SYLLABUS

DATE OF LAST REVIEW: 09/28/2014
CIP CODE: 46.0401
SEMESTER: Departmental Syllabus
COURSE TITLE: Roof Coverings, and Gutters
COURSE NUMBER: BPMT0136
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 texts for your particular class.

COURSE DESCRIPTION:
This is the basic course in repairing roofs and gutters. The course topics include: Environmental sustainability, types of roofing, types of roofing repairs, leak locating, repair of asphalt shingles, wood shingles, flat roof repair, flashing repair and replacement. It will also cover guttering fabrication, installation and repair, including leak sealing, tools, ladders and materials.

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. Roof Coverings
   A. Asphalt Shingle
   B. Wood Shingle
   C. Tile Shingle
   D. State Shingle

II. Locating Leaks
   A. Above Inspection
   B. Attic Inspection
   C. Chimneys, Plumbing, Vents

III. Repair of Asphalt Shingles
   A. Removed Damaged Shingles
   B. Repair Roofing Felt
   C. Caulk and Seal

IV. Wood Shingle Repair
   A. Removed Damaged Shingles
   B. Cover Nail Heads
   C. Size Shingles

V. Flat Roof Repair
   A. Asphalt Patch
   B. Saturated Felt
   C. Asphalt Cement

VI. Estimating Tab Shingle Quantity
   A. Square Shingles Formula
   B. Area of simple surfaces
   C. Pitch
   D. Horizontal Area
   E. Slope Area

VII. Valley Treatments
   A. Valley Definition
   B. Square Butt Tab Shingles
      1. Open Valley
      2. Woven Valley

VIII. Flashing
   A. Against a Vertical Wall
   B. Simple Flashing
   C. Caulking
   D. Chimney Flashing

IX. Gutters
   A. Gutter Maintenance, and install.
   B. Making gutters from a gutter machine
   C. Painting Gutters
   D. Stopping Gutter Leaks
      1. Loose Joint
      2. A Hole or Crack
   E. Repairing All or Part of Gutter
X. Environmental Sustainability
   A. Environmentally safe waste disposal.
   B. Life cycle analysis.
   C. Recycled material.
   D. Low VOC emissions.
   E. New “green” materials.
   F. New “green” methods and practices.
      1. “Low impact” designs.

EXPECTED LEARNER OUTCOMES:
A. The student will be able to identify and explain roof covering repair.
B. The student will be able to identify and explain locating leaks.
C. The student will be able to identify and explain repair of asphalt shingles.
D. The student will be able to identify and explain wood shingle repair.
E. The student will be able to identify and explain flat roof repair.
F. The student will be able to identify and explain estimating tab shingle quantity.
G. The student will be able to identify and explain valley treatments.
H. The student will be able to identify and explain flashing.
I. The student will be able to identify and explain gutters.
J. The student will be able to identify and explain environmental sustainability.

COURSE COMPETENCIES:
The student will be able to identify and explain roof covering repair.
1. The student will be able to identify the different roof coverings.
2. The student will be able to demonstrate proper roof inspection.
3. The student will be able to demonstrate proper and safe methods of asphalt shingle repair.
4. The student will be able to understand and demonstrate different types of roof designs.
5. The student will be able to understand and demonstrate uses of slate shingles.
6. The student will be able to demonstrate correct slate shingle installation.
7. The student will be able to understand and demonstrate uses of tile roofing.

The student will be able to identify and explain locating leaks.
8. The student will be able to demonstrate correct roof walking methods.
9. The student will be able to understand and demonstrate an above inspection.
10. The student will be able to demonstrate proper attic inspections.
11. The student will be able to understand and demonstrate leak tracing.
12. The student will be able to demonstrate correct caulking technique.
13. The student will be able to understand and demonstrate uses of roofing tar.
14. The student will be able to demonstrate proper patching technique.

The student will be able to identify and explain repair of asphalt shingles.
15. The student will be able to understand and demonstrate when shingles are worn.
16. The student will be able to demonstrate correct cutting technique.
17. The student will be able to understand and demonstrate what hail damage looks like.
18. The student will be able to demonstrate proper sealing from below.
19. The student will be able to understand and demonstrate splicing in methods.
20. The student will be able to demonstrate correct nailing on of patches.
21. The student will be able to demonstrate proper installation of tar paper.

22. The student will be able to identify and explain wood shingle repair.
23. The student will be able to understand and demonstrate splitting shingles.
24. The student will be able to understand and demonstrate the knowledge of wood shingle types.
25. The student will be able to demonstrate proper underlayment of shingles.
26. The student will be able to understand and demonstrate nailing procedures.
27. The student will be able to demonstrate correct patching in technique.
28. The student will be able to understand and demonstrate water proofing of shingles.

29. The student will be able to identify and explain flat roof repair.
30. The student will be able to demonstrate the proper and safe methods of flat roof repair.
31. The student will be able to understand and demonstrate felt saturation.
32. The student will be able to understand and demonstrate overlap methods.
33. The student will be able to demonstrate correct removal of damaged material.
34. The student will be able to understand and demonstrate proper nailing technique.
35. The student will be able to demonstrate proper asphalt sealing technique.

36. The student will be able to identify and explain estimating tab shingle quantity.
37. The student will be able to demonstrate the ability to estimate tab shingle quantity.
38. The student will be able to understand and demonstrate square feet.
39. The student will be able to demonstrate correct use of measuring tape.
40. The student will be able to understand and demonstrate Pitch.
41. The student will be able to demonstrate proper slope area.
42. The student will be able to demonstrate correct estimation of percentages.

43. The student will be able to identify and explain valley treatments.
44. The student will be able to understand and demonstrate valley definitions.
45. The student will be able to demonstrate correct bending technique.
46. The student will be able to understand and demonstrate cutting methods.
47. The student will be able to demonstrate proper open valley closing.
48. The student will be able to understand and demonstrate a woven valley closing.
49. The student will be able to demonstrate correct valley estimation.
50. The student will be able to understand and demonstrate sealing.
51. The student will be able to demonstrate proper valley tear out.

The student will be able to identify and explain flashing.
The student will be able to demonstrate the proper methods of flashing repair.

The student will be able to understand and demonstrate simple flashing.

The student will be able to demonstrate correct vertical flashing.

The student will be able to understand and demonstrate horizontal flashing.

The student will be able to demonstrate proper attachment techniques.

The student will be able to understand and demonstrate caulking techniques.

The student will be able to demonstrate correct tear out procedures.

The student will be able to identify and explain gutters.

The student will be able to understand and demonstrate the types of gutters.

The student will be able to demonstrate correct cutting procedures.

The student will be able to understand and demonstrate hanging procedures.

The student will be able to demonstrate proper sealing of gutters.

The student will be able to understand and demonstrate gutter leak detection.

The student will be able to demonstrate correct gutter tear off.

The student will be able to identify and explain environmental sustainability.

The student will be able to describe waste disposal methods for this industry according to EPA and industry guidelines.

The student will be able to describe the process of life cycle analysis in this industry based on industry guidelines.

The student will be able to identify recycled materials by label and industry practice.

The student will be able to define “low emission” and give two examples.

The student will be able to identify new “green” materials now being introduced or currently used in this industry.

The student will be able to describe new “green” practices and methods being instituted or currently employed within this industry.

The student will be able to identify and explain the term “low Impact” as it relates to the environment.

**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.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.
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