

CET 85 Course Outline as of Fall 1981**CATALOG INFORMATION**

Dept and Nbr: CET 85

Title: CIVIL COMP DRAFTING

Full Title: Civil Engineering Computer-Aided Drafting/Design

Last Reviewed: 10/24/2022

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	17.5	Lab Scheduled	52.50
		Contact DHR	2.00		Contact DHR	35.00
		Contact Total	7.00		Contact Total	122.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 192.50

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

Catalog Description:

Computer-aided drafting/design for the civil-engineering technician. The D.C.A. civil software program will be utilized. Areas covered include: input of boundary, contours, and field data, creation of DTM model topography, design of a road plan and profile, building layout, design utilities, and titles and notes.

Prerequisites/Corequisites:

Applied Tech 57, Advanced Auto Cad, CET 50A & 50B, Plane Surveying, or equivalent.

Recommended Preparation:

CET 51, Map Drafting.

Limits on Enrollment:**Schedule of Classes Information:**

Description: Preq: Applied Tech 57, CET 50A-50B or equivalent. Recomm: CET 51. Computer-aided drafting/design for the civil-engineering technician. The D.C.A. civil software program will be utilized. Areas covered include: input of boundary contours & field data, creating of DTM model topography, design of a road plan & profile, building layout, design utilities and titles and notes. (Grade only) COURSE RENUMBERED TO CEST - 94/95. (Grade Only)

Prerequisites/Corequisites: Applied Tech 57, Advanced Auto Cad, CET 50A & 50B, Plane Surveying, or equivalent.

Recommended: CET 51, Map Drafting.

Limits on Enrollment:

Transfer Credit: CSU;

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:	Transferable	Effective:	Fall 1995	Inactive:
----------------------	--------------	------------	-----------	-----------

UC Transfer:		Effective:		Inactive:
---------------------	--	------------	--	-----------

CID:

Certificate/Major Applicable:

Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:

Upon completion of this course, the students will:

1. Input existing boundary, contours, and field data.
2. Create a DTM model topography.
3. Design a road plan and profile.
4. Layout buildings and utilities while working with existing and proposed utilities.
5. Design utilities (sanitary, storm, water, etc).
6. Organize the project on standard size sheets, then title and note.
7. Plot the project.

Topics and Scope:

1. Course introduction and organization.
2. Introduction to input reduction and logo modules.
 - A. Input existing bearings and distances, tree point file and digitized contours.
3. Introduction to the DTM module.
 - A. Create DTM model topography, check contours and tree data.
 - B. Create line by contours.
 - C. Create 3-D grid.
 - D. Create and view contours.
4. Introduction to design and highways modules.
 - A. Design road plan and profile.
 - B. Layout center line and stations.
 - C. Create offsets, profile, vertical curves, and template for

- road.
- D. Define profile to "outside of drawing".
- E. Process templates, obtain earthwork.
- F. Import daylight lines.
- G. Label profile.
- 5. Building layout and utility layout.
 - A. Make, digitize, or import build block, fire hydrants, street lights, trees.
 - B. Set parameters for placing utilities.
 - C. Place buildings and utilities.
- 6. Design utilities (sanitary, storm, water, etc.).
 - A. Create offsets for utilities.
 - B. Layout utilities using plan and profile restrictions.
- 7. Draw "D" size sheet with title blocks.
 - A. Set text size and style and import notes via logo notes.
 - B. Use various text sizes to create a text.
 - C. Plot project using a view.

Assignment:

1. Reading and written assignments as assigned by instructor.

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.

None

Problem solving
0 - 0%

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

Class performances

Skill Demonstrations
40 - 55%

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

Multiple choice, True/false, Matching items, Completion

Exams
10 - 25%

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

None

Other Category 0 - 0%

Representative Textbooks and Materials:
D.C.A. Civil Engineering Software Manual.