SYLLABUS

DATE OF LAST REVIEW: 02/2013
CIP CODE: 46.0201
SEMESTER: Departmental Syllabus
COURSE TITLE: Carpentry (level 2)
COURSE NUMBER: CONS0208
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.

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, http://www.kckcccbookstore.com/, for the required tests for your particular class.

COURSE DESCRIPTION: This is the advanced course in Carpentry. It is aligned with NCCER and the Kansas Board of Regents. The course topics include: Environmental sustainability, Commercial Drawings, Roofing Applications, Thermal and Moisture Protection, Exterior Finishing, Cold-Formed Steel Framing, Drywall Installation, Drywall Finishing, Doors and Door Hardware, Suspended Ceilings, Window - Door - Floor and Ceiling Trim, Cabinet Installation, and Cabinet Fabrication.

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 27201-07 – COMMERCIAL DRAWINGS
   A. Commercial and residential construction drawings.
   B. Keys, abbreviations, and other references.
   C. Reading commercial drawings.
   D. Document specific items.
   E. Construction details and concepts.
   F. Calculate floor area.

II. MODULE 27202-07 – ROOFING APPLICATIONS
   A. Materials used in roofing.
   B. Safety requirements.
   C. Fiberglass shingles.
   D. Valley closing.
   E. Watertight projections.
   F. Main and hip ridge caps.
   G. Crickets and saddles.
   H. Wood shingles.
   I. Closing a valley using wood shingles.
   J. Watertight projections using wood shingles.
   K. Main and hip ridge caps using shingles.
   L. Selected types of roofing materials.

III. MODULE 27203-07 – THERMAL AND MOISTURE PROTECTION
    A. Insulation.
    B. Types of insulation.
    C. Required insulation.
    D. Selected insulation materials.
    E. Moisture control.
    F. Vapor barriers.
    G. Methods of waterproofing.
    H. Air infiltration.
    I. Building wraps.

IV. MODULE 27204-07 – EXTERIOR FINISHING
    A. Wall insulation and flashing.
    B. Common cornices.
    C. Lap and panel siding.
    D. Common wood siding.
    E. Fiber-cement siding.
    F. Types of vinyl and metal siding.
    G. Types of stucco and masonry veneer finishes.
    H. Types of special exterior finish.
    I. Types of siding commonly used in your area.
V. MODULE 27205-07 – COLD-FORMED STEEL FRAMING
   A. Steel framing.
   B. Tools and fasteners.
   C. Applications for steel framing.
   D. Back-to-back, box, and L-headers.
   E. Steel stud structural walls.
   F. Steel stud non-structural walls.

VI. MODULE 27206-07 – DRYWALL INSTALLATION
   A. Types of drywall.
   B. Thickness of drywall.
   C. Fasteners for drywall.
   D. Fastener schedules.
   E. Single-layer and multi-layer drywall installation including:
      1. Nails
      2. Drywall screws
      3. Adhesives
   F. Gypsum drywall.
   G. Soundproofing.
   H. Material estimating.

VII. MODULE 27207-07 – DRYWALL FINISHING
    A. Levels of finish.
    B. Hand tools.
    C. Automatic tools.
    D. Materials used including:
       1. Compounds
       2. Joint reinforcing tapes
       3. Trim material
       4. Textures and coatings
    E. Finishing drywall.
    F. Types of problems.
    G. Damaged drywall.

VIII. MODULE 27208-07 – DOORS AND DOOR HARDWARE
      A. Types of door jambs and frames.
      B. Types of interior doors.
      C. Types of interior door hardware.
      D. Safe use of the hand and power tools.
      E. Typical door schedule.
      F. Hanging a door.

IX. MODULE 27209-07 – SUSPENDED CEILINGS
    A. Level line.
    B. Terms related to sound waves.
    C. Types of suspended ceilings.
D. Ceiling layout.
E. Suspended ceilings.
F. Material takeoffs.
G. Installing suspended ceilings.

X. MODULE 27210-07 – WINDOW, DOOR, FLOOR, AND CEILING TRIM
A. Types of standard moldings.
B. Square and miter cuts.
C. Coped joints.
D. Fasteners to install trim.
E. Interior trim, including:
   1. Door trim
   2. Window trim
   3. Base trim
   4. Ceiling trim
F. Materials estimating.

XI. MODULE 27211-07 – CABINET INSTALLATION
A. Typical base and wall kitchen cabinets.
B. Cabinet components and hardware.
C. Factory-made cabinets.
D. Installation of an island base.

XII. MODULE 27212-07 – CABINET FABRICATION
A. Types of woods.
B. Stationary power tools.
C. Types of joints used in cabinetmaking.
D. Cabinet drawings.
E. Plastic laminate.

XIII. 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 27201-07. The student will be able to identify and describe commercial drawings, abbreviations, and calculate floor area.
B. Module 27202-07. The student will be able to identify and describe types of materials, safety, types of roofing applications.
C. Module 27203-07. The student will be able to identify and describe the types of insulation, vapor barriers, thermal and moisture protection wraps.
D. Module 27204-07. The student will be able to identify and describe types of exterior finishing, and siding.
E. Module 27205-07. The student will be able to identify and describe the types of cold-formed steel framing, tools, and walls.
F. Module 27206-07. The student will be able to identify and describe the types of drywall, installation, and fasteners.
G. Module 27207-07. The student will be able to identify and describe the levels of drywall finishing, problems and damage.
H. Module 27208-07. The student will be able to identify and describe the types of doors and door hardware, tools and hang a door.
I. Module 27209-07. The student will be able to identify and describe terms used in suspended ceilings, layout, and materials.
J. Module 27210-07. The student will be able to identify and describe types of window, door, floor, and ceiling trim, fasteners, and materials.
K. Module 27211-07. The student will be able to identify and describe the types of cabinets, installation, and hardware.
L. Module 27212-07. The student will be able to identify and describe types of cabinets, fabrication, and drawings.
M. The student will identify and describe sound environmental practices for carpentry, including waste disposal, life cycle analysis, green practices and low impact

COURSE COMPETENCIES:

Module 27201-07. The student will be able to identify and describe commercial drawings, abbreviations, and calculate floor area.

1. The student will be able to identify and describe the difference between commercial and residential construction drawings.
2. The student will be able to identify the basic keys, abbreviations, and other references contained in a set of commercial drawings.
3. The student will be able to identify and describe and accurately read a set of commercial drawings.
4. The student will be able to identify and document specific items from a door and window schedule.
5. The student will be able to identify and explain basic construction details and concepts employed in commercial construction.
6. The student will be able to identify and calculate the floor area of each room in a floor plan.

Module 27202-07. The student will be able to identify and describe types of
The student will be able to identify the materials and methods used in roofing.

The student will be able to explain the safety requirements for roof jobs.

The student will be able to install fiberglass shingles on gable and hip roofs.

Close up a valley using fiberglass shingles.

The student will be able to explain how to make various roof projections watertight when using fiberglass shingles.

The student will be able to complete the proper cuts and install the main and hip ridge caps using fiberglass shingles.

The student will be able to lay out, cut, and install a cricket or saddle.

The student will be able to install wood shingles and shakes on roofs.

The student will be able to describe how to close up a valley using wood shingles and shakes.

The student will be able to explain how to make roof projections watertight when using wood shakes and shingles.

The student will be able to complete the cuts and install the main and hip ridge caps using wood shakes/shingles.

The student will be able to demonstrate the techniques for installing other selected types of roofing materials.

Module 27203-07: The student will be able to identify and describe the types of insulation, vapor barriers, thermal and moisture protection wraps.

The student will be able to describe the requirements for insulation.

The student will be able to describe the characteristics of various types of insulation material.

The student will be able to calculate the required amounts of insulation for a structure.

The student will be able to install selected insulation materials.

The student will be able to describe the requirements for moisture control and ventilation.

The student will be able to install selected vapor barriers.

The student will be able to describe various methods of waterproofing.

The student will be able to describe air infiltration control requirements.

The student will be able to install selected building wraps.

Module 27204-07: The student will be able to identify and describe types of exterior finishing, and siding.

The student will be able to describe the purpose of wall insulation and flashing.

The student will be able to install selected common cornices.

The student will be able to demonstrate lap and panel siding estimating methods.

The student will be able to describe the types and applications of common wood siding.

The student will be able to describe fiber-cement siding and its uses.

The student will be able to describe the types and styles of vinyl and metal siding.

The student will be able to describe the types and applications of stucco and masonry.
veneer finishes.
35. The student will be able to describe the types and applications of special exterior finish systems.
36. The student will be able to install three types of siding commonly used in your area.

Module 27205-07. The student will be able to identify and describe the types of cold-formed steel framing, tools, and walls.

37. The student will be able to identify the components of a steel framing system.
38. The student will be able to identify and select the tools and fasteners used in a steel framing system.
39. The student will be able to identify applications for steel framing systems.
40. The student will be able to demonstrate the ability to build back-to-back, box, and L-headers.
41. The student will be able to lay out and install a steel stud structural wall with openings to include bracing and blocking.
42. The student will be able to lay out and install a steel stud non-structural wall with openings to include blocking and bracing.

Module 27206-07. The student will be able to identify and describe the types of drywall, installation, and fasteners.

43. The student will be able to identify the different types of drywall and their uses.
44. The student will be able to select the type and thickness of drywall required for specific installations.
45. The student will be able to select fasteners for drywall installation.
46. The student will be able to explain the fastener schedules for different types of drywall installations.
47. The student will be able to perform single-layer and multi-layer drywall installations using different types of fastening systems, including:
   - Nails
   - Drywall screws
   - Adhesives
48. The student will be able to install gypsum drywall on steel studs.
49. The student will be able to explain how soundproofing is achieved in drywall installations.
50. The student will be able to estimate material quantities for a drywall installation.

Module 27207-07. The student will be able to identify and describe the levels of drywall finishing, problems and damage.

51. The student will be able to state the differences between the six levels of finish established by industry standards and distinguish a finish level by observation.
52. The student will be able to identify the hand tools used in drywall finishing and demonstrate the ability to use these tools.
53. The student will be able to identify the automatic tools used in drywall finishing.
54. The student will be able to identify the materials used in drywall finishing and state the purpose and use of each type of material, including:
   Compounds
   Joint reinforcing tapes
   Trim material
   Textures and coatings
55. The student will be able to properly finish drywall using hand tools.
56. The student will be able to recognize various types of problems that occur in drywall finishes; identify the causes and correct methods for solving each type of problem.
57. The student will be able to patch damaged drywall.

Module 27208-07. The student will be able to identify and describe the types of doors and door hardware, tools and hang a door.

58. The student will be able to identify various types of door jambs and frames and demonstrate the installation procedures for placing selected door jambs and frames in different types of interior partitions.
59. The student will be able to identify different types of interior doors.
60. The student will be able to identify different types of interior door hardware and demonstrate the installation procedures for selected types.
61. The student will be able to demonstrate the correct and safe use of the hand and power tools described in this module.
62. The student will be able to list and identify specific items included on a typical door schedule.
63. The student will be able to demonstrate the procedure for placing and hanging a selected door.

Module 27209-07. The student will be able to identify and describe terms used in suspended ceilings, layout, and materials.

64. The student will be able to establish a level line.
65. The student will be able to explain the common terms related to sound waves and acoustical ceiling materials.
66. The student will be able to identify The student will be able to the different types of suspended ceilings.
67. The student will be able to interpret plans related to ceiling layout.
68. The student will be able to sketch the ceiling layout for a basic suspended ceiling.
69. The student will be able to perform a material takeoff for a suspended ceiling.
70. The student will be able to install selected suspended ceilings.

Module 27210-07. The student will be able to identify and describe types of window, door, floor, and ceiling trim, fasteners, and materials.

71. The student will be able to identify the different types of standard moldings and describe their uses.
72. The student will be able to make square and miter cuts using a miter box or power miter
saw.
73. The student will be able to make coped joint cuts using a coping saw.
74. The student will be able to select and properly use fasteners to install trim.
   Install interior trim, including:
   Door trim
   Window trim
   Base trim
   Ceiling trim
75. The student will be able to estimate the quantities of different trim materials required for selected rooms.

Module 27211-07. The student will be able to identify and describe the types of cabinets, installation, and hardware.

76. The student will be able to state the classes and sizes of typical base and wall kitchen cabinets.
77. The student will be able to identify the cabinet components and hardware and describe their purposes.
78. The student will be able to lay out factory-made cabinets, countertops, and backsplashes.
79. The student will be able to explain the installation of an island base.

Module 27212-07. The student will be able to identify and describe types of cabinets, fabrication, and drawings.

80. The student will be able to recognize the common types of woods used to make cabinets.
81. The student will be able to correctly and safely use stationary power tools.
82. The student will be able to identify and cut the various types of joints used in cabinetmaking.
83. The student will be able to build a cabinet from a set of drawings.
84. The student will be able to install plastic laminate on a countertop core.

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

85. The student will be able to describe waste disposal methods for this industry according to EPA and industry guidelines.
86. The student will be able to describe the process of life cycle analysis in this industry based on industry guidelines.
87. The student will be able to identify recycled materials by label and industry practice.
88. The student will be able to define “low emission” and give two examples.
89. The student will be able to identify new “green” materials now being introduced or currently used in this industry.
90. The student will be able to describe new “green” practices and methods being instituted or currently employed within this industry.
91. 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.