DATE OF LAST REVIEW: 02/2013
CIP CODE: 46.0201
SEMESTER: Departmental Syllabus
COURSE TITLE: Carpentry Basics
COURSE NUMBER: CONS0108
CREDIT HOURS: 4
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 text for your particular class.

COURSE DESCRIPTION: This course is the basic carpentry course. It is in alignment with NCCER and the Kansas Board of Regents. It is (in part) a component of the Core Curriculum for the KCKCC Construction Technology program and the KCKCC Building and Property Maintenance program. The course topics include: Environmental sustainability, Orientation to the Trade, Building Materials, Fasteners, and Adhesives, Hand and Power Tools, Reading Plans and Elevations, and Commercial Drawings.

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 27101-06 – ORIENTATION TO THE TRADE (CORE)
A. History of carpentry.
B. Aptitudes, behaviors, and skills.
C. Training opportunities.
D. Career opportunities.
E. Responsibilities.
F. Personal characteristics.
G. Importance of safety.

II. MODULE 27102-06 – BUILDING MATERIALS, FASTENERS, AND ADHESIVES (CORE)
A. Types of building materials.
B. Types of hardwoods and softwoods.
C. Grades and markings of wood.
D. Safety precautions.
E. Storing and handling.
F. Types of engineered lumber.
G. Quantities of lumber.
H. Fasteners, anchors, and adhesives.

III. MODULE 27103-06 – HAND AND POWER TOOLS (CORE)
A. Hand tools.
B. Safety.
C. General safety rules.
D. General rules for properly maintaining power tools.
E. Portable power tools.
F. Using power tools in a safe manner.

IV. MODULE 27104-06 – READING PLANS AND ELEVATIONS (CORE)
A. Types of drawings.
B. Types of lines used on construction drawings.
C. Architectural symbols.
D. Electrical, mechanical, and plumbing symbols.
E. Abbreviations commonly used.
F. Interpret plans, elevations, schedules, sections, and details.
G. Written specifications.
H. Parts of a specification.
I. Quantity takeoff for materials.

V. MODULE 27108-06 – INTRODUCTION TO CONCRETE, REINFORCING MATERIALS, AND FORMS (CORE)
A. Properties of cement.
B. Composition of concrete.
C. Volume estimates.
D. Types of concrete reinforcement.
E. Types of footings.
F. Types of forms.
G. Safety procedures.
H. Plumb and brace.

VI. MODULE 27201-07 – COMMERCIAL DRAWINGS
A. Commercial and residential drawings.
B. Keys, abbreviations, and other references.
C. Commercial drawings.
D. Door and window schedules.
E. Basic construction details in commercial construction.
F. Floor area.

VII. 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 27101-06 - The student will be able to identify and describe the history of the trade, responsibilities, safety, skills needed, training and careers.
B. Module 27102-06 - The student will be able to identify and describe the types of materials, safety, storage, and fasteners.
C. Module 27103-06 - The student will be able to identify and describe the types of hand and power tools, safety, and tool usage.
D. Module 27104-06 - The student will be able to identify and describe the types of drawings, reading plans and elevations, symbols, plans, and materials.
E. Module 27108-06 - The student will be able to identify and describe properties of concrete, reinforcing materials, safety and forms.
F. Module 27201-07 - The student will be able to identify and describe the types of drawings, schedules, and floor area.
G. Module 27202-07 - The student will be able to identify and describe the types of materials, safety, installation, and methods.
COURSE COMPETENCIES:

Module 27101-06 - The student will be able to identify and describe the history of the trade, responsibilities, safety, skills needed, training and careers.

1. The student will be able to describe the history of the carpentry trade.
2. The student will be able to identify the aptitudes, behaviors, and skills needed to be a successful carpenter.
3. The student will be able to identify the training opportunities within the carpentry trade.
4. The student will be able to identify the career and entrepreneurial opportunities within the carpentry trade.
5. The student will be able to identify the responsibilities of a person working in the construction industry.
6. The student will be able to state the personal characteristics of a professional.
7. The student will be able to explain the importance of safety in the construction industry.

Module 27102-06 - The student will be able to identify and describe the types of materials, safety, storage, and fasteners.

8. The student will be able to identify various types of building materials and their uses.
9. The student will be able to state the uses of various types of hardwoods and softwoods.
10. The student will be able to identify the different grades and markings of wood building materials.
11. The student will be able to identify the safety precautions associated with building materials.
12. The student will be able to describe the proper method of storing and handling building materials.
13. The student will be able to state the uses of various types of engineered lumber.
14. The student will be able to calculate the quantities of lumber and wood products using industry-standard methods.
15. The student will be able to describe the fasteners, anchors, and adhesives used in construction work and explain their uses.

Module 27103-06 - The student will be able to identify and describe the types of hand and power tools, safety, and tool usage.

16. The student will be able to identify the hand tools commonly used by carpenters and describe their uses.
17. The student will be able to use hand tools in a safe and appropriate manner.
18. The student will be able to state the general safety rules for operating all power tools, regardless of type.
19. The student will be able to state the general rules for properly maintaining all power tools, regardless of type.
20. The student will be able to identify the portable power tools commonly used by carpenters and describe their uses.
21. The student will be able to use portable power tools in a safe and appropriate manner.

Module 27104-06 - The student will be able to identify and describe the types of drawings, reading plans and elevations, symbols, plans, and materials.
22. The student will be able to describe the types of drawings usually included in a set of plans and list the information found on each type.
23. The student will be able to identify the different types of lines used on construction drawings.
24. The student will be able to identify selected architectural symbols commonly used to represent materials on plans.
25. The student will be able to identify selected electrical, mechanical, and plumbing symbols commonly used on plans.
26. The student will be able to identify selected abbreviations commonly used on plans.
27. The student will be able to read and interpret plans, elevations, schedules, sections, and details contained in basic construction drawings.
28. The student will be able to state the purpose of written specifications.
29. The student will be able to identify and describe the parts of a specification.
30. The student will be able to demonstrate or describe how to perform a quantity takeoff for materials.

Module 27108-06 - The student will be able to identify and describe properties of concrete, reinforcing materials, safety and forms.

31. The student will be able to identify the properties of cement.
32. The student will be able to describe the composition of concrete.
33. The student will be able to perform volume estimates for concrete quantity requirements.
34. The student will be able to identify types of concrete reinforcement materials and describe their uses.
35. The student will be able to identify various types of footings and explain their uses.

Module 27201-07 - The student will be able to identify and describe the types of drawings, schedules, and floor area.

36. The student will be able to recognize the difference between commercial and residential construction drawings.
37. The student will be able to identify the basic keys, abbreviations, and other references contained in a set of commercial drawings.
38. The student will be able to accurately read a set of commercial drawings.
39. The student will be able to identify and document specific items from a door and window schedule.
40. The student will be able to explain basic construction details and concepts employed in commercial construction.
41. The student will be able to calculate the floor area of each room in a floor plan.

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

42. The student will be able to describe waste disposal methods for this industry according to a. EPA and industry guidelines.
43. The student will be able to describe the process of life cycle analysis in this industry based on industry guidelines.
44. The student will be able to identify recycled materials by label and industry practice.
45. The student will be able to define “low emission” and give two examples.
46. The student will be able to identify new “green” materials now being introduced or currently used in this industry.
47. The student will be able to describe new “green” practices and methods being instituted or currently employed within this industry.
48. 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.