



Course Number and Title: EDD 271 Advanced CAD

Campus Location:

Stanton

Effective Date:

2020-52

Prerequisite:

EDD 171

Co-Requisites:

none

Course Credits and Hours:

3.00 credits

2.00 lecture hours/week

2.00 lab hours/week

Course Description:

This course is a continuation of the Introduction to CAD course. Students elaborate on advanced computer-aided drawing and editing commands, symbol libraries, attributes, and pictorial drawings.

Required Text(s):

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore.

Check your course schedule for the course number and section.

Additional Materials:

None

Schedule Type:

Classroom Course

Video Conferencing

Web Conferencing

Hybrid Course

Online Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Create CAD drawings with appropriate values for all settings. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 3, 4, 5)
2. Create symbol libraries with attributes. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 3, 4, 5)
3. Generate a bill of materials. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 3, 4, 5)
4. Create pictorial drawings. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 3, 4, 5)
5. Prepare and construct hard copy drawings using printers. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 3, 4, 5)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

Measurable Performance Objectives (MPOs):

Upon completion of this course, the student will:

1. Create CAD drawings with appropriate values for all settings.
 1. Set up drawing files with correct units, limits, snap, grid, layers, file names, and other settings.
 2. Manage and back up files for safekeeping.
 3. Organize toolbars and other screen settings for drafting efficiency.
2. Create symbol libraries with attributes.
 1. Create symbols as blocks.
 2. Create blocks as drawing files.
 3. Assign attributes to blocks.
 4. Edit blocks with attributes.
3. Generate a bill of materials.
 1. Create a template file for the storage of block attribute data.
 2. Extract attribute values to create a bill of materials.
 3. Edit visible and hidden attributes to blocks.
4. Create pictorial drawings.
 1. Construct isometric objects.
 2. Construct oblique objects.
 3. Create isometric text styles.
 4. Demonstrate isometric and oblique dimensioning techniques.
5. Prepare and construct hard copy drawings using printers.
 1. Prepare various blocks for paper, printers, and scale options.
 2. Reference an existing drawing onto a current drawing.
 3. Construct a multi-view drawing using external references of different scales.

Evaluation Criteria/Policies:

Students must demonstrate proficiency on all CCPOs at a minimal 75 percent level to successfully complete the course. The grade will be determined using the Delaware Tech grading system:

92	-	100	=	A
83	-	91	=	B
75	-	82	=	C
0	-	74	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

Final Course Grade:

Calculated using the following weighted average

Evaluation Measure	Percentage of final grade
Drawing Exercises (Formative)	40%
Exams (Summative) (Equally Weighted)	50%
Online quizzes (Summative) (Equally Weighted)	10%
TOTAL	100%

Core Curriculum Competencies (CCCs are the competencies every graduate will develop):

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):

1. Prepare detailed mechanical, machine, architectural, structural, HVAC, industrial piping, and electrical/electronics drawings for light commercial, manufacturing, and industrial companies.
2. Perform routine structural design calculations required to size steel beams, columns, and decking materials in accordance to AISC standards and reinforced concrete slabs and foundation footings in accordance to ACI standards.
3. Support manufacturing office administration activities with the ability to read and interpret drawings and specifications, prepare technically accurate drawings using both manual and CAD techniques, perform quantity surveys and organize cost data for cost estimating functions, prepare or check shop drawings, assist in the planning or coordinating of manufacturing activities, assist designers, and coordinate the preparation and review of bid packages.
4. Provide meaningful and innovative assistance to supervising engineers or designers by developing layout design solutions to manufacturing problems, recommending alternate material substitutions or methods of production, and applying reference resources to collect, organize, and analyze required research data.
5. Collect, organize, and analyze data for manufacturing machine parts, and prepare plans for department and/or client approval.

Disabilities Support Statement:

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.