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