SYLLABUS

DATE OF LAST REVIEW: 02/2013
CIP CODE: 46.0201
SEMESTER: Departmental Syllabus
COURSE TITLE: Introductory Craft Skills
COURSE NUMBER: CONS0106
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 an introduction to the construction trades. It is in alignment with NCCER and the Kansas Board of Regents. It is also a component (in part) of the Core Curriculum for the KCKCC Construction Technology program and the KCKCC Building and Property Maintenance program. The course topics include: Environmental sustainability, Basic Safety, Introduction to Construction Math, Introduction to Hand Tools, Introduction to Power Tools, Construction Drawings, Basic Rigging, Basic Communication Skills, Basic Employability Skills, and Introduction to Materials Handling.

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 00101-09 – BASIC SAFETY (CORE)
   A. Safety and its importance.
   B. Causes of accidents.
   C. OSHA safety.
   D. OSHA’s General Duty Clause.
   E. Hazard recognition.
   F. Fall protection.
   G. Struck-by hazards.
   H. Caught-in-between hazards.
   I. Safe work procedures.
   J. Appropriate personal protective equipment (PPE).
   K. Hazard communications (HazCom) and Material Safety Data Sheets (MSDSs).
   L. Other construction hazards.

II. MODULE 00102-09 – INTRODUCTION TO CONSTRUCTION MATH (CORE)
   A. Add, subtract, multiply, and divide whole numbers.
   B. Standard ruler, a metric ruler, and a measuring tape.
   C. Add, subtract, multiply, and divide fractions.
   D. Add, subtract, multiply, and divide decimals.
   E. Convert decimals.
   F. Convert fractions.
   G. Metric system.
   H. Metric units of length, weight, volume, and temperature.
   I. Basic shapes in the construction industry.

III. MODULE 00103-09 – INTRODUCTION TO HAND TOOLS (CORE)
    A. Basic hand tools.
    B. Visually inspection of hand tools.
    C. Hand tool use.

IV. MODULE 00104-09 – INTRODUCTION TO POWER TOOLS (CORE)
    A. Power tools commonly construction.
    B. Power tools safely.
    C. Maintaining power tools.

V. MODULE 00105-09 – INTRODUCTION TO CONSTRUCTION DRAWINGS
(CORE)
A. Basic construction drawings.
B. Relating information on construction drawings.
C. Different classifications.
D. Interpreting dimensions.

VI. MODULE 00106-09 – BASIC RIGGING (CORE)
A. Use of slings.
B. Inspection techniques.
C. Hitch configurations.
D. Load-handling safety practices.
E. American National Standards Institute (ANSI) hand signals.

VII. MODULE 00107-09 – BASIC COMMUNICATION SKILLS (CORE)
A. Interpreting information.
B. Verbal and written skills.
C. Electronic communication devices.

VIII. MODULE 00108-09 – BASIC EMPLOYABILITY SKILLS (CORE)
A. Role of an employee.
B. Critical thinking skills.
C. Computer systems.
D. Relationship skills.
E. Workplace issues.

IX. MODULE 00109-09 – INTRODUCTION TO MATERIALS HANDLING
A. Define a load.
B. Pre-task plan.
C. Materials-handling techniques.
D. Materials-handling equipment.
E. Safety procedures for materials handling.

X. 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 00101-09. The student will be able to identify and describe the various types of hazards in the workplace, basic safety, and procedures.
B. Module 00102-09. The student will be able to understand and demonstrate a knowledge of the math related to construction.
C. Module 00103-09. The student will be able to identify and describe the types of hand and power tools used in the trades.
D. Module 00104-09. The student will be able to identify and describe and perform specific uses of power tools.
E. Module 00105-09 The student will be able to identify types and uses of construction drawings.
F. Module 00106-09. The student will be able to identify and describe the types of basic rigging.
G. Module 00107-09. The student will be able to demonstrate proper basic communication skills.
H. Module 00108-09. The student will be able to identify and develop basic employability Skills.
I. Module 00109-09. The student will be able to identify and describe how to safely handle and store material.
J. The student will identify and describe sound environmental practices for construction workers, including waste disposal, life cycle analysis, green practices and low impact.

COURSE COMPETENCIES:

*Module 00101-09. The student will be able to identify and describe the various types of hazards in the workplace, basic safety, and procedures.*

1. The student will be able to identify and explain the idea of a safety culture and its importance in the construction crafts.
2. The student will be able to identify causes of accidents and the impact of accident costs.
3. The student will be able to identify and explain the role of OSHA in job-site safety.
4. The student will be able to identify and explain OSHA’s General Duty Clause and 1926 CFR Subpart C.
5. The student will be able to identify and recognize hazard recognition and risk assessment techniques.
6. The student will be able to identify and explain fall protection, ladder, stair, and scaffold procedures and requirements.
7. The student will be able to identify struck-by hazards and demonstrate safe working procedures and requirements.
8. The student will be able to identify caught-in-between hazards and demonstrate safe working procedures and requirements.
9. The student will be able to identify and define safe work procedures to use around electrical hazards.
10. The student will be able to identify and demonstrate the use and care of appropriate personal protective equipment (PPE).
11. The student will be able to identify and explain the importance of hazard communications (HazCom) and Material Safety Data Sheets (MSDSs).

12. The student will be able to identify and other construction hazards on your job site, including hazardous material exposures, environmental elements, welding and cutting hazards, confined spaces, and fires.

Module 00102-09. The student will be able to understand and demonstrate a knowledge of the math related to construction.

13. The student will be able to identify, add, subtract, multiply, and divide whole numbers, with and without a calculator.

14. The student will be able to identify and use a standard ruler, a metric ruler, and a measuring tape to measure.

15. The student will be able to identify, add, subtract, multiply, and divide fractions.

16. The student will be able to identify, add, subtract, multiply, and divide decimals, with and without a calculator.

17. The student will be able to identify and convert decimals to percentages and percentages to decimals.

18. The student will be able to identify and convert fractions to decimals and decimals to fractions.

19. The student will be able to identify and explain what the metric system is and how it is important in the construction trade.

20. The student will be able to identify and recognize and use metric units of length, weight, volume, and temperature.

21. The student will be able to identify and recognize some of the basic shapes used in the construction industry and apply basic geometry to measure them.

Module 00103-09. The student will be able to identify and describe the types of hand and power tools used in the trades.

22. The student will be able to identify and recognize and identify some of the basic hand tools and their proper uses in the construction trade.

23. The student will be able to identify and visually inspect hand tools to determine if they are safe to use.

24. The student will be able to identify and safely use hand tools.

Module 00104-09. The student will be able to identify and describe and perform specific uses of power tools.

25. The student will be able to identify power tools commonly used in the construction trades.

26. The student will be able to identify and use power tools safely.

27. The student will be able to identify and explain how to maintain power tools properly.

Module 00105-09 The student will be able to identify types and uses of construction drawings.
28. The student will be able to identify and recognize basic construction drawing terms, components, and symbols.
29. The student will be able to identify and relate information on construction drawings to actual locations on the print.
30. The student will be able to identify and recognize different classifications of construction drawings.
31. The student will be able to identify, interpret and use drawing dimensions.

Module 00106-09. The student will be able to identify and describe the types of basic rigging.

32. The student will be able to identify and describe the use of slings and common rigging hardware.
33. The student will be able to identify and describe basic inspection techniques and rejection criteria used for slings and hardware.
34. The student will be able to identify and describe basic hitch configurations and their proper connections.
35. The student will be able to identify and describe basic load-handling safety practices.
36. The student will be able to identify and demonstrate proper use of American National Standards Institute (ANSI) hand signals.

Module 00107-09. The student will be able to demonstrate proper basic communication skills.

37. The student will be able to identify and interpret information and instructions presented in both verbal and written form.
38. The student will be able to identify and communicate effectively in on-the-job situations using verbal and written skills.
39. The student will be able to identify and communicate effectively on the job using electronic communication devices.

Module 00108-09. The student will be able to identify and develop basic employability skills.

40. The student will be able to identify and explain the role of an employee in the construction industry.
41. The student will be able to identify and demonstrate critical thinking skills and the ability to solve problems using those skills.
42. The student will be able to identify and demonstrate knowledge of computer systems and explain common uses for computers in the construction industry.
43. The student will be able to identify and define effective relationship skills.
44. The student will be able to identify and recognize workplace issues such as sexual harassment, stress, and substance abuse.
Module 00109-09. The student will be able to identify and describe how to safely handle and store material.

45. The student will be able to identify and define a load.
46. The student will be able to identify and establish a pre-task plan prior to moving a load.
47. The student will be able to identify and use proper materials-handling techniques.
48. The student will be able to identify and choose appropriate materials-handling equipment for the task.
49. The student will be able to identify and recognize hazards and follow safety procedures required for materials handling.

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

50. The student will be able to identify and describe waste disposal methods for this industry according to EPA and industry guidelines.
51. The student will be able to identify and describe the process of life cycle analysis in this industry based on industry guidelines.
52. The student will be able to identify recycled materials by label and industry practice.
53. The student will be able to identify and define “low emission” and give two examples.
54. The student will be able to identify new “green” materials now being introduced or currently used in this industry.
55. The student will be able to identify and describe new “green” practices and methods being instituted or currently employed within this industry.
56. 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.