

Course Syllabus

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LARC 332 | Materials | Making | Landscape Architecture | 2016

Faculty:

Anna O'Connell

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Office Hours: Thursdays 3-4pm (arrange via email with Anna)

TA:

Stevie Koepp

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Fab Lab Manager:

Penny Maulden

Room: Gould 312 (Fishbowl), CBE Fab Lab

Time: Thursdays 4-6:50 pm

Canvas: <https://canvas.uw.edu/courses/1066853>

Materials and their assembly engage design at a tactile, human scale, and challenge us to think about the composition and construction of the built environment from the bottom-up. In this class, we will approach materials through hands-on, conscientious, and creative pursuit integral to the landscape design process. We will synthesize questions of technical performance, design ethics, and creative expression and explore how larger scale design intent is parlayed into the built environment.

1. AREAS OF INQUIRY

Technical

Successful landscape projects satisfy technical performance criterion. Materials and their connections respond to the effects of climate and use. Over the course of the class, we will explore the physical properties and technical opportunities/constraints of material assemblies. We will examine how these materials are typically joined and how they function as constituent parts of larger assemblies. This will be done through on-site observation, hands-on exercises, and drawing/detailing.

Ethical

Throughout their lifecycles, material assemblies impact social and environmental systems locally, regionally and globally. Materials sourced from strip mines contribute to the destruction of wildlife habitat. Industrial byproducts disposed of in developing communities are detrimental to human health. Materials that have a positive impact in one cultural context might have negative effects in another. We will explore the environmental and social implications of materials and their assembly.

Tactile

Every material has a personality, which can best be understood and explored through hands on engagement. Workshop sessions are intended to expose you to the tools and techniques of material manipulation and assembly. A working understanding of materials tactile properties will help bring definition to its limitations and possibilities as they related to the processes of making.

Creative

Material assemblies are fertile territory for creative expression. They enrich the sensual experience of place – a stone bench, warmed by the sun offers respite from the cool morning air. – and speak poetically - the patina of copper wall indexes the passage of time and translates climatic conditions into legible form. Throughout the class, we will examine precedents in expressive landscape detailing. We will undertake assignments that encourage you to explore your own creative detailing process.

Synthesis

At their best, material assemblies synthesize technical, ethical and creative considerations. Such synthesis can take many forms. There can be great beauty in a well crafted joint or in the simplicity of functionally derived form. Creative technical innovation can result in new modes of construction or ecologically-intelligent, multifunctional assemblies. Designing small scale interventions in developing communities can improve the quality of the built environment, provide vital services, and help bring dignity to poor families.

1. METHODS OF INQUIRY

Lectures and discussions, hands-on building exercises, sketchbook observations, readings, and field trips.

1. CLASS ORGANIZATION

Class meetings will take place from 4 until 6:50 in the Fishbowl (Gould 312), the CBE Fab Lab, and on site. Please refer to the course schedule.

Lectures

Lectures are generally organized around particular materials such as concrete or wood. Within each lecture we will discuss the technical properties, ethical considerations, and creative possibilities of materials, material palettes, and material assemblies.

Field Trips

Field trips will take place in the first half of the quarter; we will have three (see schedule for dates) are organized around materials discussed in lecture. Some of these lectures will take place prior to the field trip, while others will take place after. While on site, we will explore the full site and have some general design discussion focusing on materials. There will be a specific sketchbook assignment associated with each site visit. In this individual exercise, you have the opportunity to explore themes such as weathering, material design palette, and interplay of different materials.

Fab Lab demonstrations and work sessions

Three times throughout the quarter, we will be in the Fab Lab for a materials demonstration. During demonstrations you will learn how to use Fab Lab and landscape construction tools, develop a tactile appreciation for the working qualities of materials and gain hands-on skills in concrete, woodworking, and metalworking. In addition to in class demonstrations, you will be assigned a Fab Lab work session that will take place on a weekly

basis (times TBD).

Construction Drawing and Detailing

You will be introduced to how landscape architects communicate detailed material and assembly information through construction drawings and specifications.

Readings

Recommended readings related to landscape materials and detailing are listed for each lecture. Supplemental readings may be assigned or provided.

Assignments

Assignments will include:

- 3 sketchbook assignments centered around our site visits
- 3 hands-on materials explorations
- 1 communications & documentation assignment
- 1 final assignment that is a synthesis of what we covered over the course of the quarter

1. OBJECTIVES AND GOALS

The class will serve as an introduction to an extensive body of knowledge related to landscape materials and detailing. There is a great deal of “material” we won’t be able to cover. Our hope is that the class will serve as a foundation and challenge you to pursue landscape materials and detailing research as a lifelong pursuit.

Skills and subjects the class will cover include:

- Hands-on familiarity with landscape materials and tools
- Technical qualities of materials and material assemblies
- Iterative design exploration at the human-scale
- The phenomenological qualities of materials and their composition
- Social, cultural and environmental issues related to material selection, assembly and detailing

1. REQUIREMENTS AND GRADING

Grading

Grading for the class will be based on the 8 class assignments and participation. Detailed descriptions of the assignments will be distributed when assigned. Due dates are on the schedule. Completion of assignments on time is required. Late submittals will be docked 5% per day. Submittals more than 7 days late without prior consent of the instructor will receive a zero.

Contribution to discussion and in-class activities from the beginning of class until we recess will count towards your participation grade.

Grading will break down as follows:

Participation (10%)

Assignment 00, Independent site visit (not graded)

Assignment 01, OSP sketchbook entry (5%)

Assignment 02, Fab lab concrete exploration (10%)

Assignment 03, Colonnade Park Sketchbook entry & wood detail (10%)

Assignment 04, Seattle Center sketchbook entry & lifecycle/sustainability analysis (10%)

Assignments 05 & 06, Fab lab wood & metal explorations – can be one or two items (20%)

Assignment 07, documentation (10%)

Assignment 08, final/synthesis (25%)

1. BOOKS AND SUPPLIES

Texts

Purchase:

Landscape Architectural Graphic Standards, Student Edition, Hopper, 2007

Highly Recommended:

Constructing Landscape, Zimmerman, 2011

Materials for Sustainable Sites, Meg Calkins, 2009

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Recommended:

Landscape Architectural Graphic Standards

Time Saver Standards (comprehensive volume and site construction details manual)

Sustainable Landscape Construction Thompson and Sorvig, 2008

The Art of Landscape Detail: Fundamentals, Practices and Case Studies, Kirkwood, Niall, 1999

Landscape Construction, 2nd Ed. Sauter, David, 2004

Landscape Detailing, Editions 1- 4 Little, Michael

Living Systems, Margolis and Robinson, 2007

Transmaterial 1, 2 and 3 -Brownell

Supplies

To be specified in assignment handouts

Course Schedule

Thursdays, 4 – 6:50pm

Work Sessions: Times TBD

Location: Fishbowl (Gould 312) / Fab Lab

Calendar

Week 1 - September 29

Lecture: Intro / Construction Process

Fab Lab: Orientation

Assigned: ASSIGNMENT 00: Sketchbook entry - Independent site visit

References:

The Art of Landscape Detail, Part 1, Chapter 1, Landscape and Detail pp. 13-44

Landscape Architectural Graphic Standards, Site Construction Overview pp. 169-171

Materials for Sustainable Sites, Materials for Sustainable Sites Defined pp. 1-8

Week 2 – October 6

Field Trip: Olympic Sculpture Park

Assigned: ASSIGNMENT 01: Sketchbook entry – Olympic Sculpture Park

References:

Landscape Architectural Graphic Standards

Concrete Pavement pp. 267-269

Stairs Ramps and Curbs pp. 273-284

Concrete pp. 486-505

Week 3 – October 13

Lecture: Concrete & Wood / structures

Fab Lab: Concrete

Assigned: ASSIGNMENT 02: Concrete exploration

Due: ASSIGNMENT 01: Sketchbook entry – Olympic Sculpture Park

References:

Landscape Architectural Graphic Standards

<i>Soil Mechanics</i>	<i>pp. 172-183</i>
<i>Retaining Walls</i>	<i>pp. 295-303</i>
<i>Soils: Agronomic</i>	<i>pp.467-481</i>
<i>Wood</i>	<i>pp. 524-531</i>
<i>Fences and Screens</i>	<i>pp. 304-322</i>

Constructing Landscape

<i>1.1 Soil</i>	<i>pp. 15-25</i>
<i>3.1 Ground Modeling and Earthworks</i>	<i>pp. 199-211</i>
<i>1.7 Concrete</i>	<i>pp. 95-102</i>
<i>3.3 Steps</i>	<i>pp. 243-263</i>
<i>3.5 Walls</i>	<i>pp. 295-323</i>
<i>1.4 Wood</i>	<i>pp. 53-63</i>
<i>3.4 Railings and Fences</i>	<i>pp. 267-291</i>
<i>3.8 Walkways and Decks</i>	<i>pp. 357-366</i>

Materials for Sustainable Sites

<i>Concrete</i>	<i>pp. 103-112</i>
<i>Wood and Wood Products</i>	<i>pp. 271-280</i>

Week 4 – October 20

Field Trip: I-5 Colonnade Park

Assigned: ASSIGNMENT 03: Sketchbook entry & detail – Colonnade Park

References:

Landscape Architectural Graphic Standards

<i>Freestanding Wood Structures</i>	<i>pp. 323-328</i>
<i>Wood Decks/Wood Decking</i>	<i>pp. 329-337</i>

Week 5 – October 27

Field Trip: Seattle Center

Assigned: ASSIGNMENT 04: Sketchbook– Seattle Center; Lifecycle Assessment

Due: ASSIGNMENT 03: Sketchbook entry & detail – Colonnade Park

References:

Landscape Architectural Graphic Standards

Masonry construction pp. 506 – 512

Materials for Sustainable Sites

Brick Masonry pp.179-186

Week 6 – November 3

Lecture: Metals & Masonry

Fab Lab: Wood & Metal

Assigned: Wood & Metal

Due: ASSIGNMENT 02: Concrete exploration

References:

Landscape Architectural Graphic Standards

Metal construction pp. 512 – 524

Constructing Landscape

1.8 Metals pp. 105-119

3.4 Railings and Fences pp. 267-291

Materials for Sustainable Sites

Metals pp. 327-340

Week 7 – November 10

Lecture: Intro to Construction Documentation

Reading TBD

Week 8 – November 17

Lecture: Water, Soils, Planting (including green roofs & green walls)

Lab crits / Pin up tbd

Assigned: ASSIGNMENT 07: Documentation

Due: ASSIGNMENT 04: Sketchbook– Seattle Center; Lifecycle Assessment

References:

Landscape Architectural Graphic Standards

Rooftop Soil Profiles pp. 477-479

Constructing Landscape

3.13 *Vertical Planting*

3.14 *Green Roofs* pp.457-476

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Week 9 - November 24

Holiday *Happy Thanksgiving*

Week 10 – December 1








Lecture: Construction Administration

Lab crits / Pin up tbd

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Week 11 – December 8

Assignments Summary:

Date	Details	
Thu Oct 13, 2016	 Assignment 01 (https://canvas.uw.edu/courses/1066853/assignments/3435972)	due by 11:59pm
Thu Nov 10, 2016	 Assignment 04 (https://canvas.uw.edu/courses/1066853/assignments/3461894)	due by 11:59pm
Wed Nov 23, 2016	 Assignments 05 and 06 (https://canvas.uw.edu/courses/1066853/assignments/3467591)	due by 11:59pm
Mon Dec 12, 2016	 Assignment 07 (final) (https://canvas.uw.edu/courses/1066853/assignments/3479978)	due by 5pm
	 Assignment 00 (https://canvas.uw.edu/courses/1066853/assignments/3418525)	
	 Assignment 02 (https://canvas.uw.edu/courses/1066853/assignments/3447717)	
	 Assignment 03: SKETCHBOOK ENTRY & DETAIL (https://canvas.uw.edu/courses/1066853/assignments/3450389)	