DIGITAL REPRESENTATION FOR LANDSCAPE ARCHITECTURE

Abdouni Spring 2022 Landscape Architecture Clemson University

Course Catalogue Description

Introduces students to the use of computer technology in the landscape architectural design process. Covers the basics of computer applications used in the industry for conceptualizing, drafting, modeling, and graphic communications.

Introduction + Goals

Anything and everything in this class will revolve around two main concepts: production workflows and graphic agility. In any design discipline, transforming a concept into a design product is inextricable from visual representation. Oftentimes, an idea does not begin to take shape until it is "put on paper", and a design does not come through to its audience unless it is clearly produced. You, the student, will develop your graphic skills to refine your design ideas and transform them into final products in this course. We will primarily focus on developing speed and capacity in using multiple programs and creating healthy workflows. We will also work to complement, rather than replace, hand-rendered graphics. These activities will provide an environment to try out different styles and products that help you in your design studios.

Class organization

Instructional videos will be recorded and posted on the Canvas page. Your responsibility is to watch the videos before class and become familiar with the content. There might be some follow-along basic steps, so complete those before class. Take notes in your binder worksheets of steps and shortcuts that might help you work more efficiently.

In-Class exercise sessions will be dedicated to completing the assignments. Make the best out of these sessions to reduce the amount of time you need outside class for these assignments. Naturally, you should aim to complete the exercise by the deadline. If you have completed your assignment already, use class as a studio working session.

Studio working sessions will be dedicated for you to bring in your design studio work to class and work on refining your product. Do your best in getting work done that needs technical support –early stage design phases such as research, rough drafts, and ideation are best done outside the scope of this class.

Crash sessions will be at the end of every module, and the intent is to build your stamina and speed in working. You will be given an assignment at the beginning of class with a set time limit. Within the time constraint, you will work efficiently to complete the assignment to the best of your ability.

Workshop visits will be to get acquainted with the facilities at Clemson for production, specifically physical models.

Grading schema. Your grade for this class: Projects - 50% Crash Sessions - 30% Participation - 20%

Modules

Module 01: Analogue-Digital Interface. Here we will talk basics: how to organize and name files, the differences between different formats, pixel versus vector graphics, and how to move from hand rendering to scan, and from computer screen to printing. The in-class exercise shall include making color palettes, typography choices, and poster layout 101. Programs: Adobe Illustrator, Adobe Photoshop, Adobe Scan.

Module 02: Construction Documents. Deep dive into Autodesk Autocad, working with different commands, shortcuts, and preparing files for print. We will create base maps and represent topography, existing conditions, proposed design, and construction details. Programs: AutoCAD.

Module 03: 2D to 3D. Here we will talk about creating digital 3D representation of the landscape. We will start working from a vector base map and create 3D shapes. We will export views and videos. Programs: AutoCAD, Sketchup, Illustrator.

Module 04: Presentation Graphics. Assembling multiple products: How to create consistency and legibility in your product set, how to create a unifying brand, and how to coordinate digital and physical components. Programs: AutoCAD, Sketchup, Illustrator, Photoshop, Adobe Spark, ESRI storymaps (potentially InDesign).

Module 05: Production. We will go over the basics of 3D printing and create a laser cutting assignment.

Module 06: Extra. How to create reports and portfolios on InDesign. 3D rendering: Lumion/Rhino

What you need

Rendering equipment

- Trace paper
- Mixed media papers
- Markers (0.1; 0.3; 0.5; 0.7 pt)
- Pencil
- Eraser
- Engineering and Architectural scales
- Triangle
- Optional: Color rendering equipment (markers, pencils, watercolor, etc.) – if you have no preference, then perhaps try a few items in the class supply before you purchase.
- Optional: charcoal, or more specified markers

A 3-ring binder

A laptop with the following specifications:

- CPU: 9th generation Intel Core i5 or AMD Ryzen 5
- Memory: 16GB
- Hard Drive: 512GB SSD / 512GB HD
- Video Card: NVIDIA GeForce GTX 1650 6GB
- Display: 15" 1920x1080

Supporting textbooks:

- Landscape Graphics: Plan, Section, and Perspective Drawing of Landscape Spaces, Grant Reid. 2012
- Drawing for Landscape Architecture: Sketch to Screen to Site, Hutchinson. 2019
- Freehand drawing and discovery, James Richards, 2013 (available online) https://ebookcentral.proquest.com/lib/clemson/reader.action?docID=1111032
- Representing Landscapes, Analogue and Digital, Nadia Amoroso.

Class Schedule:

This is a general plan of the course activities and topics. Timeline will change upon needed.

Date	Day	Topic Covered	Due	Programs
12-Jan	Weds.	Course introduction		
Module 01: Analogue - Digital Interface				
17-Jan	Mon.	MLK Day- No Classes		
19-Jan	Weds.	In Class Exercise 01: Sketch, Scan, Layout	Make sure you have your rendering equipment with you!	Analogue, Photoshop, Illustrator
24-Jan	Mon.	In Class Exercise 01: Sketch, Scan, Layout		Analogue, Photoshop, Illustrator
26-Jan	Weds.	In Class Exercise 01: Sketch, Scan, Layout		Analogue, Photoshop, Illustrator
31-Jan	Mon.	In Class Exercise 01: Sketch, Scan, Layout		Analogue, Photoshop, Illustrator
2-Feb	Weds.	In Class Exercise 01: Sketch, Scan, Layout		Analogue, Photoshop, Illustrator
7-Feb	Mon.	Crash session 01: Design a poster in 60 minutes. Print Exercise 01.	Due Crash 01 Due Exercise 01	Analogue, Photoshop, Illustrator
Module 02: Construction Documents				
9-Feb	Weds.	In-Class Exercise 02: Existing Conditions		Autocad, GIS
14-Feb	Mon.	In-Class Exercise 02: Proposed Site Plan		Autoca, GIS
16-Feb	Weds.	In-Class Exercise 02: Proposed Site Plan		Autocad
21-Feb	Mon.	In-Class Exercise 02: Details		Autocad
23-Feb	Weds.	In-Class Exercise 02: Details / Studio Working Session		Autocad
28-Feb	Mon.	In-Class Exercise 02: Details / Studio Working Session		Autocad
2-Mar	Weds.	Crash session 02: Trace a site plan in 1 hour	Due Crash 02	Autocad
7-Mar	Mon.	Studio Working Session	Due Exercise 02	Autocad

Date	Day	Topic Covered	Due	Programs
Module 03: 2D to 3D				
9-Mar	Weds.	In-Class Exercise 03: Create a 3D Framework		Autocad, Sketchup
14-Mar	Mon.	In-Class Exercise 03: Create a 3D Framework		Autocad, Sketchup
16-Mar	Weds.	Workshop visit / Studio Working Session	Due Exercise 03	Autocad, Sketchup
21-Mar	Mon.	Spring Break- no classes		
23-Mar	Weds.	Spring Break- no classes		
25-Mar	Fri.	Spring Break- no classes		
Module 04: Presentation Graphics				
28-Mar	Mon.	In-Class Exercise 04: Rendering in 2D and 3D		Analogue, Autocad, Sketchup, Illustrator, Photoshop.
30-Mar	Weds.	In-Class Exercise 04: Rendering in 2D and 3D		Analogue, Autocad, Sketchup, Illustrator, Photoshop.
4-Apr	Mon.	In-Class Exercise 04: Rendering in 2D and 3D		Analogue, Autocad, Sketchup, Illustrator, Photoshop.
6-Apr	Weds.	Crash Session 04: Create an exploded axon in 1 hour	Due Exercise 04 / Due Crash 04	Analogue, Autocad, Sketchup, Illustrator, Photoshop.
Module 05: Production				
11-Apr	Mon.	Visit DDS		Lumion / Revit / Rhino/ Indesign
13-Apr	Weds.	Portfolio Design		TBA
18-Apr	Mon.	Portfolio Design		TBA
20-Apr	Weds.	Crash Session 05	Due: Crash 05	
25-Apr	Mon.	Crash Session 06	Due: Crash 06	
27-Apr	Weds.	Crash Session 07	Due: Crash 07	

Policies

Assignments: All work is to be handed in at the designated times. Late work will be penalized by 10% for each day it is late. Lateness due to campus printing and plotting problems will be excused only if problems are university-wide and of university, rather than student, origination. In these rare cases, there will be an extension granted.

Student Work Documentation (Accreditation): You are expected to keep all work throughout the semester. A few selected projects may be stored for use in future accreditation visits. At the end of the semester, you will be required to record some or all of your work on a CD/Dropbox/USB Drive or similar method and submit it to the Instructor.

Attendance: The academic resources of Clemson University are provided for the intellectual growth and development of students. Class attendance is critical to the educational process; therefore, students should attend scheduled courses regularly if they are to attain their academic goals.

Make-up Work Due to Missed Attendance

1. Students should speak with their course instructors regarding any scheduled absence as soon as possible and develop a plan for any make-up work.

2. In the event of an emergency, the student should make direct contact with the course instructor, preferably before a class or an exam takes place. It is the student's responsibility to secure documentation of emergencies, if required.

3. Course instructors must implement fair grading procedures and provide an opportunity to make up missed assignments and examinations that does not unfairly penalize the student. Issuing specific dates by which make up work must be submitted without confirmation from the student could constitute unfair penalization, as students with illness (including COVID-19-related illness) may not always respond in a timely manner. Such make-up work shall be at the same level of difficulty with the missed assignment or examination. Course instructors shall hold all students to the same standard for making up missed assignments or examinations.

4. While course instructors should seek to make reasonable accommodation for a student involved in University-sponsored activities, students should understand that not every course can accommodate absences and that absences do not lessen the need to meet all course objectives.

Notification of Absence

1. The Notification of Absence module in Canvas allows students to quickly notify instructors (via an email) of an absence from class and provides for the following categories: court attendance, death of immediate family member, illness, illness of family member, injury, military duty, religious observance, scheduled surgery, university function, unscheduled hospitalization, other anticipated absence, or other unanticipated absence. The notification form requires a brief explanation, dates and times. Based on the dates and times indicated, instructors are automatically selected, but students may decide which instructors will receive the notification. This does not serve as an "excuse" from class. It is a request for an excused absence and students are encouraged to discuss the absence with instructors, as the instructor is the only person who can excuse an absence. If students are unable to report the absence by computer, they may reach the Office of Advocacy and Success via 864.656.0935. Students with excessive absences who need academic or medical assistance can also contact the Office of Advocacy and Success.

Weather or Emergency Related Changes

Any exam that was scheduled at the time of a class cancellation due to inclement weather will be given at the next class meeting unless contacted by the instructor. Any assignments due at the time of a class cancellation due to inclement weather will be due at the next class meeting unless contacted by the instructor. Any extension or postponement of assignments or exams must be granted by the instructor via email or Canvas within 24 hours of the weather-related cancellation.

Syllabus Changes

The professors reserve the right to make any changes in the syllabus throughout the course as necessary. Changes in assignments, point values, due dates are also at the discretion of the professor and will be announced in advance of due dates.

Student Support

ACADEMIC SUCCESS CENTER

The Academic Success Center (ASC) offers a variety of free learning and success services for all undergraduate students that include:

Mastery of course content

- Tutoring – students can expect a 1:1 meeting with a trained undergraduate peer leader (who made an A or B in the course and was recommended by a faculty member) during which the student can share specific questions they have about course content with the tutor focused on helping the student, through questioning techniques and identification of helpful learning strategies, and master course concepts. Tutors do not help with homework or other class assignments.
- Peer-Assisted Learning (PAL) – students can expect collaborative and active group learning and study sessions focused on mastery of course content and learning strategies that is facilitated by a trained undergraduate peer leader (who made an A or B in the course and was recommended by a faculty member). PAL leaders do not help with homework or other class assignments.

ASC INCLUSION STATEMENT

We celebrate diversity in abilities, identities, and perspectives and invite Clemson students, faculty, and staff from all walks of life to participate in our programs, services, and employment. We believe that engaging with a variety of ideas and viewpoints results in deeper and more meaningful learning and creates the conditions for our students to thrive. We seek to be an active partner with Clemson students, faculty, and staff in creating an inclusive campus environment in which mutual respect and support are demonstrated for all members of our campus community.

STUDENT HEALTH AND WELLNESS RESOURCES

Student Health Services, locally known as "Redfern" Health, strengthens Clemson University by providing quality medical and mental health care and the health, safety and well-being of the campus community. Student Health Services strives to be an innovative health care system providing integrated quality services that are responsive to the needs of the University community.

CAPS: COUNSELING AND PSYCHOLOGICAL SERVICES

At Counseling and Psychological Services(CAPS), you are encouraged to be an active participant in your medical and mental health care. Which service is the right one for you hinges on your individual need, and CAPS will help you figure that out.

CAPS is committed to educating students, as well as offering "outreach services to faculty and staff members in order to improve the quality of their interactions with students and to promote a healthy work environment."

ACADEMIC INTEGRITY

As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a "high seminary of learning." Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.

All infractions of academic dishonesty by undergraduates must be reported to Undergraduate Studies for resolution through that office. In cases of plagiarism instructors may use the Plagiarism Resolution Form.