 Wednesday</td>
<td>Architecture Career Fair</td>
</tr>
<tr>
<td>March</td>
<td>1 Tuesday</td>
<td>Architecture faculty meeting, 11:30. Brown bag</td>
</tr>
<tr>
<td></td>
<td>2 Wednesday</td>
<td>Arch Cabinet meeting, 12:30</td>
</tr>
<tr>
<td></td>
<td>3-6</td>
<td>ACSA National Conference, Montréal</td>
</tr>
<tr>
<td></td>
<td>8 Tuesday</td>
<td>Hold Curriculum Cmt. 12:00</td>
</tr>
<tr>
<td></td>
<td>13-19</td>
<td>Spring Break, no classes</td>
</tr>
<tr>
<td></td>
<td>22 Tuesday</td>
<td>Curriculum Cmt. 12:00</td>
</tr>
<tr>
<td></td>
<td>24 Thursday</td>
<td>Tenured, Tenure Track Faculty meeting, 12:00-1:00</td>
</tr>
<tr>
<td>April</td>
<td>1-2</td>
<td>Graduate Open House</td>
</tr>
<tr>
<td></td>
<td>1 Friday</td>
<td>Graduate Open House Lecture, Juhani Pallasmaa</td>
</tr>
<tr>
<td></td>
<td>5 Tuesday</td>
<td>Architecture faculty meeting, 11:30, brown Bag</td>
</tr>
<tr>
<td></td>
<td>6 Wednesday</td>
<td>Arch Cabinet meeting, 12:30</td>
</tr>
<tr>
<td></td>
<td>8 Friday</td>
<td>Advising begins</td>
</tr>
<tr>
<td></td>
<td>12 Tuesday</td>
<td>Curriculum Cmt. 12:00</td>
</tr>
<tr>
<td></td>
<td>20 Wednesday</td>
<td>Arch Cabinet meeting, 12:30</td>
</tr>
<tr>
<td></td>
<td>22 Friday</td>
<td>Registration begins</td>
</tr>
<tr>
<td></td>
<td>22 Friday</td>
<td>Awards Day, 4:00, Steinberg</td>
</tr>
<tr>
<td></td>
<td>26 Tuesday</td>
<td>Curriculum Cmt. 12:00</td>
</tr>
<tr>
<td></td>
<td>28 Thursday</td>
<td>Tenured, Tenure Track Faculty meeting, 12:00-1:00</td>
</tr>
<tr>
<td></td>
<td>28 Thursday</td>
<td>Awards for Distinction</td>
</tr>
<tr>
<td></td>
<td>29 Friday</td>
<td>National Council Meeting</td>
</tr>
<tr>
<td></td>
<td>29 Friday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>May</td>
<td>3 Tuesday</td>
<td>Final Reviews begin</td>
</tr>
<tr>
<td></td>
<td>2-4</td>
<td>Reading Days</td>
</tr>
<tr>
<td></td>
<td>5-11</td>
<td>Final Exams</td>
</tr>
<tr>
<td></td>
<td>16 Monday</td>
<td>Arch. faculty meeting, 10:00-2:00</td>
</tr>
<tr>
<td></td>
<td>20 Friday</td>
<td>Commencement</td>
</tr>
</tbody>
</table>