

Rutgers—the State University of New Jersey, School of Environmental and Biological Sciences  
Department of Landscape Architecture

**CONSTRUCTION III –11:550:441 Design Implementation and Practice**  
**COURSE SYLLABUS Fall 2023**

Credits: 4  
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Schedule: Class: T F 8:30 AM-11:30PM  
Office Hours: By appointment

### **Overview**

Construction III, Design Implementation and Practice is the final course in the Construction Sequence in the Department of Landscape Architecture at Rutgers University. It will take a project from existing conditions to schematic construction drawings based on a specific concept, performance requirements and scope of work. The course will approach the work as a real-world design studio, simulating the dynamics, structure, and requirements of a professional office. Students will apply their knowledge of skills in data collection and research, design development, digital representation and learn the construction drawing production and administration process.

As a capstone course, it assumes the successful completion of all prerequisite courses and proficiency in design, grading, materials, technical drawing, and digital representation. If you are not comfortable with any of your skills in these areas, please make time early in the semester to review and practice.

### **Course Goals**

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).

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).

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 (LO)**

The learning objectives of this course are:

- 1. Learn the technical aspects of design through the production of plans, sections, details, and notes.*
- 2. Learn the professional and administrative aspects of design construction through readings, lectures, and focused class discussion.*
- 3. Learn time management skills through coordination of multiple tasks and deadlines.*

The course is designed to review and expand the skills required to develop documents for the construction of a proposed design. The sequencing of work has been developed to build on existing knowledge of design fundamentals, grading and drainage, planting design, materials and construction documentation and administration.

Each phase of work will have multiple parts and will extend over multiple weeks. The assignments are a guide for completing the project successfully and an opportunity to receive input and revise your design and working drawings. They will later form part of a set of schematic construction drawings.

As a record of your progress and to develop your project management skills you will be required to keep project notes. The project notes contain to-do lists, work completed, and other information related to your project. The project notes will be reviewed weekly during the studio and count in your overall course grade. This reiterates the importance of managing and planning your work.

### **Course Description**

The course is divided into three areas:

#### *SCHEMATIC DESIGN*

Covers a review drawing standards practices for sustainable design and implications of earthwork forms in construction. The assignments will focus on building technical skills in the production of grading plans and sections and back up calculation material.

#### *FINAL DESIGN*

This portion of the course focuses on water movement through the soil profile and plant selection based on water and sun requirements and spatial and aesthetic considerations. The assignments will emphasize the production of enlargement plans, sections, and details.

#### *FINAL DESIGN PACKAGE*

This section of the course is an introduction to the production of construction drawings and a

review of the design, construction, and administrative phases of work in professional practice. Design, grading, planting, materials, and detailing will be discussed and practiced through lectures, assignments, and the production of construction documents. Aspects of specification writing, construction management and administration will also be discussed in general terms and how they relate to the final project.

The Review and production section of the course introduces the practice of redlining, peer review and the production of composite drawings to resolve design conflicts.

**Schedule (For a full description of the semester's project please refer to the Project Schedule.)**

### **01 SCHEMATIC DESIGN**

- Week1      Introduction, Page Set up.  
Assignment 1- Title blocks, Cover Sheet, and Page Setup  
Readings: Site Engineering (SE) pgs. 68-75, 33-62, 63-68
- Week 2      Page Set Up Contd.  
Assignment 2- Site Plan, Drop Off Area  
Reading: SE pgs.77-100
- Week 3      Design Plans-Materials and Grading  
Assignment 3 – Site Plan, Materials and Grading  
Reading: SE pgs.101-122  
Reading: SE pgs.129-145
- Week 4      Design Plans- Layout Plan  
Assignment 4- Site Plan, Planting Plan, Stormwater calculations
- Week 5      Design Plans-Grading Plan  
Project 1 Schematic Design Issued  
**Quiz 2**  
Readings: SE pgs.147-56, 14-156

### **02 FINAL DESIGN**

- Week 6      Design Plans-Grading  
Assignment 5- Enlargement Plans/sections/structures  
Reading: SE pgs. 207-226, 227-243  
**Project 1 Schematic Design Due**
- Week 7      Design Plans Layout  
Reading: SE pgs.113-128, Detailing for Landscape Architects (DLA) pgs.51-65  
Assignment 6- Planting Plan/Details
- Week 8      Design Plans-Planting  
Reading: SE pgs. 279-290  
Assignment 7- Planting Plan/Schedule

Week 9            Sections/Enlargements  
Assignment 8-Stormwater Calculations  
Readings: DLA pgs. 21-50, 67-94, 95-102

Week 10          **Project 2 Final Design Due**  
**Quiz 3**  
Reading: DLA pgs. 113-121, 127-146

### **03 FINAL DESIGN PACKAGE**

Week 11          Redlining: Constructability  
Assignment 9- Renderings: Site Plan  
Reading: DLA 149-182, Landscape Architectural Standards (LAS) pgs. 432-454

Week 12          Cost Estimating and Bidding  
Assignment 10- Renderings: Sections and Perspective  
Reading: Landscape Architectural Standards LAS pgs. 39-42  
Thanksgiving Recess

Week 13          Contracts and Construction Administration  
Reading: LAS pgs. 43-48, AIA Contract Documents (AIACD) pgs.4-7,

Week 14          Construction Observation/Administration  
Reading: LAS pgs. 49-56, AIACD pgs. 82-106

Week 15          **Final Project Submittal Quiz 4**

### **Lecture and Lab Guidelines:**

Plan your work and schedule.

Take advantage of your time in the studio.

Keep track of what has been done and what needs to be done. If you plan, you will never be late or miss a deadline.

No texting, phone calls or non-course related web searches in lecture or studio.

### **Readings**

1. Design Workshop. 2016. Landscape Architecture Documentation Standards: Principles, Guidelines, and Best Practices. Hoboken, NJ John Wiley, and Sons.
2. Hopper, Leonard J. 2006. Landscape Architectural Graphic Standards. New York, NY: John Wiley and Sons.
3. Ryan, Tom R, Edward Allen, and Patrick Rand. 2011. Detailing for Landscape Architects. Hoboken, N.J.: John Wiley and Sons
4. Strom, Steven, Kurt Nathan, and Jake Woland. 2013. Site Engineering for Landscape Architects. 5th Edition Ed., Hoboken, N.J: John Wiley & Sons.

The course instructor will provide additional topical readings.

## Grading

Course work is designed to work progressively from short assignments to larger projects. The final project will progress based on a schedule with milestone submittals. Submittals will be reviewed by a supervisor or mentor, and returned, with comments, for revision.

Revisions will continue through the semester until the work demonstrates a suitable level of proficiency. The milestone submittals and final submittal will contribute to your overall course grade. You will also be responsible to keep track of and plan your work in a Work Log.

The individual break down of your cumulative semester grade is as follows:

Type	#	(Total Value)
<i>Assignments</i>	<i>10</i>	<i>(200 pts)</i>
<i>Quiz</i>	<i>2</i>	<i>(50 pts)</i>
<i>Project 1</i>	<i>1</i>	<i>(100 pts)</i>
<i>Project 2</i>	<i>1</i>	<i>(100 pts)</i>
<i>Final Project</i>	<i>1</i>	<i>(200 pts)</i>
<i>Time Management</i>		<i>(100 pts)</i>

Final letter grades will be assigned using the following scale: A > 90%

B > 80% C > 74% D > 65% F ≤ 65%

The Department of Landscape Architecture uses the following guidelines for understanding appropriate grading in its courses:

**A – Outstanding – This not only means fulfilling the requirements but impressing and going beyond the initial expectations of the project.** The student has demonstrated a superior grasp of the subject matter coupled with a high degree of creative or logical expression, and strong ability to present these ideas in an organized and analytical manner.

**B – Very Good –** The student has demonstrated a solid grasp of the material with an ability to organize and examine the material in an organized, critical, and constructive manner. The projects and in-class performance reveal a solid understanding of the issues and related theories or literature.

**C – Acceptable –**The student has shown a moderate ability to grasp concepts and theories for the class, producing work that, while basically adequate, is not in any way exceptional. This performance in class displays a basic familiarity with the relevant literature and techniques.

**D – Unacceptable –** The work demonstrates a minimal understanding of the fundamental nature of the material or the assignment with a performance that does not adequately examine the course material critically or constructively. Students cannot graduate from the Landscape Architecture program with 2 D's in required 550 classes.

**F – Failure –** The student has demonstrated a lack of understanding or familiarity with course concepts and materials. Their performance has been inadequate. Failure is often the result of limited effort and poor attendance which may indicate that the student is not in the proper field of study.

It will be the responsibility of each student to track their own academic progress throughout the semester. Interim grades will be available to students on an individual basis. Students should make an appointment with the instructor to review interim grades.

Appointments must be made at least one week in advance of any meeting.

### **Attendance**

Attendance at scheduled Lab and Lecture sessions is mandatory. If a circumstance arises which prohibits your attendance at any class session, please notify the instructor 24-hours prior to the class and an alternate arrangement will be made. Keep in mind that your participation in class discussions and submission of in-class exercises will contribute to your overall course grade.

There will be no opportunity to make up for a missed quiz, in-class exercise, or guest lecture. Beyond the above recommendations, this course utilizes the Department's policy on attendance which reads:

Attendance and participation in all lectures and studios are essential if the student is to achieve his/her maximum potential. More than three unexcused absences will result in a step reduction in your semester grade. Each additional three absences will result in another step reduction.

A minimum level of participation is defined as being in attendance for the entire duration of a class session. It is the student's responsibility to attend all required classes and all personal plans should be made in accordance with the schedule.

**Please note that attendance will be taken at the start of each class and late arrivals will be marked as an absence.**

### **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/>

### **Equipment**

The student handbook also includes a section governing the use of equipment: [http://landarch.rutgers.edu/current\\_students/student%20handbook/StudentHandbook\\_web\\_Sectl.pdf](http://landarch.rutgers.edu/current_students/student%20handbook/StudentHandbook_web_Sectl.pdf).

This section includes rules specifying use department equipment including of projection equipment, department cameras, and drafting equipment.

### **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/](http://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/](http://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.