LAA 3420: Sustainable Landscape Technologies 2
UF Department of Landscape Architecture
Fall 2025

SYLLABUS

I. General Information

CLASS MEETINGS: 100% In-Person, Mondays, Periods 3-4; Thursdays, Period 9
LOCATION: Antevy Hall 439
CREDITS: 3 Credits

INSTRUCTOR: Dan Farrah, Ph.D., PLA
Antevy Hall 452
dfarrah@ufl.edu
Office Hours: M Period 5 (11:45 – 12:35)
W F Period 6 (12:50 – 1:40)

Andrea Otalora
Office Hours: By appointment via email or as arranged during class
aotalora@ufl.edu

COURSE DESCRIPTION

Introduction to essential technical skills in grading, drainage, and stormwater management for implementing landscape architectural design solutions. These topics will be taught from a perspective of sustainability and how landscape architects can use these skills to mitigate environmental impacts related to site development.

PREREQUISITE KNOWLEDGE AND SKILLS

Pre-requisite: LAA2379c: Design Communications 2

REQUIRED READINGS AND WORKS

Aymer, Valerie. *Landscape Grading: A Study Guide for the LARE*. Second edition. Abingdon, Oxon ; Routledge, 2020.

Sharky, Bruce. *Landscape Site Grading Principles: Grading with Design in Mind*. Hoboken, New Jersey: John Wiley & Sons, Inc., 2015. Print.

Strom, Nathan, and Woland; *Site Engineering for Landscape Architects*, Sixth Edition.

All required readings and works can be found online, course reserves, or in the UF Library (see annotated schedule).

Materials and Supplies Fees: see schedule of courses.

The following software is required:

- MS Office (Word, Excel and PowerPoint)
- AutoCAD
- Rhino
- Adobe Acrobat Reader or other PDF reading software

II. Student Learning Outcomes (SLOs) & Course Learning Objectives (CLOs)

The **course learning objectives** (CLOs) below align with the Landscape Architectural Accreditation Board (LAAB) standards and UF's MLA Student Learning Outcomes (SLOs) are used to guide the assessment of student learning throughout their engagement in the program.

At the end of this course, students will be expected to have achieved an appropriate developmental level of the following CLOs numbered in the chart below (each with an individual name):

CONTENT
SLO 1 – Integrate concepts from the general body of knowledge of the profession of landscape architecture in design decision-making.
1. **Site Engineering:** Understand and integrate principles and practices of landscape engineering including grading, drainage, water quality and management, and other processes.
2. Engineering Impacts: Explain the impacts associated with landscape engineering, development, post-construction management and maintenance
3. **Earth Systems:** Describe earth systems - including soil science, geology, hydrology, and topography - and their influence on landscape design decision making.
SLO 2 – Apply core professional landscape architecture skills in design decision-making.
4. **Construction Documentation:** Accurately prepare design development, construction documents, and details.
SLO 3 – Apply ethical understanding to design decision-making.
5. **HSW:** Explain the ethical, legal, and professional obligations LAs have to clients, communities, the public, and the environment
CRITICAL THINKING
SLO 4 – Combine and analyze information from multiple sources to support design decision-making.
6. Quantification and Performance: Apply mathematical calculations to measure design and construction performance to quantify project impact.
COMMUNICATION
SLO 5 – Produce professional visual, oral, and written communications.
7. **Drawing Conventions:** Demonstrate and ability to employ architectural drawing conventions (diagram, plan, section, perspective) and models (physical and digital) to design three-dimensional spaces.

III. Graded Work

Grading policies

Grading policies in the course are consistent with University grades and grading policies. Deadlines for assignments are listed in the Annotated Weekly Schedule and on Canvas. Students should submit work on the dates indicated except where university policy provides an exemption.

DESCRIPTION OF GRADED WORK

Project 1 – Creative Grading Project (10% of total grade)

Students will develop a grading plan for an existing land art landform. In addition to the grading plan, students will create a 3D model.

Project 2 – Recreation Center (20% of total grade)

Making the connection between stormwater management and resource protection, students will develop a technical grading plan and perform stormwater management calculations for a site.

Exercises (70% of total grade)

Throughout the semester, students will apply knowledge through exercises. These exercises are intended to reinforce concepts learned in class.

Statement on Work Expectations: In a fall or spring class, one credit hour is the equivalent of approximately three hours of coursework per week. Students should expect to spend the equivalent of approximately 9 hours a week throughout the semester.

The graded work assesses the course learning objectives as follows:

	LAA 3420 - Course Learning Objectives (CLOs)						
	SLO1			SLO2	SLO3	SLO4	SLO5
Assessment	1	2	3	4	5	6	7
Project 1 – Creative Grading	X			X		X	X
Project 2 – Recreation Center	X			X		X	X
Exercises	X	X	X	X	X	X	X

GRADING SCALE

For information on how UF assigns grade points, visit: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/

A	93 – 100%		C	73 – 76%
A-	90 – 92%		C-	70 – 72%
B+	87 – 89%		D+	67 – 69%
B	83 – 86%		D	63 – 66%
B-	80 – 82%		D-	60 – 62%
C+	77 – 79%		E	<60

The Department acknowledges that the student retains ownership of their documents; however, it is a necessity for the Department to retain the right to use the documents for professional accreditation purposes. Furthermore, other course specific work, such as service-learning opportunities may require the Department to ultimately provide work created by students to an outside organization.
Digital copies of student work for this course must be turned in at the completion of each assignment. Please follow the instructor's directions on how they will be submitted (e.g., Canvas, CD, PDF, word file, etc.). If an assignment is required to be scanned, it must be scanned; photographs of assignments are not acceptable. If a multipage PDF is requested, do NOT submit each page as a separate PDF. It must be submitted as one file.

IV. Annotated Weekly Schedule

Week	Topics, Homework, and Assignments
Week 1	• Topic: Introduction to the course and basic grading concepts • Summary: This week students will be introduced to basic grading concepts and will complete exercises to aid in visualization of 2d representations of landforms. • Required Readings/Works: Sharky chapters 1 - 2, Strom chapters 1 & 3, Aymer p. 5-7 • Assignment: none
Week 2	• Topic: AutoCAD review and visualization • Summary: This week students will review AutoCAD and will be introduced to construction sets. We will also explore different landforms and their contour signatures. • Required Readings/Works: Sharky chapters 7- 8 & p. 94-97, 173-183, Aymer p. 13-18, Strom p.68-69 • Assignment 1: Slope in the field
Week 3	• Topic: Landform: mounds, depressions, ridges, and swales • Summary: Students will learn how to create 2d representations of 3d landforms • Required Readings/Works: Sharky chapter 9 & p. 139-153 • Assignment 2: Landforms
Week 4	• Topic: Calculating slope and interpolation • Summary: Students will learn how to calculate slopes and interpolate contours from spot elevations. • Required Readings/Works: Sharky p.212-213 • Assignment 3: Slope, spot elevations, and interpolation
Week 5	• Topic: Sections and Sidewalks

	• Summary: Students will complete grading vignettes for sidewalks and learn how to create sections through landforms. • Required Readings/Works: Sharky p. 180-183, 206-210, Strom p. 48-50, 75 • Assignment 4: Sidewalks
Week 6	• Topic: Planes • Summary: Students will complete grading vignettes for a tennis court and building pads. • Required Readings/Works: Strom p.68 • Assignment 5: Planes
Week 7	• Topic: Curbs • Summary: Students will learn how to incorporate curbs into grading plans. • Required Readings/Works: Sharky p. 218-222 • Assignment 6: Curbs
Week 8	• Topic: Parking lots • Summary: Students will learn how to grade a parking lot. • Required Readings/Works: Sharky p. 145-147, Strom p. 46-47 • Assignment 7: Parking lot
Week 9	• Topic: ASLA National Conference (no class)
Week 10	• Topic: Stairs • Summary: Students will learn how to grade stairs. • Required Readings/Works: Strom p. 66-67 • Assignment 8: Stairs
Week 11	• Topic: Roads • Summary: Students will learn how to grade roads with and without curbs. • Required Readings/Works: none • Assignment 9: Roads
Week 12	• Topic: Creative grading project • Summary: Students will use the skills developed throughout the semester to design a site using landforms. • Required Readings/Works: none • Assignment: Project 1: Creative grading project
Week 13	• Topic: Recreation Center • Summary: Students will develop a comprehensive grading plan for a recreation center.

	• Required Readings/Works: none • Assignment: Project 2: Recreation Center
Week 14	• Topic: Recreation Center • Summary: Students will continue work on Project 2. • Required Readings/Works: none
Week 15	• Topic: Recreation Center • Summary: Students will continue work on Project 2. • Required Readings/Works: none

VI. Required Policies

VI. Required Policies - https://go.ufl.edu/syllabuspolicies

Please use this link (https://go.ufl.edu/syllabuspolicies) to UF's academic policies and campus resources, including information on:

- Class Attendance
- Make-up Exams
- Assignments
- Accommodations/Disability Resources Center
- Grading Policies
- Course Evaluations
- Guidance on how to Provide Constructive Feedback
- UF's Honesty Policy
- In-Class Recording

As well as academic resources, including:

- E-learning technical support
- Career Connections Center
- Library Support
- Academic Resources: ex. General study skills and tutoring.
- Writing Studio: ex. Help brainstorming, formatting, and writing papers.
- Academic Complaints: Office of the Ombuds
- Enrollment Management Complaints (Registrar, Financial Aid, Admissions)
- UF Student Success Initiative: for resources that support your success as a UF student, and

Campus Health and Wellness Resources:

- UF Whole Gator Resources: for resources that are designed to help you thrive physically, mentally, and emotionally at UF.