

Minnesota State College Southeast

CARP 1110: Concrete Construction

A. COURSE DESCRIPTION

Credits: 2

Lecture Hours/Week: 2

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course covers the theory and practices used when designing and installing footings, foundations and flatwork for residential construction as well as light commercial. (Prerequisite: none) (2 credits: 2 lecture/0 lab)

B. COURSE EFFECTIVE DATES: 02/06/2018 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Build Location on Building Site
2. Excavation
3. Formwork
4. Waterproofing
5. Mix Design
6. finishing Techniques

D. LEARNING OUTCOMES (General)

1. Concrete safety
2. Recognize soil types
3. Site preparation
4. Explore concrete foundation types
5. Estimate concrete
6. Estimating reinforcing
7. Determine size of pier, post, and column footings
8. Determine common footing and wall sizes
9. Knowledge of concrete anchoring and applications
10. Determine rebar layout
11. Determine wall reinforcing
12. Determine sill anchors
13. Determine correct water drainage
14. Critique placement of insulation
15. Analyze types of waterproofing and installation
16. Analyze corner construction
17. Explore crawl space construction
18. Determine interior vapor barrier usage and type
19. Explore anchor bolt sizing and locations
20. Explore the use of drain tile
21. Explore poured concrete foundations
22. Analyze types of poured wall forms
23. Analyze tools for poured walls
24. Analyze properties of concrete
25. Analyze different available wall form heights
26. Analyze footing to poured wall anchors
27. Analyze anchoring in poured concrete walls
28. Analyze the use of beam pockets
29. Analyze opening in poured concrete walls
30. Concrete placement and finishing techniques

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted