SYLLABUS

DATE OF LAST REVIEW: 02/2013
CIP CODE: 46.0201
SEMESTER: Departmental Syllabus
COURSE TITLE: Insulating
COURSE NUMBER: CONS0123
CREDIT HOURS: 3
INSTRUCTOR: Departmental Syllabus
OFFICE LOCATION: Departmental Syllabus
OFFICE HOURS: Departmental Syllabus
TELEPHONE: Departmental Syllabus
EMAIL: KCKCC issued email accounts are the official means for electronically communicating with our students.

PREREQUISITES: KBOR approved Core Curriculum. 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 course in Insulating. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Orientation, Trade Relations, Tools of the Trade, Material Handling, Storage, and Distribution, and installing Mineral Wool Insulation.

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, performance tests, and other learning experiences outside the classroom. Methodology will be selected to best meet student needs.
COURSE OUTLINE:

I. MODULE 19101 - ORIENTATION
   A. Types of insulation.
   B. History of insulation.
   C. Tool requirements.
   D. Systems that require insulation.
   E. Required insulation.
   F. Estimating.
   G. Insulation materials.
   H. Commercial and industrial plants.
   I. Subcontractors and general contractors.
   J. Owners.
   K. Energy conservation.

II. MODULE 19102 - TRADE RELATIONS
   A. Types of contracts.
   B. Construction teams.
   C. Insulation contractors.
   D. Communications.
   E. Application difficulties.
   F. First day of assignment.

III. MODULE 19103 - TOOLS OF THE TRADE
    A. Tools required for insulation.
    B. Specific applications.
    C. Care of personal hand tools.
    D. Usage of personal hand tools.
    E. Safety rules.
    F. Personal tool storage.

IV. MODULE 19104 - MATERIAL HANDLING, STORAGE, AND DISTRIBUTION
    A. Receiving materials.
    B. Storing materials.
    C. Separating materials.
    D. Materials stored inside.
    E. Excess materials.
    F. Boxes of materials.

V. MODULE 19205 - INSTALLING MINERAL WOOL INSULATION
    A. Tools for installing mineral wool insulation.
    B. Forms of mineral wool.
C. Measuring requirements.
D. Cutting and scoring.
E. Attachments.
F. Installation methods.
G. Sealing requirements.
H. Welded pins, stick pins, and clips.
I. Pin welding equipment.

VI. 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.
G. “Low impact” designs.

EXPECTED LEARNER OUTCOMES:
A. Module 19101. The student will be able to identify and describe the types of insulation, tools, and estimating.
B. Module 19102. The student will be able to identify and describe trade relations, contractors, and teams.
C. Module 19103. The student will be able to identify and describe the types of tools, application, safety and storage.
D. Module 19104. The student will be able to identify and describe proper material handling, storage, and distribution
E. Module 19205. The student will be able to identify and describe the methods used in installing mineral wool insulation
F. The student will identify and describe sound environmental practices for insulators, including waste disposal, life cycle analysis, green practices and low impact

COURSE COMPETENCIES:

Module 19101. The student will be able to identify and describe the types of insulation, tools, and estimating.

1. The student will be able to identify, describe and explain what insulation is and the basic uses of insulation.
2. The student will be able to identify, describe and understand the history of insulation.
3. The student will be able to identify, describe and explain some tool requirements and their uses.
4. The student will be able to identify, describe and explain some systems that require insulation.
5. The student will be able to identify, describe and explain who designs the required insulation for different systems.
6. The student will be able to identify, describe and explain what an estimate is used for in a project.
7. The student will be able to identify, describe some of the types of insulation materials used.
8. The student will be able to identify, describe and explain the difference between commercial and industrial plants.
9. The student will be able to identify, describe and explain who subcontractors and general contractors are.
10. The student will be able to identify, describe and explain who owners are.
11. The student will be able to identify, describe and explain what energy conservation is.

   Module 19102. The student will be able to identify and describe trade relations, contractors, and teams.

12. The student will be able to identify, describe and list the various types of contracts.
13. The student will be able to identify, describe and explain how a construction team works together to complete a project.
14. The student will be able to identify, describe and explain the work an insulation contractor performs.
15. The student will be able to identify, describe and explain what happens when poor communications between trades takes place.
16. The student will be able to identify some of the specific areas that would make insulation application difficult.
17. The student will be able to identify what is important upon the first day of assignment on the job site.

   Module 19103. The student will be able to identify and describe the types of tools, application, safety and storage.

18. The student will be able to identify specific tools required in the insulation trade.
19. The student will be able to identify, describe and choose the correct tool for the specific application.
20. The student will be able to identify, describe and demonstrate the procedures for the care of personal hand tools.
21. The student will be able to identify, describe and demonstrate the proper usage of personal hand tools.
22. The student will be able to identify, describe and explain the general safety rules for hand tools.
23. The student will be able to identify, describe and explain how and where personal tools should be kept when not in use at the job site.

   The student will be able to identify and describe module 19104 - material handling, storage, and distribution.
24. The student will be able to identify, describe and explain how to receive materials.
25. The student will be able to identify, describe and explain how to store materials outside.
26. The student will be able to identify, describe and separate materials for easy usage when
   needed.
27. The student will be able to identify, describe and explain why certain materials should be
   stored inside.
28. The student will be able to identify and describe where excess materials should be placed.
29. The student will be able to identify and describe what happens to boxes of materials when
   not kept dry.

The student will be able to identify and describe module 19205 - installing mineral wool
insulation.

30. The student will be able to identify and use specific tools for installing mineral wool
    insulation.
31. The student will be able to identify and recognize the various forms of mineral wool.
32. The student will be able to identify, describe and understand measuring requirements.
33. The student will be able to identify, describe and understand cutting and scoring methods.
34. The student will be able to identify, describe and understand the various attachments used.
35. The student will be able to identify, describe and understand and perform installation
    methods.
36. The student will be able to identify, describe and understand the sealing requirements.
37. The student will be able to identify, describe and understand the characteristics of welded
    pins, stick pins, and clips.
38. The student will be able to identify, describe, use and maintain pin welding equipment.

   The student will identify and describe sound environmental practices for insulators,
   including waste disposal, life cycle analysis, green practices and low impact.

39. The student will be able to describe waste disposal methods for this industry according to
    EPA and industry guidelines.
40. The student will be able to describe the process of life cycle analysis in this industry based
    on industry guidelines.
41. The student will be able to identify recycled materials by label and industry practice.
42. The student will be able to define “low emission” and give two examples.
43. The student will be able to identify new “green” materials now being introduced or currently
    used in this industry.
44. The student will be able to describe new “green” practices and methods being instituted or
    currently employed within this industry.
45. 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 not limited to, exams, written assignments, performance tests, 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.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college’s policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center in Rm. 3354 or call (913) 288-7670.