SYLLABUS

DATE OF LAST REVIEW: 02/2013
CIP CODE: 46.0201
SEMESTER: Departmental Syllabus
COURSE TITLE: Masonry (Level 1)
COURSE NUMBER: CONS0107
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. 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 masonry course. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Introduction to Masonry, Masonry Tools and Equipment, Measurements, Drawings, and Specifications, Mortar, and Masonry Units and Installation 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 28101-04 - INTRODUCTION TO MASONRY**  
   A. History of masonry.  
   B. Modern masonry materials.  
   C. Career ladders.  
   D. Skills, attitudes, and abilities.  
   E. Safety precautions:  
      1. Safety practices  
      2. Fall-protection procedures  
      3. Forklift-safety operations  
   F. Bricklaying procedures:  
      1. Mixing of mortar  
      2. Laying a mortar bed  
      3. Laying bricks  
   G. Eye protection, respiratory protection, and a safety harness.  
   H. Fueling and starting a gasoline-powered tool.

II. **MODULE 28102-04 - MASONRY TOOLS AND EQUIPMENT**  
   A. Tools used in masonry work.  
   B. Equipment used in masonry work.  
   C. Tool use.  
   D. Equipment use.  
   E. Trade terms.  
   F. Assembling and disassembling scaffolding.

III. **MODULE 28103-04 - MEASUREMENTS, DRAWINGS, AND SPECIFICATIONS**  
   A. Denominate numbers.  
   B. Mason’s measure.  
   C. (English) system to metric equivalents.  
   D. Areas, circumferences, and volumes of basic geometric shapes.  
   E. Parts of a set of drawings.  
   F. Types of specifications.

IV. **MODULE 28104-04 - MORTAR**  
   A. Primary ingredients in mortar.  
   B. Types of mortar used in masonry work.  
   C. Admixtures.  
   D. Common problems.  
   E. Mortar mixing area.  
   F. Mixing mortar by hand.  
   G. Mixing mortar with a mechanical mixer.
V. MODULE 28105-04 - MASONRY UNITS AND INSTALLATION TECHNIQUES
   A. Types of masonry units.
   B. Setting up a wall.
   C. Dry bond.
   D. Bed joints.
   E. Types of masonry bonds.
   F. Cutting brick and block.
   G. Laying masonry units.

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 28101-04. The student will be able to identify and describe the history of masonry, mixing, safety, PPE and career information.
B. Module 28102-04. The student will be able to identify and describe the types masonry tools and equipment.
C. Module 28103-04. The student will be able to identify and describe the measurements, drawings, and specifications used in masonry.
D. Module 28104-04. The student will be able to identify and describe the ingredients, types and mixing of mortar.
E. Module 28105-04. The student will be able to identify and describe the types of masonry units, set-up, lay-up and installation techniques.
F. The student will identify and describe sound environmental practices for masons, including waste disposal, life cycle analysis, green practices and low impact

COURSE COMPETENCIES:

Module 28101-04. The student will be able to identify and describe the history of masonry, mixing, safety, PPE and career information.

1. The student will be able to identify and discuss the history of masonry.
2. The student will be able to identify and describe modern masonry materials and methods.
3. The student will be able to identify and explain career ladders and advancement possibilities in masonry work.
4. The student will be able to identify and describe the skills, attitudes, and abilities needed
to work as a mason.
5. The student will be able to identify and state the safety precautions that must be practiced
at a work site, including the following:
   a. Safety practices
   b. Fall-protection procedures
   c. Forklift-safety operations
6. The student will be able to identify and perform the following basic bricklaying
   procedures:
   a. Mixing of mortar
   b. Laying a mortar bed
   c. Laying bricks
7. The student will be able to identify and put on eye protection, respiratory protection, and
   a safety harness.
8. The student will be able to identify and use the correct procedures for fueling and starting
   a gasoline-powered tool.

Module 28102-04. The student will be able to identify and describe the types masonry
   tools and equipment.

9. The student will be able to identify, describe and name the tools used in performing
   masonry work.
10. The student will be able to identify, describe and name the equipment used in performing
    masonry work.
11. The student will be able to identify and describe how each tool is used.
12. The student will be able to identify and describe how the equipment is used.
13. The student will be able to identify and associate trade terms with the appropriate tools
    and equipment.
14. The student will be able to identify and demonstrate the correct procedures for
    assembling and disassembling scaffolding according to federal safety regulations, under
    the supervision of a competent person.

Module 28103-04. The student will be able to identify and describe the measurements,
   drawings, and specifications used in masonry.

15. The student will be able to identify and work with denominate numbers.
16. The student will be able to identify and read a mason’s measure.
17. The student will be able to identify and describe convert measurements in the U.S.
    Customary (English) system into their metric equivalents.
18. The student will be able to identify and describe recognize, identify, and calculate areas,
    circumferences, and volumes of basic geometric shapes.
19. The student will be able to identify and describe identify the basic parts of a set of
    drawings.
20. The student will be able to identify and discuss the different types of specifications used
    in the building industry and the sections that pertain to masonry.
Module 28104-04. The student will be able to identify and describe the ingredients, types and mixing of mortar.

21. The student will be able to identify and name and describe the primary ingredients in mortar and their properties.
22. The student will be able to identify and describe the various types of mortar used in masonry work.
23. The student will be able to identify and describe the common admixtures and their uses.
24. The student will be able to identify and describe the common problems found in mortar application and their solutions.
25. The student will be able to identify and properly set up the mortar mixing area.
26. The student will be able to identify and properly mix mortar by hand.
27. The student will be able to identify and properly mix mortar with a mechanical mixer.

Module 28105-04. The student will be able to identify and describe the types of masonry units, set-up, lay-up and installation techniques.

28. The student will be able to identify and describe the most common types of masonry units.
29. The student will be able to identify, describe and demonstrate how to set up a wall.
30. The student will be able to identify and lay a dry bond.
31. The student will be able to identify, describe and spread and furrow a bed joint, and butter masonry units.
32. The student will be able to identify and describe the different types of masonry bonds.
33. The student will be able to identify and cut brick and block accurately.
34. The student will be able to identify and lay masonry units in a true course.

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

35. The student will be able to describe waste disposal methods for this industry according to EPA and industry guidelines.
36. The student will be able to describe the process of life cycle analysis in this industry based on industry guidelines.
37. The student will be able to identify recycled materials by label and industry practice.
38. The student will be able to define “low emission” and give two examples.
39. The student will be able to identify new “green” materials now being introduced or currently used in this industry.
40. The student will be able to describe new “green” practices and methods being instituted or currently employed within this industry.
41. 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.