

CM 155: SPECIAL INSPECTION - REINFORCED CONCRETE

Citrus College Course Outline of Record

Heading	Value
Effective Term:	Fall 2021
Credits:	3
Total Contact Hours:	54
Lecture Hours :	54
Lab Hours:	0
Hours Arranged:	0
Outside of Class Hours:	108
Prerequisite:	CM 110.
Transferable to CSU:	Yes
Transferable to UC:	No
Grading Method:	Standard Letter

Catalog Course Description

This course provides a comprehensive overview of Special Inspection and testing processes relevant to reinforced concrete performed in permitted building construction, including the duties and responsibilities of the special inspector as mandated by respective Authority Having Jurisdiction (AHJ). Emphasis is on preparing students to become qualified to inspect and document reinforced concrete construction from pre-placement through post-placement operations. Successful completion of this course will prepare a student to pursue licensure by the Los Angeles Department of Building & Safety (LADBS) as a Deputy Building Inspector (Special Inspector). 54 lecture hours.

Course Objectives

- Demonstrate thorough knowledge of the Special Inspector's duties and responsibilities.
- Demonstrate understanding of professional interpersonal relations.
- Understand the various components in a reinforced concrete structure.
- Examine the ethics in the special inspection profession.
- Demonstrate appropriate interpretation of reinforced concrete requirements and clarity of intent.
- Demonstrate understanding of reinforced concrete terminology.
- Demonstrate proficiency in writing accurate, descriptive and complete special inspection daily reports on actual report templates provided by instructor to meet special inspection standards of practice.
- Examine the means & methods of reinforced concrete operations from pre-placement through post placement operations.

Major Course Content

1. Interpersonal Skills for Inspectors
2. Governing Documents for Special Inspection Concrete
3. Review of Precedence of Contract Documents
4. Reinforced Concrete Terminology

5. The Fundamental Properties of Portland Cement Concrete
6. Structural Lightweight-Aggregate Concrete
7. Specification for Structural Concrete
8. Concrete Mix Designs
9. Reinforced Concrete Construction – Structural Components
10. Tolerances for Reinforced Concrete Construction
11. Formwork for Reinforced Concrete
12. Reinforcing Steel
13. Proportioning, Mixing, Transporting, and Placing Concrete
14. Concrete by Pumping Methods
15. Consolidation of Concrete
16. Hot and Cold Weather Concrete Placements
17. Concrete Finishing and Curing
18. The Integrated Team Environment
19. Construction Special Inspector Program Information
20. Special Inspection Reports
21. Compliance and Resolution Process
22. Ethics in Construction inspection

Suggested Reading Other Than Required Textbook

Selected reading assignments to be provided by instructor covering Building codes, construction standards and specifications for reinforced concrete.

Examples of Required Writing Assignments

Using templates provided by instructor, prepare sample documents typically produced by the inspector such as Job Memorandums and Non-Conformance reports based on specific topics provided by instructor.

Examples of Outside Assignments

Participate in Team Project assignments and preparation for oral presentation on instructor-assigned topics on project inspection

Instruction Type(s)

Lecture, Online Education Lecture