

Lecture Contact Hours: 32-36; Outside-of-Class Hours: 64-72;  
Laboratory Contact Hours: 48-54; Outside-of-Class Hours: 0;  
Total Student Learning Hours: 144-162

**CUYAMACA COLLEGE**  
**COURSE OUTLINE OF RECORD**

**Ornamental Horticulture 201 – Advanced Computer-Aided Landscape Design**

2 hours lecture, 2 units  
3 hours laboratory, 1 unit  
Total units: 3

**Catalog Description**

Use of computer-aided landscape design software for the application of graphics, symbols, patterns, layouts, text and scales for the development of design drawings, concept plans, construction documents and cost estimates for residential landscape projects. *Also listed as CADD 201. Not open to students with credit in CADD 201.*

**Prerequisite**

“C” grade or higher or “Pass” in CADD/OH 200 or equivalent

**Entrance Skills**

Without the following skills, competencies and/or knowledge, students entering this course will be highly unlikely to succeed:

- 1) Utilize the functions of AutoCAD to prepare landscape plans including a color conceptual plan, construction layout, and planting plans.
- 2) Use AutoCAD to count blocks and calculate areas for cost estimating.
- 3) Use AutoCAD in preparation of a landscape site plan from field notes on a landscape project.
- 4) Use editing tools in AutoCAD to edit a landscape design project.

**Course Content**

- 1) Use AutoCAD to prepare a color conceptual design plan for a residential landscape design.
- 2) Use LandFX supplemental software to prepare a planting plan
- 3) Use SketchUp software to prepare a 3D model of a landscape design.
- 4) Prepare a set of landscape construction documents including a construction layout, planting plan irrigation plan, and lighting plan.

**Course Objectives**

Students will be able to:

- 1) Demonstrate the use of AutoCAD symbols and graphic patterns in landscape designs; complete residential landscape plans including hardscape features, irrigation, drainage and planting plans.
- 2) Identify AutoCAD objects and demonstrate the ability to design components for landscape designs. Create industry recognized landscape symbols, linework, and quantify for cost estimating.
- 3) Explain and demonstrate the use of multiple model space and layouts in AutoCAD.
- 4) Use AutoCAD to design and produce a graphic presentation of a landscape plan for a client presentation.
- 5) Compare and contrast alternative software and supplemental design and presentation software for residential landscape design and client presentations.

**Method of Evaluation**

A grading system will be established by the instructor and implemented uniformly. Grades will be based on demonstrated proficiency in subject matter determined by multiple measurements for evaluation, including skills demonstration or, preparation of landscape plans and 3D models.

- 1) Exercises that measure students' ability to:
  - a. Use AutoCAD to prepare landscape plans which include hardscape features, irrigation, drainage and planting plans.
  - b. Use AutoCAD to rotate, scale and place objects.
  - c. Explain design concepts, concept plans, planting plans and AutoCAD graphics and presentation tools.
- 2) Prepare landscape plans in AutoCAD, LandFX, and SketchUp.:
  - a. Select the appropriate design and presentation software for use in landscape design and client presentations.
  - b. Recognize, explain and provide examples of AutoCAD symbols, graphic patterns and multiple design environments.
- 3) Participation in class activities that measures students' ability to articulate the fundamental CADD applications in landscaping architecture.

### **Special Materials Required of Student**

None

### **Minimum Instructional Facilities**

CAD computer lab

### **Method of Instruction**

- 1) Lecture and demonstration
- 2) Lab activities

### **Out-of-Class Assignments**

- 1) **Reading:** review lecture notes, course materials, and digital resources on AutoCAD, LandFX, and SketchUp; research industry standards for landscape plans and construction documents.
- 2) **Writing:** reflections or short reports on AutoCAD terminology, symbols, and design concepts; document legends, scales, project notes, and cost estimates; analyze and compare design software.
- 3) **Other:** practice exercises in AutoCAD, LandFX, and SketchUp; develop conceptual, planting, irrigation, lighting, and construction plans; create 3D models; and prepare professional construction documents with quantified materials for cost estimates.

### **Texts and References**

- 1) Required (representative examples):
  - a. Shrock, Heather. Advanced AutoCAD® 2022.
  - b. Exercise Workbook. Industrial Press, Inc.2021. 978-0831136673
- 2) Supplemental: The complete guide to Sketchup Pro: All you need to know for mastering Sketchup Pro, using the power of extension and Layout Paperback – May 11, 2021 by Yael Kedem.

### **Student Learning Outcomes**

Upon successful completion of this course, students will be able to:

- 1) Use AutoCAD, LandFX, and SketchUp software to create industry recognized landscape design plans.
- 2) Identify, create, and properly use landscape design industry recognized symbols in AutoCAD, LandFX, and SketchUp.
- 3) Use AutoCAD, LandFX, and SketchUp to create landscape design client presentations and to prepare landscape design drawings.