Landscape Architecture Program  |  College of Architecture and Planning  |  University of Colorado at Denver

Fall 2015  
LDAR 6631 - 001  
Tuesday + Thursday 9:30 AM - 12:15 PM  |  Room number: 480  
Instructor:  
Leila Tolderlund | Office: CAP 512 / Office Hours: By Appointment | Phone: (303)901-9993 | Email: Leila.Tolderlund@ucdenver.edu  
TA: Katie Benz | Email: KAITLYN.BENZ@UCDENVER.EDU

Landscape Architecture  
Construction Materials and Methods

Introduction

As a continuation of the technology sequence in the Landscape Architecture curriculum, this course helps students develop an understanding of the process that translates design concepts into a fully materialized buildable set of documents. Pre-requisite classes for this course includes: Landform Manipulation and Landscape Architecture Computer Applications.

Students will gain an understanding of basic materials and their properties when used in landscape construction. Students will furthermore be challenged to use conventional materials to create innovative design solutions. Students will also develop an understanding of the sequence from conceptual design, through design development, and to construction detailing. Here students learn how to communicate complex design ideas and ensure implementation aligned with these ideas – for future studios and eventually in the practice of landscape architecture.

Sequence and Methods

This class is a combination of lectures, home-work assignments, team and individual assignments, and lab-work to communicate and practice both application as well as skills-building aspects of the course.

Fieldtrips and guest lecturers will help expose students to the typical materials used in Landscape Architecture. Lectures will typically be followed by homework assignments. Lab sessions and desk meeting are provided to enhance the student’s understanding of the work with practical assignments reinforcing the lectures. Field trips to local constructed projects and material suppliers will provide the opportunity to see material choices and detailing that have either succeeded or failed. The class will also visit the premises of selected contractors and fabricators in an effort to gain perspective of the construction process from the fabricator’s and installer’s point of view. The delivery of the course content will be through lectures, readings, field trips, and a series of assignments that, when assembled together, create the final project.
Objectives
Student will be exposed to:

- Physical properties of typical details for construction materials including wood, concrete and precast concrete, stone, brick, metal, and the importance of those properties in detailing and specifying these items;
- Overview of the sequence: conceptual design - to design development - to construction documentation and gain an understanding of the relationship between construction documentation and specifications.
- Detail drafting conventions including: assembly, layout, notation and dimensioning systems, line-weights, drawing clarity and readability, and final assembly of construction documentation pages.
- The importance of drawings and specifications under the “construction document” umbrella.

Learning Outcomes
COMMUNICATION AND REPRESENTATION: The ability to speak, write, create and employ appropriate representational media to effectively convey design ideas based on the selection of materials for design proposals.

PROFESSIONAL ETHICS: The ability to:
- Understand various ethical aspects associated with the selection and assembly of materials in landscape architectural design.
- Critically evaluating local and global social, economic, and ecological issues associated with those material choices.
- Critiquing and finalizing design ideas based on ethical standards for material use.

DESIGN: The ability to:
- Formulate questions and arguments about construction materials and methods.
- Determine processes and practices that evaluate and improve the design process through construction materials and methods to conceptual/formative actions that transform existing situations into preferred alternatives.

CONTENT KNOWLEDGE: The ability to develop a critical understanding of ideas generated by different types of construction materials and methods and its role in reflecting and shaping culture, phenomena, poetics, ecology and environment over time.

Students will at terms end be asked to demonstrate an overall understanding of construction materials and methods in a comprehensive final project; developing a design development package of drawings and details. Assignments will be assigned early in the semester that will (when refined) become part of the final project.

At the end of this class students will be able to:

Program – level student learning outcomes:
- Demonstrate an understanding of landscape architects’ legal responsibilities with respect to professional standards for public health, safety, welfare, and other factors affecting design, construction and practice.
Demonstrate an understanding of the principles, conventions, standards and applications pertaining to the assembly, manufacture and use of construction materials, components, and assemblies.

Course – level student learning outcomes
- Demonstrate an understanding of the role of the landscape architect in the design and construction process. This will be accomplished by reviewing the AIA process for construction documents, project manuals, details, and specifications.
- Demonstrate an understanding of materials and methods used in construction. The material presented will focus on terminology, design qualities, and detail applications of the basic materials used by the landscape architect to realize a design. Students will furthermore be challenged to think about innovative ways of using conventional landscape materials.
- Develop a set of design development drawings and details. This will be accomplished by organizing and preparing a set of documents for a pre-determined preliminary design including, drawing organization, dimensioning and notation systems, material selection, grading, and development of details.

Class approach
This class is shaped by the instructor’s years of experience within the practice of landscape architecture and urban planning. Using method, logic, and intuition; trial and error, repetition, imagination, magic, passion, and compromise we will together explore various construction methods, and conventional and innovative ways of using materials.

Projects and Assignments
This class requires weekly preparation. You will be expected to participate in discussions, share your thoughts on a bi-weekly basis and participate in individual and group presentations. Engagement, participation, persistence, preciseness and passion will be essential to your success of this class.

Late assignments without prior agreement with instructor or verified medical reasons will typically be reduced one grade point. Final grades for assignments are set at the discretion of the instructor.

Returning Assignments and Projects:
- Assignments and projects will be distributed either in a class session or left in your mailbox on the fourth floor for you to pick up at your convenience.
- I will announce when assignments and projects will be available to be picked up, if they are not to be returned during class.
- If you are concerned about ensuring your privacy when assignments and projects are returned in class or made available for pickup, please provide me with an appropriately sized envelope with your name on it each time you submit an assignment, quiz, or project to me.

Communication
Canvas will be used as a tool to disseminate information and to allow students access to course material from home. Students will find assignments and readings on Canvas; it will be the student’s responsibility to print this information and be familiar with it prior to coming to class. Hardcopies will not be handed out in class. It is the responsibility of the student to make sure they are registered, have access, and are familiar with the use of Canvas.

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File Management
Assignments should be submitted as .pdf’s unless otherwise noted on assignment handout. All files should be less than 800KB. Large image or text files can be printed (not ‘saved as’) .pdf’s to reduce file size.

Please use the following naming conventions of files:
LastnameinitialFirstname_AssignmentName.pdf (for example: TLeila_Assignment1.pdf)

Classroom Behavior and Attendance
You are expected to be on time and prepared for each class. Participation and engagement is 10% of your grade. Missed classes will result in a ‘0’ participation. In case of an extreme personal emergency or a medical reason for absence, you may be asked to show evidence. The instructor is to be notified via email. Two missed classes will result in notification to student’s department chair, who may decide to take additional action.

Late work will not be accepted unless prior agreement with instructor. Homework, papers, projects, or any other required assignments that are turned in late (at the beginning of the class period on the due date) will receive one grade reduction for being late. Grades for incomplete projects will be based on the percentage of completion. Extra credit assignments will not be given.

To ensure a productive classroom and an environment conductive for learning for all students, the following ground rules apply:

1. Please deactivate and keep all handheld internet devices off until the end of class (cell phones, messengers/beepers, iPads, and laptops). Some in-class assignments require the use of your laptop. You will be notified prior to class when you are expected to bring in (or borrow/sign out/reserve use in the computer lab) a laptop for in-class assignments.

2. Please do not bring children to class

3. Please read, understand and comply with the Student Code of Conduct.

Grading and Evaluation
Attendance is mandatory and 100% collaboration with team members and classmates are essential to your success in this class.

Engagement, innovation, research, planning and design will all be included in the way you are evaluated.

Missed classes will result in lower grade. Research and production work beyond class hours and demonstration of progress in each class, will be expected.

Students will be assigned a mid-term grade and a letter grade at term end. Students will be evaluated based on their enthusiasm and commitment to investigating and advancing the process along with the quality of work, work ethics, verbal and graphic presentation skills and individual assignments.
Grade Scale: The following scale will be used to assign grades at the end of the semester:

<table>
<thead>
<tr>
<th>Average</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>95 and above</td>
<td>A</td>
</tr>
<tr>
<td>90 to 94.9</td>
<td>A-</td>
</tr>
<tr>
<td>85 to 89.9</td>
<td>B+</td>
</tr>
<tr>
<td>80 to 84.9</td>
<td>B</td>
</tr>
<tr>
<td>75 to 79.9</td>
<td>B-</td>
</tr>
<tr>
<td>70 to 74.9</td>
<td>C</td>
</tr>
<tr>
<td>65 to 69.9</td>
<td>D</td>
</tr>
<tr>
<td>Below 65</td>
<td>F</td>
</tr>
</tbody>
</table>

These letter grades are defined as follows:

- A: Excellent
- A-: Very good
- B+: Good, better than average
- B: Good, average
- B-: Below average
- C: Probationary Status
- D: Unacceptable - retake course
- F: Failing - retake course

You will be evaluated based on the following:

- Class Participation and Engagement: 10%
- Assignments and mid-term quiz: 60%
- Final Design Project: 30%

Student Code of Conduct:

Students are expected to know, understand, and comply with the Code of Student Conduct. You can find the Student Code of Conduct on the CU Denver website, under Office of Student Life and Student Activities. Disruptive classroom behavior will be reported to the Office of Student Life for disciplinary action. Disruptive classroom behavior, if necessary or appropriate, might also be reported to the Auraria Campus Police for investigation of possible criminal action.

Disruptive behavior includes, but is not limited to: arriving to class late (or leaving early) without explanation or apology; sleeping in class; reading a book, a newspaper or a magazine: unrelated to the content of the course; having personal conversations unrelated to class or passing notes during class; being under the influence of alcohol or other drugs; any kind of physical or verbal threat or other type of harassment to the instructor or fellow students; failing to comply with classroom rules and expectations described above.

Each student is expected to do his or her own work on the homework assignments. Collaborating with others on individual homework assignments is prohibited. Using copies of any kind of other person’s previous homework, posted or published solutions to the problems on a homework assignment is prohibited. Lending your solutions to others or allowing another student to copy any of your work on a homework assignment is prohibited. Violating these homework assignment policies will result in a failing grade for the course. The violation will also be reported to the student’s department chair for potential additional action.
Notice of Non-Discrimination
Consistent with the Laws of the Regents, Article 10, Non-Discrimination, the University will not tolerate acts of sexual harassment of or related retaliation against or by any employee or student in its educational programs and activities (Policy 2J: Sexual Harassment. https://www.cu.edu/regents/policy-2j-sexual-harassment).

The University of Colorado does not discriminate on the basis of race, color, national origin, sex, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation, or political philosophy in admission and access to, and treatment and employment in, its educational programs and activities. The university takes action to increase ethnic, cultural, and gender diversity, to employ qualified disabled individuals, and to provide equal opportunity to all students and employees (Article 10: Nondiscrimination. https://www.cu.edu/regents/laws-and-policies/regent-laws/article-10-nondiscrimination.)

Academic Honesty
Students are expected to know, understand, and comply with the ethical standards of the University, including rules against plagiarism, cheating, fabrication and falsification, multiple submissions, misuse of academic materials, and complicity in academic dishonesty.

Students are expected to abide by the highest standards of intellectual honesty in all academic work. The University and your instructor assume that you do your own work and credit all work or thought taken from others. Assignments are to be turned in electronically on canvas so submission to plagiarism detection software can be done if needed. Academic dishonesty will result in the grade ‘F’ for the course.

Plagiarism is the use of another person’s ideas or works without acknowledgement. Appropriate acknowledgement and credits are required when incorporating another person’s work into your own.

Examples of plagiarism when the source is not noted:
- Copying (word–for-word) another person’s writings or ideas
- Leaving out quotation marks out, when quoting other peoples work
- Copying another person’s writings, imagery, or ideas and interspersing your own words or imagery here and there, yet still using that persons basic imagery/ideas and/or theories
- Paraphrasing another person’s writings, imagery or ideas, yet still using that persons basic ideas and/or theories
- Copying or submitting another person’s work as your own
- Fabricating sources

For suggestions on ways to avoid academic dishonesty, please see the Academic Honesty Handbook at: http://www.ucdenver.edu/faculty_staff/faculty/center-for-facultydevelopment/Documents/academic_honesty.pdf

Disabilities
If you qualify for accommodations because of a disability, please submit a letter to the instructor from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact the appropriate campus agency.

Accommodation for Religious Observances

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Accommodations for Religious Observances
Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments, or required attendance. In this class, we will work with individuals on a case-by-case basis. Please notify the instructor in a timely manner so that accommodations can be arranged.

Military Duty
If you are a student in the military with the potential of being called to military service and/or training during the course of the semester, you are encouraged to contact your school/college Associate Dean or Advising Office immediately.

Readings
Required readings, films, artwork, and music will be shared via canvas at the appropriate time during the semester. There is no required textbook because no single textbook covers the range of topics explored in this class. Readings will be posted to Canvas at least 24 hours prior to class. However, these are not the sole sources of information and further research into the topics will be required.

Recommended Readings (available online – not in the Auraria Bookstore)

Optional Readings
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**Calendar**

*Important dates: (schedule subject to change)*

- **Aug 18**: Introduction to class
- **Sep 17+ Oct 1,15,22,29**: Field studies (tentative)
- **Nov 23+25**: No Class – Thanksgiving
- **Dec 10**: Final project (analog and digital) due

**Intellectual Property**

The instructor(s) uphold intellectual property rights on this syllabus, all lectures, and all other class material. Students are prohibited from selling, or being paid by any person or commercial firm for taking notes, recording class lectures/discussions without the advanced express written permission of the faculty member(s) teaching this course. Exceptions are permitted for students with a disability who are approved in advance by Disability Resource and Services for note taking or tape recording as an academic accommodation.

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http://archpick.com/1761/vertical-living-gallery  
Condominium sale office, Bangkok

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