

**General Education Course Information Sheet**

*Please submit this sheet for each proposed course*

*Department & Course Number*   Architecture & Urban Design 98T  
*Course Title*   The Drawing At Work: Theories of design and drawing

1 Check the recommended GE foundation area(s) and subgroups(s) for this course

**Foundations of the Arts and Humanities**

- Literary and Cultural Analysis \_\_\_\_\_
- Philosophic and Linguistic Analysis \_\_\_\_\_
- Visual and Performance Arts Analysis and Practice                                 x

**Foundations of Society and Culture**

- Historical Analysis \_\_\_\_\_
- Social Analysis \_\_\_\_\_

**Foundations of Scientific Inquiry**

- Physical Science \_\_\_\_\_  
*With Laboratory or Demonstration Component must be 5 units (or more)*
- Life Science \_\_\_\_\_  
*With Laboratory or Demonstration Component must be 5 units (or more)*

2. Briefly describe the rationale for assignment to foundation area(s) and subgroup(s) chosen.

The class is situated under Foundations of Arts and Humanities, as it focuses on theories of the architectural drawing in art and architectural history.

3. List faculty member(s) who will serve as instructor (give academic rank):

Professor Sylvia Lavin, faculty mentor; Sarah Hearne, teaching fellow

4. Indicate when do you anticipate teaching this course:

2013-2014	Winter	_____	Spring	_____
	Enrollment		Enrollment	<u>x</u>

GE Course Units         5

5. Please present concise arguments for the GE principles applicable to this course.

- ❑ General Knowledge Spanning from the Renaissance until the contemporary moment this class will use drawing as a way to ‘read’ the history of architecture broadly.
- ❑ Integrative Learning The class will involve presentations, discussions, formal analysis, and close reading in order to facilitate an integrated approach to the study of architectural history.
- ❑ Ethical Implications This class will explore the wider implications of drawing types and their transmission to various audiences in order to understand the disciplinary aspects of architecture and art.
- ❑ Cultural Diversity The class will cover material from a wide variety of geographical and cultural sources.
- ❑ Critical Thinking By presenting the students with comparative texts and drawings that reflect on a single theme or historical moment the class will encourage critical evaluations and thinking from various perspectives.
- ❑ Rhetorical Effectiveness There will be presentations of the final papers toward the end of the quarter. These will feature feedback that incorporates rhetorical effectiveness.
- ❑ Problem-solving The in-class seminar discussions will walk the students through how to read both drawings and texts closely and what questions to ask of this information in order to engage specific disciplinary problems.
- ❑ Library & Information Literacy The students will utilize the library resources in their final paper research. The class will guide them on how to read various notations, conventions and symbolic orders of the architectural drawing.

**(A) STUDENT CONTACT PER WEEK (if not applicable write N/A)**

- 1. Lecture: \_\_\_\_\_ (hours)
- 2. Discussion Section: 3 (hours)
- 3. labs NA (hours)
- 4. Experiential (service learning, internships, other): NA (hours)
- 5. Field Trips: NA (hours)

**(A) TOTAL Student Contact Per Week** 3 (HOURS)

**(B) OUT-OF-CLASS HOURS PER WEEK (if not applicable write N/A)**

- 1. General Review & Preparation: 2 (hours)
- 2. Reading 6 (hours)
- 3. Group Projects: NA (hours)
- 4. Preparation for Quizzes & Exams: NA (hours)
- 5. Information Literacy Exercises: NA (hours)
- 6. Written Assignments: 2 (hours)
- 7. Research Activity: 2 (hours)

**(B) TOTAL Out-of-class time per week** 12 (HOURS)

**GRAND TOTAL (A) + (B) must equal at least 15 hours/week** 15 (HOURS)

Architecture and Urban Design 98T  
Instructor: Sarah Hearne

### **The Drawing At Work: Theories of design and drawing in Architecture**

Today in a world of architecture commonly described as late digital, the definition of what a drawing actually *is* has expanded to accommodate the disappearance of the physical page. From the virtual spaces of modelling software to the paperless studio, the operations of architecture are largely run according to the capabilities of computation. The term *digital*, the popular usage of which relates to the computer, exists in opposition to its paired term the *analogue*. And while both terms arise out of early computer terminology of the post war period, it is important to note that their quotidian usage is somewhat based on a misunderstanding. Because while the term analogue has come to stand in for things that are physically made, it still relates to that which is computed. Likewise we find in fact that the term digital has its roots in relation to the finger (digit), and further there are examples of architectural drawings that can be described as digital from as early as the Renaissance.<sup>1</sup>

These problems are intrinsically linked to the history of the drawing as it shifted from the hand to the instrument and finally into the virtual. And yet histories of architecture commonly involve themselves in the development of movements and changing styles, rather than tracking the architect's procedures and protocols of operation. This seminar is not about style, nor movements. This seminar will track an alternate and minor history of the media of architectural discipline. We will examine the role of the drawing in the construction of the idea of design itself since the renaissance. We will examine how drawings and other media shape our understanding of the history of architecture, and will also examine key drawing techniques that have shaped the practice of architecture and that are still taught in the design studio today.

#### **Course Format:**

##### **SEMINAR STRUCTURE:**

Each week the in-class discussion will focus around 2-3 specific case study drawings. These drawings will be described and analyzed in a workshop environment through the lens of the weekly set readings. The weekly reading sets are designed to feature at least one text that promotes a 'close reading,' allowing the opportunity to lead a reading oriented discussion. These in class close readings of the text, much like the analysis of the drawings, will equip the students with often overlooked skills in ways to approach and understand texts and drawings in their own future studies.

##### **MATERIAL ORGANISATION:**

The introductory session in week one will focus on the problems of the contemporary and establishes the exploratory themes for the rest of the class. From that point on the classes will follow a chronological structure, beginning with the Renaissance. Each week has a thematically focus that keys students into the priorities of that historical moment, for example *disegno* and the idea of architecture during the Renaissance.

#### **Course Requirements:**

The course is structured around the production of a substantial piece of analytical writing, as a final essay paper. This essay form (10-15 pages) will demonstrate comprehension of the seminar topic and focus on a related topic of the students choosing. The essay must utilize the analytical techniques introduced in the class in order to elaborate on a particular drawing (or set of drawings) to form the main argument.

Assignments:	Participation (discussion, questions, responses) 10%
	Submission 1 (Wk 03): Paper Abstract and outline 10%
	Midterm (Wk 05): Paper Draft 20%
	Submission 2 (Wk 08): Presentation paper and feedback 40%
	Final Paper (Wk 10) 20%

<sup>1</sup> Carpo, Mario. *The Alphabet and the Algorithm*. Writing Architecture Series. Ed. Davidson, Cynthia. Cambridge, MA: MIT Press, 2011. Print.

## **Week 01\_ INTRODUCTION: CONTEMPORARY CONTEXT, FACING THE DIGITAL AND THE ANALOGUE**

The introduction seminar will establish the contemporary status of architecture, as deeply embedded in digital and virtual practices, but despite this persistently engaged with myths of hand-made or analogue procedures. These myths in architecture are often disguised through discourse on the drawing. This seminar is designed to broadly establish the terms for the coming weeks and likewise, the seminar instructor will initiate the case-study analysis in order to model the various ways to formally read and understand the conventions of drawings.

### Possible Discussion Questions:

1. Where do the terms digital and analogue come from, and how do they relate to contemporary practices of drawing and architecture?
2. What is the current status of the drawing?
3. Why do contemporary architects like Frank Gehry and Junya Ishigami use digital techniques of drawing in order to produce works that capture the expressivity of the 'hand'?

### Weekly Readings:

Manovich, Lev. "The Myth of the Digital." *The Language of New Media*. Leonardo. Cambridge, Mass.: MIT Press, 2001. Print.

Carpo, Mario. *The Alphabet and the Algorithm*. Writing Architecture Series. Ed. Davidson, Cynthia. Cambridge, MA: MIT Press, 2011. Print.

Bredenkamp, Horst. "Frank Gehry and the Art of Drawing." Gehry, Frank O., et al. *Gehry Draws*. Cambridge, Mass.: MIT Press in association with Violette Editions, 2004. Print.

## **WEEK 02\_ IDEAS**

This week focuses on the Renaissance conception of *Disegno*, a term which translates into both drawing and design—this split in meaning foregrounds the fundamental relationship between 'ideas' and the act of drawing. The seminar will explore the relationship between concept and materialization, as formed in art history.

### Discussion Topics:

1. What is disegno? How did it tie the arts together during the renaissance?
2. What are the contemporary implications for understanding the notion of the idea?
3. How do we understand the role of imitation in the history of architecture? And what role has drawing played in this story?

### Weekly Readings:

Vasari, Giorgio, Louisa S. Maclellan, and Girard Baldwin Brown. *Vasari on Technique; Being the Introduction to the Three Arts of Design, Architecture, Sculpture and Painting, Prefixed to the Lives of the Most Excellent Painters, Sculptors and Architects*. London: J. M. Dent, 1907.

Panofsky, Erwin. *Idea; a Concept in Art Theory*. [1st ed. Columbia,; University of South Carolina Press, 1968. Print.

Barzman, Karen-edis. "Disegno as a Disciplinary Practice: The Academy School." In *The Florentine Academy and the Early Modern State : The Discipline of Disegno*. xii, 377 p. Cambridge ; New York: Cambridge University Press, 2000

Carpo, Mario. "How Do You Imitate a Building That You Have Never Seen? Printed Images, Ancient Models, and Handmade Drawings in Renaissance Architectural Theory." *Zeitschrift für Kunstgeschichte* 64.2 (2001): 223-33. Print.

## **WEEK 03\_ PERSPECTIVE AND THE RENDER**

This week will look at the invention of perspective, a method of representation that embeds a viewer into the

drawing. We will explore how attitudes toward the perspective and illustration have shifted and how this is seen through the construction of the drawing. This discussion will establish the current discourse around the rendering in the design studio and the field at large.

Discussion Topics:

1. What was the novelty of perspective (refer to Brunelleschi's exercise)?
2. What were the anxieties surrounding the distortion and seduction of perspective renderings? Do these anxieties persist today?
3. What is the difference between the painterly technique and the line?

Drawing Casestudies:

Jean Courtonne, *Practical Perspective (Traite de la perspective pratique)* 1725

Girard Desargues, *One Example of the Universal Method (Exemple d'une des manieres universalles)* 1636

Andrea Pozzo, *Perspectival*, 1670

Weekly Readings:

Ackerman, James S. "Alberti's Eye." *Distance Points : Essays in Theory and Renaissance Art and Architecture*. Cambridge, Mass.: MIT Press, 1991. Print.

Lotz, Wolfgang. "The Rendering of the Interior." *Studies in Italian Renaissance Architecture*. Cambridge, Mass.: MIT Press, 1977. xxiv, 220 p. Print.

Evans, Robin. "The Developed Surface: An Enquiry into the Brief Life of an Eighteenth Century Drawing Technique." *Translations from Drawing to Building and Other Essays*. Cambridge, Massachusetts: MIT Press, 1989. Print.

## **WEEK 04\_ ANTI PERSPECTIVE**

This week looks at techniques of drawing that were held to a system of scale and measurability, from two dimensional (orthogonal) drawings most commonly used in describing building for construction purposes, to the more radical practices of axonometry. While the orthogonal and axonometric share a regard for measure, they in fact operate according to a different mode of reading. The orthogonal drawings exist in sets and therefore require a relative reading of layouts, and the axonometric displays 'everything all at once'. This class will explore the ideological differences between these two forms of representation.

Discussion Topics:

1. What is the ideological difference between the universal and subjective view point?
2. What does virtual mean? How does this relate to the earlier discussion of *disegno*?
3. Why do two types of drawings that prioritizes the stability of true measurement produce different readings?

Weekly Readings:

Scolari, Massimo. *Oblique Drawing : A History of Anti-Perspective*. Writing Architecture Series.

Yve-Alain Bois, "Metamorphosis of Axonometry," *Daidalos*, no. 1 (1981), pp. 41–58

Petherbridge, Deanna. "Bodies in Pieces: anatomical and drawing manuals for artists." *The Primacy of Drawing : Histories and Theories of Practice*. New Haven: Yale University Press, 2010. Print.

## **WEEK 05\_ DISCIPLINED DRAWINGS**

This week focuses on the disciplining of the drawing in the early French Academies during the enlightenment. The Beaux Arts and the Polytechnic systems educated architects and engineers according to a pedagogical model that is still influential today. A comparison of these institutions reveals divergent attitudes to the drawing—the former producing works of genius and talent, and the latter producing systematic strategies for efficient and economical design.

Discussion Topics:

1. What is the relationship between the institution and the notion of discipline?
2. What role did drawing play in the formation of architectural and engineering as disciplines?
3. What was the economic argument in this moment attached to the drawing?

Weekly Readings:

Durand, Jean-Nicolas-Louis, and Jean-Nicolas-Louis Durand. *Précis of the Lectures on Architecture ; with, Graphic Portion of the Lectures on Architecture*. Texts & Documents. Los Angeles, California: Getty Research Institute, 2000.

Moore, Richard A. "Academic "Dessin" Theory in France after the Reorganization of 1863." *Journal of the Society of Architectural Historians* 36, no. 3 (1977): 145-74.

Evans, Robin. "Forms Lost and Found Again." *The Projective Cast : Architecture and Its Three Geometries*. Cambridge, Mass.: MIT Press, 1995. Print.

Picon, Antoine. "From "Poetry of Art" to Method". *Précis of the Lectures on Architecture ; with, Graphic Portion of the Lectures on Architecture*. Texts & Documents. Los Angeles, California: Getty Research Institute, 2000.

Middleton, Robin. "Jacques François Blondel and the "Cours D'architecture"." *Journal of the Society of Architectural Historians* 18, no. 4 (1959): 140-48.

**Week 7\_ Mechanical Drawings and Mechanized Process**

With the rise of industry and mechanization in the late 18<sup>th</sup> century, architectural production also began to increasingly rely on mechanized techniques. Mechanical drawing, the manual discipline of drawings produced by drafting instruments, standardized the language of the drawing and neutralized the expressive marks of the 'hand'. These highly rationalized and seemingly objective drawings played an increasingly role in the production also of industrial and object design. And in full circle return, by the early 20<sup>th</sup> century Avant-garde artists, who are interested in the collapse of everyday life and art, began to explore the mechanical and patent drawing as methods to produce 'constructive' arts that challenged notions of artistic authorship. This week will explore the pressures of the first machine age on the architectural drawing and art practice.

Discussion Topics:

1. What is aura and how is it related to the hand?
2. How did the logic of rationality begin to reorganize architecture
3. How was this increasing turn toward the rational infiltrate techniques of drawing?

Weekly Readings:

Barthes, Roland. "The Hand's Footsteps." *The Responsibility of Forms : Critical Essays on Music, Art, and Representation*. 1st ed. New York: Hill and Wang, 1985. Print.

Benjamin, Walter, and Hannah Arendt. "The Work of Art in the Age of Its Mechanical Reproducibility." *Illuminations*. New York: Schocken Books, 2007. 278 p. Print.

Giedion, Siegfried. "Means of Mechanization." *Mechanisation Takes Command*. New York: Oxford University Press, 1948. Print.

Blomfield, Reginald Theodore. *Architectural Drawing and Draughtsmen*. London, New York: Cassell & company, limited, 1912. Print.

Krauss, Rosalind E. "The Originality of the Avant Garde" in *The Originality of the Avant-Garde and Other Modernist Myths*. 1st MIT Press pbk. ed. Cambridge, Mass.: MIT Press, 1986. Print.

Nesbit, Molly. "Ready-Made Originals: The Duchamp Model." *October* 37. The MIT Press (1986): 53-64. Print

**WEEK 08\_ DRAWING AS SPECIFIC MEDIUM?**

By the mid 20<sup>th</sup> Century in the arts there was a concerted effort to distinguish the particularism or irreducibilities of various mediums of art. Architecture never comfortably participated in the discussions on medium specificity. However one key way that authors have discussed the medium of architecture, was to precisely reduce it to its relationship to the drawing. This week focuses on why the question of medium is such a challenge to architecture.

Discussion Topics:

- 1.Can drawing be considered a medium?
- 2.What did architectural drawings techniques offer to Avant-Garde artists in the post war period?

Weekly Readings:

Evans, Robin. "Seeing Through Paper." Evans, Robin. *The Projective Cast : Architecture and Its Three Geometries*. Cambridge, Mass.: MIT Press, 1995. Print.

Fer, Briony, "The Language of Construction." Fer, Briony, David Batchelor, and Paul Wood. *Realism, Rationalism, Surrealism : Art between the Wars*. Modern Art--Practices and Debates. New Haven: Yale University Press, in association with the Open University, 1993. Print.

Eisenstein, Sergei M., Yve-Alain Bois, and Michael Glenny. "Montage and Architecture." *Assemblage*.10 (1989): 111-31. Print.

Naginski, Erika. "Drawing at the Crossroads." *Representations*.72 (2000): 64-81. Print.

Clement Greenberg, "Modernist Painting," 1965, in Gregory Battock, *The New Art* (EP Dutton, 1966)

**WEEK 09\_ In class Presentations and Feedback**

**WEEK 10\_ FROM VISIONARY TO CONCEPTUAL**

The 1970s saw a great flowering of architectural drawing and 'paper architecture.' While a minor history of architecture tells the story of visionary drawings that proposed utopian visions or incisive societal criticisms through the medium of image making, by the 1970s this practice reached fever pitch. With many architects seeking out the site of paper in order to experiment with drawing as a language in line with the semiotic influx into the discourse of architecture. It is important to note, that in this same moment, the drawing itself became increasingly popular topic of historical study, a study which was previously dominated by studies of buildings themselves.

Discussion Topics:

- 1.Why was making-process foregrounded in art and architectural projects in the post war period?
- 2.How does the conceptual movement in architecture relate to the historical problem of *disegno*?
- 3.How might one consider the changes in techniques of drawings from the visionary to the conceptual?

Weekly Readings:

Alloway, Lawrence. "Sol Lewitt: Modules, Walls, Books." *Artforum* XIII, no. No.8 (April 1975): 38-44.

Eisenman, Peter. "Cardboard Architecture: House I," in *Five Architects*, New York: Wittenborn, 1972.

Lee, Pamela. "Some Kinds of Duration: The Temporality of Drawing as Process Art." *After Image: Drawing through Process*. Ed. Butler, Cornelia H. Musuem of Contemporary Art, Los Angeles: MOCA, LA, 1999. 25-80. Print.

Naginski, Erika. "Drawing at the Crossroads." *Representations*.72 (2000): 64-81. Print.

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## New Course Proposal

### Architecture & Urban Design 98T Between Disciplinary Lines

**Course Number** Architecture & Urban Design 98T

**Title** Between Disciplinary Lines

**Short Title** BETWN DISCIP LINES

**Units** Fixed: 5

**Grading Basis** Letter grade only

**Instructional Format** Seminar - 3 hours per week

**TIE Code** SEMT - Seminar (Topical) [T]

**GE Requirement** Yes

**Major or Minor Requirement** No

**Requisites** Enforced: satisfaction of entry-level Writing requirement. Freshmen and sophomores preferred.

**Course Description** This seminar will explore the role of the drawing has played in constructing the "idea" of design itself from the renaissance to the contemporary moment. We will focus on how drawings and other media shape our understanding of the history of architecture and will also examine key drawing techniques that have shaped the practice of architecture and that are still taught in the design studio today.

**Justification** Part of the series of seminars offered through the Collegium of University Teaching Fellows.

**Syllabus** File [AUD\\_98T\\_syllabus.docx](#) was previously uploaded. You may view the file by clicking on the file name.

**Supplemental Information** Professor Sylvia Lavin is the faculty mentor for this course.

**Grading Structure**  
 participation - 10%  
 submission 1 of paper abstract and outline - 10%  
 midterm paper draft - 20%  
 submission 2: presentation paper and feedback - 40%  
 final paper - 20%

**Effective Date** Spring 2014

**Discontinue Date** Summer 1 2014

<b>Instructor</b>	Name	Title
	<b>Sarah A. Hearne</b>	<b>Teaching Fellow</b>

<b>Quarters Taught</b>	Fall	Winter	Spring	Summer
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**Department** Architecture & Urban Design

<b>Contact</b>	Name	E-mail
	<b>CATHERINE GENTILE</b>	<b>cgentile@oid.ucla.edu</b>

**Routing Help**

### ROUTING STATUS

**Role:** Registrar's Publications Office

**Status:** Pending Action



**Role:** Registrar's Scheduling Office - Bartholomew, Janet Gosser (JBARTHOLOMEW@REGISTRAR.UCLA.EDU) - 51441

**Status:** Added to SRS on 9/19/2013 4:10:19 PM

**Changes:** Short Title

**Comments:** Added a short title.

**Role:** L&S FEC Coordinator - Castillo, Myrna Dee Figurac (MCASTILLO@COLLEGE.UCLA.EDU) - 45040

**Status:** Returned for Additional Info on 9/16/2013 9:01:23 AM

**Changes:** No Changes Made

**Comments:** Routing to Doug Thomson in the Registrar's Office.

**Role:** FEC Chair or Designee - Palmer, Christina (CPALMER@MEDNET.UCLA.EDU) - 44796

**Status:** Approved on 9/14/2013 9:05:39 AM

**Changes:** No Changes Made

**Comments:** No Comments

**Role:** FEC Chair or Designee - Castillo, Myrna Dee Figurac (MCASTILLO@COLLEGE.UCLA.EDU) - 45040

**Status:** Returned for Additional Info on 9/13/2013 11:03:16 AM

**Changes:** Grading Structure

**Comments:** Routing to Christina Palmer for FEC approval.

**Role:** CUTF Coordinator - Gentile, Catherine (CGENTILE@OID.UCLA.EDU) - 68998

**Status:** Approved on 9/11/2013 3:01:18 PM

**Changes:** No Changes Made

**Comments:** unintentionally routed form back to C. Gentile

**Role:** Initiator/Submitter - Gentile, Catherine (CGENTILE@OID.UCLA.EDU) - 68998

**Status:** Submitted on 9/11/2013 2:57:22 PM

**Comments:** Initiated a New Course Proposal

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