

CATALOG INFORMATION

Dept and Nbr: CEST 51

Title: MAP DRAFTING TECH

Full Title: Map Drafting Techniques

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	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 157.50

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: CET 51

**Catalog Description:**  
Map drafting techniques; use and care of drafting instruments and equipment; working on various drafting media with emphasis on reproduction quality. Field note reduction and computations.

**Prerequisites/Corequisites:**  
CEST 50A (formerly CET 50) or equivalent with grade of "C" or better.

**Recommended Preparation:**

**Limits on Enrollment:**

**Schedule of Classes Information:**  
Description: Map drafting techniques related to surveying & civil engineering. (Grade Only)  
Prerequisites/Corequisites: CEST 50A (formerly CET 50) or equivalent with grade of "C" or better.  
Recommended:  
Limits on Enrollment:  
Transfer Credit: CSU;

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

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	<b>Effective:</b>	<b>Inactive:</b>
<b>CSU GE:</b>	<b>Transfer Area</b>	<b>Effective:</b>	<b>Inactive:</b>

<b>IGETC:</b>	<b>Transfer Area</b>	<b>Effective:</b>	<b>Inactive:</b>
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<b>CSU Transfer:</b>	Transferable	<b>Effective:</b>	Fall 1981	<b>Inactive:</b>
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<b>UC Transfer:</b>		<b>Effective:</b>		<b>Inactive:</b>
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**CID:**

**Certificate/Major Applicable:**

Certificate Applicable Course

## **COURSE CONTENT**

### **Outcomes and Objectives:**

The students will:

1. Identify and demonstrate the use and care of drafting tools and mediums used in map drafting.
2. Demonstrate the technique of plotting data by protractor, drafting machine, coordinates and other acceptable methods.
3. Demonstrate their knowledge and skills in drafting by reducing surveyors field notes to draft records of surveys, parcel maps, topographic maps, plan and profile drawings, final maps and other types of maps used in surveying, engineering and construction.
4. Construct various maps by interpreting legal descriptions including public land survey system, rights-of-way and other easements.
5. Identify and list the necessary elements to be shown on the various maps used in surveying, engineering, and construction.
6. Identify the two basic map projections and illustrate their use.

### **Topics and Scope:**

1. Types of maps, scales, styles, and symbols used.
2. Proper use and care of drafting tools and mediums.
3. Methods of plotting data.
4. Use and basic characteristics of contours.
5. Special plot plan problems - Assessor's maps, recorder's office, deed description, public land survey system, records of survey, parcel maps.
6. Special topographic problems - plan and profiles site plans, cross sections, cut and fill problems.
7. Legal responsibility - Land Surveyors Act, Recorder's Office, etc.
8. Map projections.

**Assignment:**

## Lecture and Laboratory:

1. Use and types of scales.
2. Basic drafting tools and their use.
3. Drafting mediums, their use and care.
4. Plotting by protractor, drafting machine and coordinates.
5. Types of line and standard mapping symbols.
6. Surveyor field notes and their interpretation.
7. Interpretation of deeds and other legal descriptions.
8. Developing legal plot plans.
9. Construction topographic maps.
10. Constructing plan and profiles.
11. Uncommon types of maps.
12. Map projections and their use.

## 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.

Homework problems, Exams, Drawings

Problem solving  
15 - 25%

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

Performance exams, Drawings

Skill Demonstrations  
40 - 60%

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

Multiple choice, Matching items, Completion, Computational

Exams  
25 - 35%

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

Class Participation

Other Category  
0 - 10%

## Representative Textbooks and Materials:

SURVEY DRAFTING, 2nd Edition by G. H. Wattles, Gordon H. Wattles

