

HORT 195 Course Outline as of Fall 2025**CATALOG INFORMATION**

Dept and Nbr: HORT 195 Title: CAD:LANDSCAPE DESIGN

Full Title: CAD: Landscape Site Plans

Last Reviewed: 11/25/2024

| Units | Course Hours per Week | | Nbr of Weeks | | Course Hours Total | |
|---------|-----------------------|-------------------|--------------|------|--------------------|-------|
| Maximum | 3.00 | Lecture Scheduled | 2.00 | 17.5 | Lecture Scheduled | 35.00 |
| Minimum | 3.00 | Lab Scheduled | 3.00 | 6 | Lab Scheduled | 52.50 |
| | | Contact DHR | 0 | | Contact DHR | 0 |
| | | Contact Total | 5.00 | | Contact Total | 87.50 |
| | | Non-contact DHR | 0 | | Non-contact DHR | 0 |

Total Out of Class Hours: 70.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

Catalog Description:

In this course, students will be introduced to computer-assisted landscape drafting utilizing Computer-Aided Drafting (CAD) software to produce professional quality landscape site plans for residential and small commercial sites. Particular attention given to drafting base plans, building footprints, and other simple hardscape features, planting bed lines, plant symbolization and irrigation plan layout.

Prerequisites/Corequisites:

Course Completion of HORT 93

Recommended Preparation:

Course Completion of APTE 46

Limits on Enrollment:**Schedule of Classes Information:**

Description: In this course, students will be introduced to computer-assisted landscape drafting utilizing Computer-Aided Drafting (CAD) software to produce professional quality landscape site plans for residential and small commercial sites. Particular attention given to drafting base plans, building footprints, and other simple hardscape features, planting bed lines, plant

symbolization and irrigation plan layout. (Grade or P/NP)
Prerequisites/Corequisites: Course Completion of HORT 93
Recommended: Course Completion of APTE 46
Limits on Enrollment:
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

| | | | |
|----------------------|----------------------|------------|-----------|
| AS Degree: | Area | Effective: | Inactive: |
| CSU GE: | Transfer Area | Effective: | Inactive: |
| IGETC: | Transfer Area | Effective: | Inactive: |
| CSU Transfer: | | Effective: | Inactive: |
| UC Transfer: | | Effective: | Inactive: |

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

COURSE CONTENT

Student Learning Outcomes:

At the conclusion of this course, the student should be able to:

1. Use CAD software to produce professional quality landscape site plans for residential and small commercial sites.
2. Use CAD software to show base plans, building footprints, property lines, and other simple site features.
3. Apply CAD software graphic symbols to landscape plans including vegetation and pattern lines, plant outlines, locating trees and shrubs.
4. Apply correct symbols and labeling styles for an irrigation plan layout including irrigation heads, valves, pipe, drip irrigation, and mainline pipe layout/placement.

Objectives:

At the conclusion of this course, the student should be able to:

1. Create a new landscape drafting project using the CAD software program.
2. Prepare a base plan for a landscape drafting project.
3. Place and modify text in a drawing.
4. Illustrate plants in a landscape planting plan.
5. Create a plant schedule to identify plant material in a planting plan.
6. Develop a computer drafted irrigation plan from a schematic drawing.
7. Arrange mainline and lateral pipe in an irrigation plan.

Topics and Scope:

- I. Beginning the Project
 - A. Adding a project
 - B. Default CAD settings

C. Plot scales

II. Base Plan

- A. Property line input
- B. Property line construction
- C. Baseline offsets
- D. Drafting a building footprint
- E. Inserting openings in building footprint
- F. Utility symbols

III. Dimensioning and Labeling

- A. Placing/editing text
- B. Summing areas and lengths by layer
 - 1. Sum area by layer
 - 2. Sum by length of lines

IV. Landscape Layout

- A. Typical graphics
 - 1. Linetypes for property line, building lines, easements, utilities, and other features.
 - 2. Use of hatch patterns, both conventional and creative.
 - 3. Plant graphic types and plant shadows
 - 4. Use of area outlines
 - 5. Other symbol graphics
- B. Placement of plant symbols
- C. Converting symbols and modifying attributes
 - 1. Converting a conceptual design to a planting plan
 - 2. Modifying plant attributes
- D. Labels
 - 1. Anatomy of a label
 - 2. Selecting size and style of labels

V. Plant Selection and Plant Schedule

- A. Labeling plants
- B. Editing plant labels
- C. Plant selection
- D. Creating a plant schedule

VI. Quantity Takeoffs and Estimates

VII. Irrigation Design

- A. Getting Started
 - 1. System components and configuration
 - 2. Typical graphic symbols
- B. Water-Efficient Landscape Ordinance (WELo) requirements
- C. Placing irrigation infrastructure
 - 1. Point of Connection (POC)
 - 2. Mainline(s)
 - 3. Valves
 - 4. Laterals
 - 5. Irrigation stub-up
 - 6. Spray heads
 - 7. Hose bibbs
 - 8. Controller(s)
- E. Completing an Irrigation Plan
 - 1. Hydrozone plan
 - 2. Irrigation plan and legend
 - 3. Irrigation details

All topics are covered in the lecture and lab portions of the course

Assignment:

Lecture-Related Assignments:

1. Quiz(zes) (0-4), and exam(s) (1-2)
2. Weekly reading (5-10 pages per week) and homework

Lab-Related Assignments:

1. Lab exercises (2-8) related to basic CAD commands, production of base maps, drafting a site from field measurements, converting hand drawn designs into CAD, creating and drafting of a landscape master plan, and creating and drafting of construction documents such as: planting plans, irrigation plans, lighting plans, and/or construction details

Both Lecture- and Lab-Related assignments:

1. CAD Projects (2-4) related to creation of site plans, planting plans, and irrigation plans.
2. Field trip(s) may be required (0 - 4)

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

Writing
0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework, lab exercises

Problem solving
10 - 20%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Lab exercises, CAD Projects

Skill Demonstrations
50 - 70%

Exams: All forms of formal testing, other than skill performance exams.

Quiz(zes) and exam(s)

Exams
10 - 40%

Other: Includes any assessment tools that do not logically fit into the above categories.

Class participation, including field trips

Other Category
0 - 15%

Representative Textbooks and Materials:

Periodicals and professional journals.

Instructor prepared materials.