

CEST 64 Course Outline as of Fall 2023**CATALOG INFORMATION**

Dept and Nbr: CEST 64 Title: PUBLIC WORKS INSPECTION

Full Title: Public Works Inspection and Testing

Last Reviewed: 10/24/2022

Units	Course Hours per Week		Nbr of Weeks		Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	8	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

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:

Catalog Description:

In this course students will be introduced to instruction on specific inspection and testing techniques used in public works projects. Topics include identifying duties, responsibilities, policies, procedures, and methods for inspection and testing performed for cities, counties, and public agencies in California. Contracts, specifications, and construction drawings will be discussed. Responsibilities of the contractor, the engineer, the inspector, and the owner will be included. Prime consideration will be given to developing inspection records, identifying duties, and project journals.

Prerequisites/Corequisites:**Recommended Preparation:****Limits on Enrollment:****Schedule of Classes Information:**

Description: In this course students will be introduced to instruction on specific inspection and testing techniques used in public works projects. Topics include identifying duties,

responsibilities, policies, procedures, and methods for inspection and testing performed for cities, counties, and public agencies in California. Contracts, specifications, and construction drawings will be discussed. Responsibilities of the contractor, the engineer, the inspector, and the owner will be included. Prime consideration will be given to developing inspection records, identifying duties, and project journals. (Grade Only)

Prerequisites/Corequisites:

Recommended:

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: Spring 2010	Inactive:
UC Transfer:		Effective:	Inactive:

CID:

Certificate/Major Applicable:

Both Certificate and Major Applicable

COURSE CONTENT

Student Learning Outcomes:

At the conclusion of this course, the student should be able to:

1. Read and interpret contract language, construction drawings, specifications, and standards.
2. Perform typical public works inspection duties for surface features, underground utilities, and site improvements.
3. Prepare appropriate diagrams and reports for public works projects.

Objectives:

At the conclusion of this course, the student should be able to:

1. Define and describe the responsibilities, inspection policies, and procedures of the Public Works Inspector.
2. Prepare daily project journals, reports, and other written communication for public works projects.
3. Identify and perform the required tests for soils, concrete, and aggregates.
4. Identify and describe correct safety procedures on a construction site.

Topics and Scope:

- I. Introduction to Public Works Inspection
 - A. Policies and procedures
 - B. Records and reports
 - C. Safety

- D. Contracts, construction drawings, specifications, and standards
- E. Project administration
- F. Scheduling and management
- II. Construction Materials
 - A. Soils and aggregates
 - B. Concrete
 - C. Asphalt and paving
 - D. Piping and conduits
 - E. Structure materials
 - F. Construction materials standards
 - G. Material testing
- III. Construction Methods and Inspection Procedures
 - A. Earthwork and grading
 - B. Underground piping systems
 - C. Concrete structures
 - D. Street surface improvements
 - E. Landscaping
 - F. Street lighting and traffic signal construction
- IV. Records and Reports
 - A. Previews
 - B. Project journals
 - C. Project payments
 - D. Contract change orders
 - E. Final inspection
 - F. Project acceptance and closing reports
 - G. Record drawings
- V. Construction Site Safety Procedures
 - A. Regulations
 - B. Equipment
 - C. Procedures

Assignment:

1. Weekly textbook chapter readings (1-3)
2. Writing assignments:
 - A. Daily project journal entries
 - B. Project reports (2-4)
 - C. Letters and memos (3-5)
 - D. Reading summaries (8-10)
3. Problem solving homework sets (1-3)
4. Skill demonstration assignments:
 - A. Perform appropriate construction materials tests (5-7)
 - B. Perform appropriate public works inspections (10-12)
 - C. Prepare diagrams (2-4)
 - D. Read and interpret contract specifications (3-5)
 - E. Prepare progress pay reports (3-5)
5. Exams (2-3)
6. Final exam

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.

Writing assignments

Writing
20 - 40%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Problem solving homework sets

Problem solving
5 - 10%

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

Skill demonstration assignments

Skill Demonstrations
20 - 40%

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

Exams; final exam

Exams
20 - 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:

Standard Specifications for Public Works Construction. BNi Publications Inc. 2021.

Public Works Inspector's Manual. 7th ed. Birch Jr., Silas B. and Updyke, Erik. BNi Publications Inc. 2008 (classic).

Chapters from various State, County and Local Agency Design and Construction Manuals. 2006-2021.