

USC School of Architecture

Architecture 635 Landscape Construction Assembly and Documentation Fall 2019

Class Location: Harris 102

Instructor: Esther Margulies ASLA

3 units Tuesdays and Thursdays 8:30 to 9:50 am Additional time for field trips will be announced.

Office hours: Tuesdays at 10 am or By Appt.

Contact Information:

Email: emarguli@usc.edu



This course builds an understanding of landscape materials and assemblies, construction documents and sequencing. Students will learn the content and organization of construction documents and specifications. Lectures, site visits and field trips will provide opportunities for students to observe multiple approaches to the use of site materials. Students will develop a resource of site construction details and assemble a site construction document package of drawings as a final assignment.

The semester will begin with instruction in AutoCAD and understanding the fundamentals of site construction documentation. The course reviews the characteristics, properties and uses of common site construction material properties and their documentation, and ends with the development of a basic construction document set based on a design by each student. In field trips and assignments students will draw construction details derived from observable conditions and reference materials.

The mid term assignment will engage students in research on innovative and emerging materials and construction techniques. Students will also research a unique site construction detail used on a built project to understand the materials used, how they are assembled and site specific parameters.

All assignments will be turned in via Blackboard. The final project will be due on or before the final exam date for this class. All students are expected to observe the class attendance policy and attend all classes unless they provide an acceptable excuse for their absence.

Readings and class announcements will be distributed via blackboard. The syllabus may be updated periodically throughout the semester.

Course Grading

Construction Detail Assignments 30%

Mid term Research Assignment 20%

Site Specific Research Project 15%

Final Construction Drawing Set 25%

Class Attendance and Participation 10%

Class Attendance and Additional Work Requirements

Attendance at all class meetings and field trips are mandatory. Students must notify the instructor and request to be excused prior to the class meeting time. Students are expected to spend a minimum of 6 hours of additional work time each week outside of class time to complete readings and assignments.

Specific content and presentation requirements for all assignments and reviews will be provided.

Required Skills:

This course will require hand drawing, Auto CAD drafting and illustrations.

Software

MS Office or equal, Adobe Creative Suite, Auto CADD PC version. Students must have the program installed on their laptops. All mac users must have bootcamp and use the PC version of Auto Cad <https://www.autodesk.com/education/free-software/featured>

Required Materials

Hand sketching materials – pencils, eraser, measuring tape

Laptops will be required in class for all Cad lessons

Final Project large scale construction drawing plots

Class Schedule

Date	Lecture Topics and Field Trips	Readings and Assignments
Tues Aug 27	1. Class Introduction i. Syllabus review ii. Expectations iii. Academic Integrity 2. Construction Document Structure i. Plans, Details, Specifications	
Thurs Aug 29rd	Lecture Base and Layout Plans – Drawing conventions, symbols, notes and strategies Site Materials observations – Harris Courtyard Bring your measuring tape and drawing supplies to class.	Reading -Construction document set standards and strategies Hopper p. 4 – 10 On Blackboard Assignment 1 Part 1: Complete your Layout and Materials plan Due Sept 3
Tues Sept 3	Cad Workshop I <ul style="list-style-type: none">• Base Drawings• Layers• Line weight• Hatching• File Set up and Page Set up	You must have Auto Cad on your laptop and be ready to use it in this class. Bring your laptop and power supply
Thurs Sept 5	CAD Workshop II <ul style="list-style-type: none">• Text• Dimensions• Plotting	Assignment 1 – Part 2 Measured Drawings Base and Layout Plan for Harris Courtyard Due Thursday Sept 10th In CAD
Tues Sept 10	Cad part 3 , Layout Pin Up and Comments Field Trip – Materials Observations USC Hahn Plaza and The Village	Field Trip Sketches and observations
Thurs Sept 12	Lecture : Cast in Place Concrete Paving, Curbs and Stairs – Properties, Qualities, Considerations Conc Paving Documentation Methods: Plan, detail and specification conventions and standards	Reading Zimmerman P 95 – 105 215 – 258 Assignment 2 – Cast in place concrete paving, curb and stair details selected site Due Thursday Sept 19 th in Class
Tues Sept 17	Lecture: Natural Stone Properties, Qualities, Considerations	Reading Zimmerman P. 67 – 95

Thurs Sept 19	Lecture: Masonry and Precast – Properties, Qualities, Considerations Pin Up Concrete Details in Class	Reading – Masonry Assignment 3 Stone / Paver Details Due Thursday Sept 26
Tues Sept 24	Stone and Pre Cast Masonry Documentation Methods: Plan, detail and specification conventions and standards	
Thurs Sept 26	Lecture: Walls – Structural loads, materials, finish treatments, soil mechanics, sub drainage design considerations Walls Documentation Methods: Plan, detail and specification conventions and standards. Pin Up Stone Paver Assignment in Class	Reading – Walls Zimmerman P 137 – 173, 295-327 Assignment 4 Wall Details Due Thursday October 3
Tues Sept Oct 1	Field Trip to Observe Paving and Walls Location TBA	Field Trip Sketch and Photos
Thurs Oct 3	Lecture: Metals –Materials, Shapes, finishes and design considerations. Pin Up Wall Details in Class	Reading – Metals Zimmerman Pages 106 – 123, 267 – 295 Assignment – 5 Fences Due Thursday October 10th
Tues Oct 8	Lecture: Metals – Metal Assemblies Drawing Conventions Field walk to observe metals MNH and USC Expo perimeter	
Thurs Oct 10	Lecture: Wood –Railings, decks, other structures materials, finishes, Assemblies Fence Assignment Pin Up	Reading – Wood Construction Zimmerman p. 553 – 67, 357 -366 Assignment 6 –Wood construction details Due Tuesday Oct 22 in class
Tues Oct 15	Wood Construction Documentation Methods: Plan, detail and specification conventions and standards Introduce Mid Term Research Topics and Assignment	
Thurs Oct 17	No Class Fall Break	
Tues Oct 22	Mid Term Assignment Introduction Lecture – Water Features – equipment, finishes, code requirements, water treatment options. Field Walk Pin Up Wood Details in Class	Mid Term Assignment Due Tuesday October 29th Reading: Zimmerman p. 421 – 445

Thurs Oct 24	Lecture - Irrigation Basics – point of connection, system equipment, materials standards, planting and grading coordination	Reading – TBD on Blackboard
Tues Oct 29	Presentations Mid Term Research Projects	
Thurs Oct 31	Lecture – Planting Plans and General Notes – Symbols, schedules, details, specs and coordination Site Specific Details Assignment Intro	Reading –Review reference sets Planting documentation Assignment – Detail Research Project Due Thursday November 14th in class
Tues Nov 5	Land FX CAD Plug in	Bring Laptops to Class with LandFX for Students installed
Thurs Nov 7	Lecture Landscape Lighting Lighting effects, equipment, documentation	Assignment – Research Project work Reading: TBA Blackboard
Tues Nov 12	Field Trip Location TBD	
Thurs Nov 14	Research Project Presentations	
Tues Nov 19	Lecture Construction Document Sets, Drawings, Specifications and Construction Administration Documentation Final Assignment Introduction	Assignment Develop Project Design for Final Assignment location TBA
Thurs Nov 21	Work Session Final Assignment Pin Up Preliminary Design Concepts in Class	
Tues Nov 26	Green Roofs and Vertical Green Walls	Reading:
Thurs Nov 28	NO CLASS THANKSGIVING	
Tues Dec 3	Mandatory Pin Up Progress Sets	Pin Up of Layout and Materials Plan Section Elevation Sheet Lighting Plan Planting Plan Detail Sheets or Individual Details, minimum list of details
Thurs Dec 5	Final Class Meeting Mandatory Attendance Pin Up Final Assignment Progress	

Final Assignment Due Dec 17 th at 6:30 pm	Final Projects Due in Person	Hand in Drawing Sets for Grading
--	-------------------------------------	----------------------------------

Bibliography

Required Text Books

Zimmermann A, Constructing Landscape: Materials, Techniques, Structural Components. 3rd, rev. and expand ed. Basel: Birkhäuser; 2015. https://www.amazon.com/Constructing-Landscape-Astrid-Zimmermann/dp/3035604673/ref=dp_ob_image_bk

Additional Sources:

Dines, Nicholas, Time Saver Standards Concise Site Construction Details Manual, McGraw Hill, NY NY, 1999

Hopper, Leonard Landscape Architectural Graphic Standards Student Edition, Wiley and Sons, 2007, Hoboken, NJ

Sauter, David, Landscape Construction, Thompson Delmar Learning, Clifton NJ, 2005

Thallon, Rob and Jones, Stan, Graphic Guide to Site Construction, The Tauton Press, Newtown, Conn. 2003

Walker, Theodore D., Site Design and Construction Detailing, Van Nostrand, NY, NY. 1992

Yglesias, Caren, The Innovative Use of Materials in Architecture and Landscape Architecture: History, Theory and Performance, McFarland, Jefferson, North Carolina 2014 – Available on line via USC Electronic Library

Required Software: AutoCad current version Download the free student version here

<https://www.autodesk.com/education/free-software/autocad>

Guest Lecturers

Jaime Yamashita OotDL

TBD

Grading Scale

Course final grades will be determined using the following scale

A	95-100
A-	90-94
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66

D- 60-62
F 59 and below

USC Critical Dates

Classes Begin	Mon	August 26
Labor Day	Mon	September 2
Fall Recess	Thur+Fri	October 17 and 18
Thanksgiving Holiday	Wed-Sun	November 27 – Dec 1
Classes End	Fri	Dec 6
Study Days	Sat-Tue	December 7-10
Exams	Wed-Wed	December 11 – 18

Statement on Academic Conduct and Support Systems

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Section 11, *Behavior Violating University Standards* <https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* <http://equity.usc.edu> or to the *Department of Public Safety* <http://adminopsnet.usc.edu/departments/departments-public-safety>. This is important for the safety of the whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* <http://www.usc.edu/student-affairs/cwm/> provides 24/7 confidential support, and the sexual assault resource center webpage <http://sarc.usc.edu> describes reporting options and other resources.

Support Systems

A number of USC’s schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu> will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

Attendance Policies

School of Architecture Attendance Guidelines 2013

The School of Architecture's general attendance policy is to allow a student to miss the equivalent of one week of class sessions (three classes if the course meets three times/week, etc) without directly affecting the student's grade and ability to complete the course. If additional absences are required for a personal illness/family emergency, pre-approved academic reason/religious observance, the situation should be discussed and evaluated with the faculty member and appropriate Chair on a case-by-case basis. For each absence over that allowed number, the student's letter grade may be lowered up to one full letter grade (some instructors might vary the consequences such as only being worth 1/3 letter grade etc).

Estimated Course Expenses and Costs

1. Textbook – Approx \$60.00 if purchased used on Amazon. The Zimmerman text is on reserve at the Arts and Architecture library.
2. Travel for Field Trips – All field trips will be local. Students are encouraged to car pool, use ride share and public transport. If you need a ride contact me.