

Rutgers, The State University of New Jersey

Spring 2026

Landscape Architecture Construction II:

Materials & Assemblies



La terre crue, Studio JOA

Course Code: Landscape Architecture 11:550:341 (4 Credits)

Instructor: Haemee Han, LLA, ASLA & Shawn Partin, PLA, ASLA

Location : Blake Hall Room 246

Office House: By Appointment Only

Course Time : Wednesday 10:20 AM–1:20 PM & Friday 2:00 PM – 5:00 PM

Course Folder : https://rutgersconnect.sharepoint.com/f:/r/sites/sebs-lastudents/Shared%20Documents/COURSE_FILES/2026_Spring/550-341_CONSTRUCTION%20II_MATERIAL_ASSEMBLY?csf=1&web=1&e=1f3sKy

Course Description:

Construction **materials** are important in landscape architecture because they impact the aesthetics, durability, and sustainability of a design. The choice of materials in a design influences the style and visual quality of a landscape and the balance of color, texture, form, line, and scale can create harmony and appeal to the eye. Materials impact the environmental footprint of the landscape and help sustain natural systems. In construction, **assembly** is the process of combining components into a cohesive unit. It involves combining different construction materials and components to create a fully functional structure like a sidewalk, retaining wall, stair, bench, or shade structure. They require precision and safety to ensure that all parts work together seamlessly.

This course will introduce the basic materials used in constructed landscapes, their origins, components and properties. It will also show the science, design and construction of landscape elements and prepare you to design, draw and detail landscapes with a sound understanding of construction and sustainability. To address materials and assemblies, the course is divided into two big topics that will be explored during the semester: **Materials and Design** and **Assemblies and Construction**.

The materials and design portion of the course will focus on the basic landscape materials, model building, design and design development. The assemblies and construction section will emphasize detailing, construction, fabrication and construction observation.

Course Goals:

1. To develop skills to interpret science, technology, and cultural context to design and develop innovative solutions in sustainability, land stewardship, and other contemporary urban challenges. (Master technical and industry standards to foster safe accessible environments using the materials, methods, and technologies of site effectively and sustainably design and engineering).
2. To acquire professional abilities with ethical, technical, and industry standards to foster social well-being through safe, accessible, and healthy environments. (Demonstrate knowledge of the professional practice skills required for the Landscape Architecture Accreditation licensure exam).
3. To explore how to creatively design space and spatial relationships. (Analyze and thoughtfully incorporate natural features and systems to create enduring and ecologically sensitive design solutions).

Learning Objectives:

1. Identify the physical, functional, and aesthetic properties of landscape architectural materials.
2. Develop sustainable landscape architectural assemblies with materials that interact with physical forces of the environment.

3. Learn industry communication methods to describe materials and assemblies to stakeholders in the landscape architectural design process.

Course Format:

1. Lecture
2. In-Class Exercises & Labs
3. Assignments & Projects
4. Presentations & Reviews
5. Field Trips
6. Exams

Student Obligations and expectations:

Students are expected to:

1. Complete and submit all assignments as directed on the designated due date. Late coursework will not be accepted unless approved by the instructor.
2. Come to class on time. Four (4) Late arrivals will be considered as one (1) absence.
3. Take notes during class presentations to help retain knowledge and repeat procedures outside of class. The instructor will not review any content that has been missed by a student's absence. Your attendance will be directly related to your success in this class.
4. Care. Put 100% into every one of your assignments and be proud of the work you produce in this class. Treat each assignment like it is your last.
5. Seek help, when needed, during office hours and in advance of an assignment's due date.

Equipment and Use of Facilities:

Digital Equipment:

Laptop (please check graphic cards & memory needed for AutoCad and Adobe CC) & Mouse

Software: AutoCAD, AdobeCC, Rhinoceros(Optional)

The student handbook also includes a section governing the use of equipment:

http://landarch.rutgers.edu/current_students/student%20handbook/StudentHandbook_web_SectII.pdf .

Woodworking:

Students will also learn and utilize woodworking tools in both Blake's fabrication lab and RU Makerspace. The tools include a table saw, mitre saw, drill press, hand drills, jigsaw, hammer, sanders, band saw, hand saw, etc. Students are responsible for wearing appropriate safety attire and equipment, such as safety glasses, face masks (respirators), hearing protection (limited availability in the lab), work gloves, and proper clothing.

Students are required to take on-line and in-person woodshop tutorials and pass the both written and in-person test to get access to both Blake and Makerspace.

<https://makerspace.rutgers.edu/trainings>

Information about training for our "FabLab" is here on the Landarch Labs

site: <https://sites.rutgers.edu/landarch-labs/fabrication/>

Attendance:

The Department of Landscape Architecture requires attendance in all of its classes. All studio meetings including both Lecture and Lab are required. The individual student's development as a landscape architect is largely dependent upon two aspects of education. First, is the exposure to an assimilation of a body of information, which relates to the field. Second, is the application of this knowledge through studio projects and problem-solving skills developed through critiques, reviews, and interactions during each project. The Rutgers Landscape Architecture curriculum is designed to develop both areas. Attendance and participation in all lectures and studios are essential if the student is to achieve their maximum potential. It is the Policy of the department that more than three (3) unexcused absences will result in a reduction of the final course grade (One Letter Grade Down). Each additional three absences will result in another step reduction. If circumstance arises beyond your control, please notify the instructor prior to the class meeting, and other arrangements will be made. Please note that attendance is taken at the start of class and late arrivals greater than 10 minutes will be documented as a full absence. In addition, students may not leave the class prior to the official end time of class unless the instructor has officially dismissed the students, or the early departure has been pre-arranged with the instructor in advance. In-class exercises will be handed out during class periods; there will not be a chance to make up missed exercises.

Students with LOA (Letter of Accommodation):

Students who know that they have any type of disability which may affect their performance in the class must inform the instructor of such disability in writing before the third-class meeting. The instructor will coordinate with the University Counseling and Testing Center as needed. To be eligible for any accommodations, students must obtain an official Letter of Accommodation (LOA). It is students' responsibility to obtain LOA. Do not discuss with instructors regarding details of procedure.

This course is structured around a cumulative sequence of assignments, with required check-ins at each designated due date. Students with an LOA are expected to adhere to the same deadlines and **will not** receive automatic extensions. Completing the entire project retroactively at the end of the term is not permitted.

In the case of an emergency, you may contact the Dean of Students for support; however, this does not guarantee an extension or an excused delay.

If you have an LOA and anticipate needing an extension, you must notify the instructor via the Canvas project submission page **at least 48 hours before the deadline**. Extensions must be approved by the

instructor or TA. Once approved, you will receive an **additional 7 days** to submit the assignment. Late submissions **up to one week after the deadline** (without prior approval) will be accepted with a **one full letter grade deduction**.

Late submissions **more than one week past the deadline** will not be accepted even with LOA. The Canvas submission window will close and will not be reopened.

Attendance is **required** for everyone including students with LOA.

If you have concerns about your grading in this course, please contact your academic advisor.

Policies:

If you encounter any personal circumstances that inhibit your ability to fulfil the requirements of this course, you should immediately contact the instructor. In addition, any student with a special need, circumstance, or disability, should make an appointment to see the instructor during the first week of classes. If there is a plotting problem, PDF files can be uploaded or emailed to the instructor and the assignment will not be considered late. All information in this syllabus and course schedule is subject to change. While students are encouraged to work alongside one another to learn the tools and techniques presented in this course and foster a positive studio environment, copying or sharing of digital information is not acceptable and will be considered a violation of the school's Integrity Policy. When an outside Lab activity is scheduled, students should wear boots, long pants, and long shirts. Hair should be tied back. Provided safety gear shall be worn when working with tools.

Labs:

Labs are to be worked on both during and outside of class time. Labs are discussed during class meetings as seen in the class schedule. Specific Lab instructions are articulated on Canvas. If a student misses a class, whether excused or unexcused, it is the responsibility of the student to acquire the missed lecture information, new assignment and submit the previous assignment on time. Except for documented circumstances truly beyond the student's control, all projects that are incomplete on the due date should still be submitted on the due date to receive a partial credit. If a student elects to not submit work, they will receive a zero. Any project work submitted late will lose a letter grade for each day past due. Students must conform to the following naming conventions for Lab submissions: 550-341_LastName_FirstName

Readings and Resources:

Calkins, Meg. Materials for Sustainable Sites. Wiley, New Jersey. 2009.

Harris, Charles and Dines, Nicholas. Timesaver Standards for Landscape Architecture. McGraw-Hill, New York. 1997.

Zimmermann, Astrid. Constructing Landscape: Materials, Techniques, Structural Components. Birkhauser Architecture. Basel. 2011.

Course Grades:

Scores for class projects during this semester will be graded and recorded as if for one class. Grades for the two courses will be determined based upon the following performance scale. In the event of split grades for the two courses, the instructor reserves the right to determine which course to assign grades. Grades will be based upon assessment of your performance.

A | Exemplary Work. Exceptional performance, discipline, and effort. The student is self-motivated to produce above and beyond what is assigned. "A" work shows initiative and independent exploration both in thought and in craft.

B | Good Work. Performance above the norm. A "B+" student completes precise and thoughtful work that executes the assignment in a well-crafted, thoughtful way, with a concept behind it. "B" work meets all expected criteria but lacks conceptual advancement or understanding.

C | Work is Lacking. Mediocre performance, little discipline, and effort. Student barely meets or is lacking the expectations of the assignment, and work is carried out in an unrefined manner.

D | Unacceptable Work. Not meeting the expectations or standards for the assignment and/or program. Student failed to apply the concepts applicable to the assignment. A sense of care does not accompany work submission.

F | Failing, Unacceptable Work. Complete lack of performance and shows no regret for non-compliance with the minimum requirements.

Grade Scale:

A = 89.5 – 100 %

B+ = 84.5 – 89.49 %

B = 79.5 – 84.49 %

C+ = 74.5 – 79.49 %

C = 69.5 – 74.49 %

D = 59.5 – 69.49 %

F = 0 – 59.49 %

Academic Integrity:

1. Attendance Policy

The Department of Landscape Architecture requires attendance in all of its classes. The individual student's development as a landscape architect is largely dependent upon two aspects of education. First, is the exposure to an assimilation of a body of information which relates to the field. Second, is the application of this knowledge through studio projects and problem-solving skills developed through critiques, reviews, and interactions during each project. The Rutgers Landscape Architecture curriculum is designed to develop both areas. Attendance and participation in all lectures and studios are essential if the student is to achieve their maximum potential. It is the Policy of the department that more than three (3) unexcused absences will result in a reduction of one letter grade down from the final course grade. Each additional three absences will result in another step reduction. If circumstances arise beyond your control, please notify the instructor prior to the class meeting, and other arrangements will be made. Please note that attendance is taken at the start of class and late arrivals greater than 10 minutes will be documented as a full absence. In addition, students may not leave the class prior to the official end time of class unless the instructor has officially dismissed the students, or the early departure has been pre-arranged with the instructor in advance. In-class exercises will be handed out during class periods; there will not be a chance to make up missed exercises.

2. Excused absences

An excused absence includes a written excuse from a Physician, excuse from the Dean of the College, or a field trip for another course if this instructor is notified one week or more in advance.

3. Due dates, deadlines, and presentations

Assignments must be submitted on the stated due date, time and place regardless of how complete or incomplete it is. Late submissions up to one week after the deadline (without prior approval) will be accepted with a one full letter grade deduction.

Late submissions more than one week past the deadline will not be accepted even with LOA.

4. Policy for make-up work due to excused absence

Upon return from an excused absence, a student has one week to turn in any missed assignments without penalty.

5. Students needing assistance:

Students who know or suspect that they have any type of disability which may affect their performance in the class must inform the instructor of such disability in writing before **the third class meeting.** The professor will work with the University Counseling and Testing Center to accommodate the needs of such students. Without such notification, no special accommodations will be considered at any later date. It is **students' responsibility** to obtain LOA.

6. Work ethics and standards:

Professionalism is requested. If presenting, students will be expected to wear professional dress. During studio, casual clothes suitable for work in an office will be the standard. Professional work days

require evidence of self-directed learning and initiative. All students are encouraged to work together in the studio outside of class time rather than at home. You will each benefit from the interaction with classmates and upperclassmen if you take advantage of this opportunity. Typically, students who produce superior work participate fully in the studio environment rather than in isolation.

7. Lab rules and etiquette:

During class time, the following will not be permitted: • Use of tobacco of any form • Playing music or use of earphones • Browsing/surfing the Internet not related to class unless indicated by the class instructor • No pets in the studio & lab • Please observe common courtesy when working with others in the studio.

8. Cell Phone Use:

Cell phone use during class is considered a public distraction and discourteous to those around you. Please turn off your phone during lectures and studio and place your phone out of sight in backpacks, purses or lockers. If you need to communicate using this vehicle – please do so outside of the studio.

9. Documentation of Student's Work:

Students are required to keep all work completed during a semester until the end of the term in order to review progress and aid discussion if necessary.

10. Studio and Computer Lab Work:

All students are encouraged to work together in the studio outside of class time rather than at home. You will benefit from the interaction with classmates and upperclassmen.

11. Academic Honesty:

While students are encouraged to work alongside one another to learn the tools and techniques presented in this course and foster a positive studio environment, copying or sharing of digital information is not acceptable and will be considered a violation of the school's Integrity Policy

Student Work:

Submitted drawings, models, photographs, or written papers for any project assigned in Landscape Architecture courses are considered the property of the Department and may be retained in its archives for exhibition and accreditation purposes. Should your drawings be retained by the Department, you will be given the opportunity to obtain a print or photographic record of your work. Department files are otherwise not available to students.

Facilities and Accommodations:

No class can be taught without reliable facilities. But your use of the facilities is dependent upon responsible use regarding the clearly established rules about their use as specified in the

Student handbook. These rules cover access to studio and vandalism, table assignments, personalization of workspace, smoking and drinking, use of the lockers, access to the reference collection, and basic rules governing the use of the computer lab. Failure to observe rules may result in loss of access.

Please follow the accommodation procedures outlined at <https://ods.rutgers.edu/students/registration-form>. Full policies and procedures are at <https://ods.rutgers.edu/>

Personal Circumstances:

If you encounter any personal circumstances that inhibit your ability to fulfill the requirements of this course, you should contact the instructor immediately. Likewise, any student with special need, circumstance or disability should make an appointment with the instructor during the first week of class.

Academic Integrity:

The intentional copying of another student's file, or portion of that file, and representation of that work as one's own, is in direct violation of Rutgers' University Integrity Policy. Please review the policy online: <http://academicintegrity.rutgers.edu/integrity.shtml#one>. Consistent with this policy, any copying and/or "sharing" of exercises, assignments and projects will be treated as Level 2 violations and subject to the sanctions as outlined in the Integrity Policy.

Student Wellness:

Just In Case Web App <http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901/ www.rhscaps.rutgers.edu/

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / www.vpva.rutgers.edu/

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation:

<https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

Scarlet Listeners

(732) 247-5555 / <https://rutgers.campuslabs.com/engage/organization/scarletlisteners>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.

DEI Statement:

SEBS DEI Statement It is our intention that students of all backgrounds will be well served by this course. We will work to create an environment of inclusion which respects and affirms the inherent dignity, value, and uniqueness of all individuals, communities and perspectives. We are lucky to have a diverse university. Diverse voices and life experiences enhance the learning process and we welcome students to share their personal experiences. We will not tolerate disrespectful language or behavior against any individual or group. If you feel as though you have been disrespected or treated unfairly by the instructors or any other individual please let us know. You may speak with the instructors in person, over email or report anonymously via the Office of Academic Programs. In addition, you may also report bias to the Rutgers Diversity and Inclusion initiative using this link:

<http://inclusion.rutgers.edu/report-bias-incident/>. For further reference, please visit: <https://sebscourseapproval.rutgers.edu/policies/syllabus-dei-statements-policy>

Assignment & Grading Schedule:

Midterm Exam – **15%**

Part 1 : Material and Assembly Exercises– **25%**

Part 2 : Design and Documentation – **25%**

Part 3 : Full Scale Bench Mock Up Fabrication - **30%**

Class Attendance & Participation - **5%**

Class Schedule:

Part 1 : Material & Assembly Technique

| WEEK | WEDNESDAYS | FRIDAYS |
|-----------------------|---|---|
| 1 (1/21) (1/23) | Intro Lecture : Time in Material (HH) Exercise 1 : Dual Material Intervention | Lecture : Concrete (HH) Exercise 1 Due Exercise 2 : Making Concrete |
| 2 (1/28) (1/30) | Lecture : Wood (HH) Exercise 2 Due <i>Woodshop Workshop Due</i> Exercise 3 : Wood Assembly | Lecture : Wood II (HH) Work Session |
| 3 (2/4) (2/6) | Lecture : Metal (SP) Exercise 3 Due Exercise 4 : Material Research | Lecture : Other Materials (SP) Work Session |
| 4 (2/11) (2/13) | Lecture : Vegetated Rooftop (SP) Exercise 4 Due, Presentation | Mid Term |

Part 2 : Design & Documentation

| WEEK | WEDNESDAYS | FRIDAYS |
|-----------------------|--|--|
| 5 (2/18) (2/20) | Intro Design / Documentation Site Intro (SP) Assignment 1 : (HH) Analysis + Programming | Site Visit (42 2 nd ave, New York, NY) |
| 6 (2/25) (2/27) | Design Language (HH) Assignment 1 Due Assignment 2 : Concept Plan | Worksession |
| 7 (3/4) (3/6) | Assignment 2 Due Assignment 3 : (SP) Layout Plan | Worksession |

| | | |
|------------------------|--|--------------------------------|
| 8 (3/11) (3/13) | Assignment 3 Due Assignment 4 : (SP) Details and Package | Worksession |
| Spring Break 3/14-3/22 | | |
| 9 (3/25) (3/27) | Worksession | Assignment 4 Documentation Due |

Part 3 : Full Scale Bench Mock Up Fabrication

| WEEK | WEDNESDAYS | FRIDAYS |
|------------------------|---|-------------------------------------|
| 10 (4/1) (4/3) | Design Build Project Intro Four group assignment Project 1 : Mass Studies | Worksession |
| 11 (4/8) (4/11) | Project 1 Due Project 2 : Small Scale Mock up Model | Worksession |
| 12 (4/15) (4/18) | Project 2 Due Project 3 : Full Scale Mock up Model | Worksession |
| 13 (4/22) (4/24) | Worksession | Worksession |
| 14 (4/29) (5/1) | Worksession | Project 3 Due Final Presentation |

*The detailed schedule above is tentative and may change as the course develops