Las Positas College
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Course Outline for INTD 40

COMPUTER AIDED DESIGN

Effective: Fall 2018

I. CATALOG DESCRIPTION:
INTD 40 — COMPUTER AIDED DESIGN — 3.00 units

Introduction to basic techniques in computer aided design for interior design, with emphasis on user terminology and hands-on learning. How to set up drawings, dimensioning systems appropriate to architecture. Floor plans, details, drawings and other techniques using the computer.

2.00 Units Lecture 1.00 Units Lab

Grading Methods:
Letter or P/NP

Discipline:
- Interior Design

	MIN
Lecture Hours:	36.00
Expected Outside of Class Hours:	72.00
Lab Hours:	54.00
Total Hours:	162.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

IV. MEASURABLE OBJECTIVES:

Upon completion of this course, the student should be able to:

A. Apply CAD operations and procedures
B. Use drawing tools
C. Modify objects
D. Use properties components
E. Demonstrate the use of duplication and reflection.
F. Demonstrate the imposition of text on drawings
G. Create dimensions
H. Create layering
I. Demonstrate the use of 3d rendering
J. Move a project from sketch to plot
K. Print working drawings along with details.

V. CONTENT:
A. Basic CAD operations and procedures
1. Starting CAD
2. Toolbars
3. Use of functions
4. Model space and paper space
5. Zoom
6. Snap/object snap
7. Specifying coordinates
8. Line tool
9. Saving and closing files
10. Opening files
B. Drawing tools
1. The draw menu
2. Construction lines
3. Walls
4. Ceilings
5. Floors
6. Roof
7. Landscape

8. Selecting and editing objects

C. Modifying objects
   1. The modify toolbar
   2. Erase
   3. Copy
   4. Mirror
   5. Offset
   6. Move
   7. Rotate
   8. Scale
   9. Stretch
   10. Break
   11. Explode
   12. Colors
   13. Materials
   14. Cutting
   15. Surfaces

D. Text
   1. Text on drawings
   2. Text on Title Blocks

E. Dimensions
   1. Adding dimensions
   2. Line weights
   3. Dimension style

F. Layers
   1. Creating layers
   2. Layer filters
   3. Objects and layers

G. 3D perspectives
   1. 3D modes
   2. Rendering
   3. Fly around
   4. Printing of perspectives

VI. METHODS OF INSTRUCTION:

A. Analysis/critique of individual exercises and projects
B. **Lecture** -
C. **Demonstration** -
D. Individual consultation
E. Hands-on activities in computer laboratory
F. **Field Trips** -
G. **Guest Lecturers** -
H. Video
I. Readings from text and other sources

VII. TYPICAL ASSIGNMENTS:

A. Projects using CAD
   1. Draw a simple floor plan
   2. Draw a floor plan from measurements or follow along with creating a new scaled floor plan
   3. Do take off drawings; elevations, sections & perspective
   4. Do detailed drawings
   5. Draw a roof plan
   6. Edit materials
   7. Draw furniture layout
   8. Presentation of final finished design using color, print out, etc

VIII. EVALUATION:

A. **Methods**

   1. Projects
   2. Field Trips
   3. Class Participation
   4. Class Work
   5. Home Work
   6. Lab Activities
   7. Final Performance

B. **Frequency**

   1. Projects - Weekly exercises and assignments/projects, about 15 in total
   2. Field Trip - Once per semester
   3. Weekly class participation and class work
   4. Homework is assigned weekly
   5. Lab activies are done in each class
   6. Final Performance is a finished design project with class presentation

IX. TYPICAL TEXTS:

1. Alina Rutten. *Introduction to Residential Design.* 9th ed., Tech Ed Concepts, INc., 2016.
2. Kim, Marcus, and Lance Kirby. *Mastering Autodesk Revit 2017 for Architecture.* 1st ed., Wiley, 2017.
3. Cadsoft Corp. *Introduction to Residential Design.* 12 ed., Tech Ed Concepts, 2016.
4. Schreyer, Alexander. *Architectural Design with SketchUp: 3D Modeling, Extensions, BIM, Rendering, Making, and Scripting.* 2nd ed., Wiley, 2017.

X. OTHER MATERIALS REQUIRED OF STUDENTS:

A. A computer (during studio time and outside)
B. Print card and Flash Drive