CEST 64 Course Outline as of Fall 2017

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:
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 plans 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 preparing job diary techniques.

Prerequisites/Corequisites:

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: 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 plans 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 preparing job diary techniques. (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 plans, specifications and standards.
2. Perform public works inspections for surface features, underground utilites and site improvements.
3. Prepare appropriate diagrams and reports for public works projects.

Objectives:
Upon successful completion of this course, students will be able to:
1. Define the responsibilities of the Public Works Inspector and describe the inspection policies and procedures.
2. Prepare daily job diaries, 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:

1. Introduction to Public Works Construction Inspection
   a. Policies and procedures
   b. Records and reports
   c. Safety
   d. Contracts, plans, specifications and standards
   e. Project administration

f. Scheduling and management
2. Construction Materials
   a. Soils and aggregates
   b. Concrete
   c. Asphalt and paving
   d. Pipes and structures
   e. Construction standards
   f. Testing
3. 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
4. Records and Reports
   a. Previews
   b. Daily job diary
   c. Project payments
   d. Contract change orders
   e. Final inspection
   f. Project acceptance and closing reports
   g. Record drawings
5. Construction Site Safety Procedures
   a. Regulations
   b. Equipment
   c. Procedures

Assignment:

1. Read one to three chapters of the textbook per week
2. Writing assignments:
   a. Daily job diary 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 demonstrations:
   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. Midterm exams (2-3) and 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.

Job diary, project reports, letter and memos, reading summaries	Writing 20 - 40%

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

Homework sets	Problem solving 5 - 10%

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

Materials tests, inspections, diagrams, specifications, pay reports	Skill Demonstrations 20 - 40%

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

Midterms, final exam: essays, matching items, completion	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. 2015
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 (2006-2015)