

**PALOMAR COLLEGE**  
**COURSE OUTLINE OF RECORD FOR**  
**DEGREE CREDIT COURSE**

  X   Transfer Course   X   A.A. Degree applicable course  
(check all that apply)

**COURSE NUMBER AND TITLE:** CFT 172 TurboCAD for Cabinets & Furniture

**UNIT VALUE:** 2/3/4

**MINIMUM NUMBER OF SEMESTER HOURS:** 64, 96, 128 Lecture/Laboratory

**BASIC SKILLS REQUIREMENTS:** Appropriate language, writing, computation and computer skills.

**ENTRANCE REQUIREMENTS**

**PREREQUISITE:** None

**COREQUISITE:** None

**RECOMMENDED PREPARATION:** None

**SCOPE OF COURSE:**

Introduction to TurboCAD and to basic CAD concepts and their direct application to the design and drawing of custom cabinets and furniture, as an alternative to “pencil & paper” drawing. Topics will include: extensive 2D and 3D drawing, modifying, and editing tools; the production of measured, shop drawings as an essential first step in the construction of a project; rendering, as a tool in the visualization of concept design.

**SPECIFIC COURSE OBJECTIVES:**

The student will:

1. Contrast the advantages of full-scale drawing versus traditional scaled drawing
2. Comprehend the precision and accuracy that CAD provides
3. Utilize the advantage of automation in efficient drawing creation
4. Compare the difference between “model space” and “paper space”
5. Demonstrate the use of “layers” as a tool to manage complex projects
6. Demonstrate the use of “snaps” as a tool in developing drawing accuracy
7. Demonstrate the use of 2D drawing tools as a means of developing orthographic drawings
8. Demonstrate the use of 3D modeling tools as a means of creating conceptual drawings
9. Prepare “measured, shop drawings” as a first step in cabinet & furniture construction

**CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:**

- I. Introduction
  - A. What is CAD?
    1. Model space vs. paper space
    2. Accuracy

- 3. Automation
    - 4. Vector graphics
    - 5. 2D vs. 3D
  - B. Computer needs
    - 1. Processor
    - 2. Memory
    - 3. Monitors
  - C. Self-training sources
    - 1. Training Guides
    - 2. 3<sup>rd</sup> party books
  - D. Help sources
    - 1. Manuals
    - 2. Program help files
    - 3. Forums
  - E. Web sites
    - 1. TurboCAD
    - 2. IMSI
    - 3. CADCourse
    - 4. ITUG
- II. Desktop
  - A. Menus
  - B. Standard tool bar
  - C. Properties tool bar
  - D. Inspector bar
  - E. Status bar
  - F. Palettes
- III. Program Setup -- customization
  - A. Desktop
  - B. Toolbars and Menu
  - C. Auto-Naming
  - D. File Locations
  - E. Symbol Libraries
  - F. General
  - G. Preference
  - H. Color Palette
  - I. Warning Dialogs
- IV. Drawing Setup
  - A. Templates
  - B. Display
  - C. Space Units
  - D. Angle
  - E. Layers
  - F. ACIS
  - G. Render Scene Environment
  - H. Grid
  - I. Advanced Grid
- V. Drawing Tools
  - A. Selection tools
  - B. Construction lines
  - C. Point tools
  - D. Line tools

- E. Double line tools
- F. Multiline tools
- G. Circle & ellipse tools
- H. Arc tools
- I. Curve tools
- J. Viewport
- K. 3D object tools
- L. Architecture tools
- M. Hatching tools
- N. Dimension tools
- O. Text tools
- P. Light tools
- Q. Camera tools
- R. Modify tools
- S. Boolean tools
- T. Explode tool
- U. Group/block tools
- V. Copy tools
- VI. Snap modes
- VII. Palettes
- VIII. Workplanes
- IX. Printing drawings
  - A. Paper space
  - B. Viewports
  - C. Scaling
- X. Rendering
  - A. Hidden line
  - B. Lights
  - C. Materials Editor

**REQUIRED READING:**

Various documents prepared and provided by the instructor along with manuals provided by the software company, IMSI, Novato, CA.

**SUGGESTED READING:**

- Doucette, Kevin. Mastering TurboCAD v8 2D, Beaverbank, Nova Scotia, Canada, 2001
- Doucette, Kevin. Mastering TurboCAD v8 3D, Beaverbank, Nova Scotia, Canada, 2001
- Doucette, Kevin. TurboCAD Unlocked, Beaverbank, Nova Scotia, Canada, 2002
- Hubich, Henry O. Photorealism in TurboCAD v8, Upperco, Maryland, 2002
- TAFE NSW. CADCourse Essentials, CADCourse.com, Petaluma, CA, 2002
- Berry, Rob and Taylor, Dave. Space Station – Episode I, CADCourse.com, Petaluma, CA, 2002

**REQUIRED WRITING:**

The completion of measured shop drawings, and a class critique reviewing the techniques learned in the class, submitted on disk.

**OUTSIDE ASSIGNMENTS:**

**Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.**

**INSTRUCTIONAL METHODOLOGY:**

**Check all that apply:**

- lecture
- laboratory
- lecture-laboratory combination
- directed study

**DISTANCE LEARNING:**

**This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.**

Yes  No

**If yes, check all that apply:**

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

**GRADING POLICY AND STANDARDS** (include methods of determining whether the stated objectives have been met by students):

Class Participation	40%
Drawing Project	60%

**IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?**

Yes  No  Number of times course may be taken for credit: 3

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable: 58161 © (2) (A)

**CONTACT PERSON:** Pat Curci, extension 5512

**SIGNATURES ON FILE:**