HORT 196 Course Outline as of Fall 2020

CATALOG INFORMATION

Dept and Nbr: HORT 196   Title: CAD:ADV LANDSCAPE DESIGN
Full Title: CAD: Advanced Landscape Design
Last Reviewed: 4/27/2020

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:
Intermediate to advanced application of Computer-Aided Drafting (CAD) software towards production of professional quality landscape site plans for residential and small commercial sites. Particular attention is given to drafting construction documents such as planting plans and legends, irrigation plans, lighting plans, and construction detail drawings. This course builds upon skills learned in HORT 195.

Prerequisites/Corequisites:
Course Completion of HORT 195

Recommended Preparation:
Course Completion of APTECH 46 and eligibility for CS 5 or proficiency in basic productivity software including word processing, spreadsheet, and presentation software

Limits on Enrollment:

Schedule of Classes Information:
Description: Intermediate to advanced application of Computer-Aided Drafting (CAD) software towards production of professional quality landscape site plans for residential and small commercial sites. Particular attention is given to drafting construction documents such as

planting plans and legends, irrigation plans, lighting plans, and construction detail drawings. This course builds upon skills learned in HORT 195. (Grade or P/NP)
Prerequisites/Corequisites: Course Completion of HORT 195
Recommended: Course Completion of APTECH 46 and eligibility for CS 5 or proficiency in basic productivity software including word processing, spreadsheet, and presentation software
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:
Certificate Applicable Course

COURSE CONTENT

Student Learning Outcomes:
At the conclusion of this course, the student should be able to:
1. Demonstrate aptitude in application of CAD software through creation of a landscape plan package of construction drawings.
2. Critique CAD drawings done by other students and professionals based on graphic conventions and knowledge of principles of landscape drafting and design.

Objectives:
Students will be able to:
1. Develop a professional landscape plan package from initial base map, to schematic design, to construction
    documentation drawings.
2. Organize files for a CAD project including external references, project documentation, and portable document
    format (PDF) plan drawings.
3. Create illustrative graphics to convey design projects including sections, section elevations, and perspective
    drawings.
4. Create a Color-dependent plot style (.CTB).
5. Design and draft custom detail drawings for landscape features such as fences, retaining walls, and planters.
6. Create custom annotation styles for labels and leader lines in a CAD drawing.
7. Develop material quantity take-offs from a landscape CAD drawing.

Topics and Scope:

I. Review of Landscape Plan Drawing Types and Process
   A. Site inventory and analysis
   B. Base map preparation
   C. Schematic design
   D. Construction documentation
   E. Illustrative drawings and supplemental documentation
II. Review of Landscape Project File Organization
   A. Folder structure organization
   B. External References (XREFs)
   C. PDF drawings
   D. Project documentation
      1. Contract
      2. Site photos
      3. Client information
      4. Other project docs
III. CAD Drawing Customization
   A. Drafting options
   B. User Coordinate System (UCS)
   C. Plot style creation and CTB files
   D. Page setup options
   E. Annotation styles
IV. Custom Details for Landscape Design
   A. Material types
      1. Unit types
      2. Cost
      3. Sustainability
      4. Mechanics
      5. Graph paper as a tool for detail design
   B. Fasteners
   C. Types
      1. Fences
      2. Walls
      3. Planters
      4. Other
   D. Engineering: structural properties and considerations for various materials
V. Creating a Landscape Plan Package
   A. Workflow
   B. External references (XREFs) management
   C. Redlines and revisions
   D. Client communication and deliverables
VI. Material Take Offs and Project Estimation
   A. Methods for estimating quantities
      1. Hand count
      2. CAD commands
   B. Plants, irrigation, and hardscape
   C. Creating a summary sheet in Excel

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

Assignment:

Lecture-Related Assignments:
1. Quizzes (2 - 14), and exam(s) (1 - 2)
2. Weekly reading and homework: 5-10 pages per week

Lab-Related Assignments and Projects:
1. Lab exercises (2 - 6) related to advanced CAD commands, project organization, development of illustrative
   drawings, critique of student and professional CAD drawings, creation of material take-offs, and drawing
   setup.

Both Lecture- and Lab-Related assignments:
1. Lab project(s) (1 - 3)
2. Final project and Presentation
3. Field trips 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.

Lab exercises, homework	Problem solving 10 - 20%

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

Lab project(s), Final Project and Presentation	Skill Demonstrations 60 - 80%

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

Quizzes and exam(s)	Exams 10 - 20%

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

Participation and attendance, including field trips	Other Category 0 - 10%

Representative Textbooks and Materials:
Periodicals and professional journals.
Instructor prepared materials.