SYLLABUS

DATE OF LAST REVIEW: 11/2014
CIP CODE: 46.0401
SEMESTER: Departmental Syllabus
COURSE TITLE: Masonry Repair
COURSE NUMBER: BPMT0133
CREDIT HOURS: 2
INSTRUCTOR: Departmental Syllabus
OFFICE LOCATION: Departmental Syllabus
OFFICE HOURS: Departmental Syllabus
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KCKCC issued email accounts are the official means for electronically communicating with our students.

PREREQUISITES: OSHA 10, Math Level 3 Recommended

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, http://www.kckccbookstore.com/, for the required tests for your particular class.

COURSE DESCRIPTION:
This is the basic course in masonry repair. The course topics include: Environmental sustainability, concrete mix preparation, placing and finishing small jobs, edging, curing, repairing, computing volumes, and types of masonry mortars. It will also cover stone repair, bricklaying, fireplace repair and cleaning, and layout. Masonry cleaning will be covered, as will how to seal masonry and concrete.

METHOD OF INSTRUCTION:
A variety of instructional methods may be used depending on content area. They may include but are not limited to lecture, multimedia, cooperative/collaborative learning, demonstrations,
labs, on-the-job, internships, and other learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

I. Concrete Mix Preparation
   A. Water to cement ratio
   B. Too much water
   C. Basement floor
   D. Driveways
   E. Walls
   F. Gravel

II. Placing and Finishing Concrete
   A. Forms
   B. Surface preparation
   C. Moisten surface
   D. Tools
      1. Shovels
      2. Rakes
      3. Floats
      4. Trowels
      5. Edger
      6. Amount of help needed

III. Edging

IV. Curing
   A. Surface protection
   B. Cover material
   C. Amount of water
   D. Curing compound

V. Repairing Damaged Concrete
   A. Commercial Patching
      1. Latex
      2. Vinyl
      3. Epoxy
   B. Repairs
      1. Loose Fragments
      2. Large holes
      3. Small cracks

VI. Computing Volumes of Concrete
EXPECTED LEARNER OUTCOMES:

A. The student will be able to describe and identify concrete mix preparation.
B. The student will be able to describe and identify Placing and Finishing Concrete.
C. The student will be able to describe and identify Curing.
D. The student will be able to describe and identify Repairing Damaged Concrete.
E. The student will be able to describe and identify Computing Volumes of Concrete.
F. The student will be able to describe and identify Masonry Mortars.
G. The student will be able to describe and identify Brick Laying.

COURSE COMPETENCIES:

The student will be able to describe and identify concrete mix preparation.

1. The student will be able to understand and demonstrate the correct water to cement ratio.
2. The student will be able to understand and perform mixing for a floor.
3. The student will be able to identify and demonstrate mixing for driveways.
4. The student will be able to understand and demonstrate mixing for walls.
5. The student will be able to understand and perform a slump test.
6. The student will be able to identify and demonstrate the knowledge of aggregates.
The student will be able to describe and identify placing and finishing concrete.
7. The student will be able to understand and demonstrate forming techniques.
8. The student will be able to understand and perform surface preparation.
9. The student will be able to identify and demonstrate how to moisten a surface.
10. The student will be able to understand and demonstrate proper tool selection.
11. The student will be able to understand and perform floating, edging and finishing.
12. The student will be able to identify and demonstrate proper cleanup.

The student will be able to describe and identify curing.
13. The student will be able to understand and demonstrate proper surface protection.
14. The student will be able to understand and perform expansion cuts.
15. The student will be able to identify and demonstrate broom finishing.
16. The student will be able to understand and demonstrate flat finishing.
17. The student will be able to understand and perform sealing.
18. The student will be able to identify and demonstrate covering methods.

The student will be able to describe and identify repairing damaged concrete.
19. The student will be able to understand and demonstrate concrete patching.
20. The student will be able to understand and perform commercial patching.
21. The student will be able to identify and demonstrate the uses of latex.
22. The student will be able to understand and demonstrate the uses of vinyl.
23. The student will be able to understand and perform how to fill cracks.
24. The student will be able to identify and demonstrate how to fill holes.

The student will be able to describe and identify computing volumes of concrete.
25. The student will be able to understand and demonstrate computing square footage.
26. The student will be able to understand and perform proper measurements.
27. The student will be able to identify and demonstrate aggregate density.
28. The student will be able to understand and demonstrate the knowledge of concrete mixes available.
29. The student will be able to understand and perform the knowledge of the short load.
30. The student will be able to identify and demonstrate the knowledge of mixing times and ambient temperatures.

The student will be able to describe and identify masonry mortars.
31. The student will be able to understand and demonstrate the types of mortar.
32. The student will be able to understand and perform a mortar mix.
33. The student will be able to identify and demonstrate proper handling of mixed mortar.
34. The student will be able to understand and demonstrate the knowledge of set up times.
35. The student will be able to understand and perform a mortar repair.
36. The student will be able to identify and demonstrate point tucking.

The student will be able to describe and identify brick laying.
37. The student will be able to understand and demonstrate the knowledge of brick types.
38. The student will be able to understand and perform a brick laying mortar mix.
39. The student will be able to identify and demonstrate how to judge mortar stiffness.
40. The student will be able to understand and demonstrate how to butter bricks.
41. The student will be able to understand and perform setting up a story pole.
42. The student will be able to identify and demonstrate proper tool care and cleanup.

ASSESSMENT OF LEARNER OUTCOMES:
Student progress is evaluated by means that include, but are not limited to, exams written assignments and class participation.

SPECIAL NOTES:
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

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