SYLLABUS

DATE OF LAST REVIEW: 02/2013
CIP CODE: 46.0201
SEMESTER: Departmental Syllabus
COURSE TITLE: Masonry (Level 2)
COURSE NUMBER: CONS0209
CREDIT HOURS: 2
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. Masonry 1.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 advanced course in Masonry. It is aligned with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Residential Plans and Drawing Interpretation, Residential Masonry, Grout and Other Reinforcement, Metal Work in Masonry, and Advanced Laying Techniques.

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 28201-05 – RESIDENTIAL PLANS AND DRAWING INTERPRETATION
   A. Residential plans and drawings.
   B. Dimensions and scales.
   C. Residential plans.
   D. Estimating materials.

II. MODULE 28202-05 – RESIDENTIAL MASONRY
    A. Residential foundations.
    B. Techniques for brick pavers.
    C. Steps, patios, and decks.
    D. Chimneys and fireplaces.

III. MODULE 28203-05 – GROUT AND OTHER REINFORCEMENT
     A. Grouts and their properties.
     B. Types of grout.
     C. Common admixtures.
     D. Steel bar reinforcement.
     E. Proper techniques.
     F. Placing grout in a hollow block wall.

IV. MODULE 28204-05 – METAL WORK IN MASONRY
    A. Vertical reinforcement.
    B. Types of horizontal joint reinforcements.
    C. Anchors, fasteners, and embedded items.
    D. Hollow metal frames.
    E. Sills and lintels.
    F. Installing sills and lintels.
    G. Installing metal hardware.

V. MODULE 28205-05 – ADVANCED LAYING TECHNIQUES
    A. Types of walls.
    B. Control joints and expansion joints.
    C. Reinforcement, jointing, and bonding techniques.
    D. Specialty structures.
    E. Types of masonry arches.
    F. Semicircular arch and a jack arches.

VI. Environmental Sustainability
    A. Environmentally safe waste disposal.
EXPECTED LEARNER OUTCOMES:

A. Module 28201-05. The student will be able to identify and describe residential plans, materials, and drawings.
B. Module 28202-05. The student will be able to identify and describe the types of residential masonry.
C. Module 28203-05. The student will be able to identify and describe the types of grout and other reinforcement.
D. Module 28204-05. The student will be able to identify and describe the types of metal work in masonry, and hardware.
E. Module 28205-05. The student will be able to identify and describe the types of walls and their reinforcement.
F. The student will identify and describe sound environmental practices for masons, including waste disposal, life cycle analysis, green practices and low impact designs.

COURSE COMPETENCIES:

Module 28201-05. The student will be able to identify and describe residential plans, materials, and drawings.

1. The student will be able to identify and explain the organization of residential plans and drawings.
2. The student will be able to identify and interpret dimensions and scales on drawings.
3. The student will be able to identify and interpret information on residential plans.
4. The student will be able to identify and estimate material quantities from plans and drawings.

Module 28202-05. The student will be able to identify and describe the types of residential masonry.

5. The student will be able to identify and explain the requirements for construction of various types of residential foundations.
6. The student will be able to identify and explain the characteristics, uses, and installation techniques for brick pavers.
7. The student will be able to identify and lay out and build steps, patios, and decks made from masonry units.
8. The student will be able to identify and lay out and build chimneys and fireplaces.
Module 28203-05. The student will be able to identify and describe the types of grout and other reinforcement.

9. The student will be able to identify and name and describe the primary ingredients in grout and their properties.
10. The student will be able to identify the different types of grout used in masonry work.
11. The student will be able to identify and describe the common admixtures and their uses.
12. The student will be able to identify and describe the use of steel bar reinforcement in masonry construction.
13. The student will be able to identify and apply grout in low and high lifts using the proper techniques.
14. The student will be able to identify and place grout in a hollow block wall and rod it into place.

Module 28204-05. The student will be able to identify and describe the types of metal work in masonry, and hardware.

15. The student will be able to identify and describe the uses and installation of vertical reinforcement.
16. The student will be able to identify and describe the uses and installation of different types of horizontal joint reinforcements and ties.
17. The student will be able to identify and describe the uses and installation of different anchors, fasteners, and embedded items.
18. The student will be able to identify and install hollow metal frames.
19. The student will be able to identify and describe the functions of sills and lintels.
20. The student will be able to identify and install sills and lintels.
21. The student will be able to identify and install metal hardware.

Module 28205-05. The student will be able to identify and describe the types of walls and their reinforcement.

22. The student will be able to identify and recognize the structural principles and fundamental uses of basic types of walls.
23. The student will be able to identify and recognize the requirement for, and function of, control joints and expansion joints.
24. The student will be able to identify and build various types of walls using proper reinforcement, jointing, and bonding techniques.
25. The student will be able to identify and lay out specialty structures such as maintenance holes, segmented block walls, and screens.
26. The student will be able to identify and identify and explain the different types of masonry arches used today.
27. The student will be able to identify and lay out a semicircular arch and a jack arch.
The student will identify and describe sound environmental practices for masons, including waste disposal, life cycle analysis, green practices and low impact

28. The student will be able to identify and describe waste disposal methods for this industry according to EPA and industry guidelines.
29. The student will be able to identify and describe the process of life cycle analysis in this industry based on industry guidelines.
30. The student will be able to identify recycled materials by label and industry practice.
31. The student will be able to identify and define “low emission” and give two examples.
32. The student will be able to identify and new “green” materials now being introduced or currently used in this industry.
33. The student will be able to identify and describe new “green” practices and methods being instituted or currently employed within this industry.
34. 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.