SYLLABUS

DATE OF LAST REVIEW: 02/2013
CIP CODE: 46.0201
SEMESTER: Departmental Syllabus
COURSE TITLE: Scaffolding
COURSE NUMBER: CONS0151
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 course in Scaffolding. It is in alignment with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Introduction to the Trade, Trade Safety, Trade Tools and Equipment, Trade Math, Stationary Scaffolds, Mobile Scaffolds and Suspension Scaffolds.

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 31101 – INTRODUCTION TO THE TRADE
   A. Job success.
   B. Apprenticeship training.
   C. The scaffolding trade, trade math, and regulations.
   D. Stationary scaffolds.
   E. Mobile scaffolds.
   F. Suspended scaffolds.

II. MODULE 31102 – TRADE SAFETY
    A. Occupational Safety and Health Act (OSHA) regulations.
    B. Guidelines for scaffolding.
    C. Personal protective equipment.
    D. Fall protection.
    E. Electrical hazards.

III. MODULE 31103 – TRADE TOOLS AND EQUIPMENT
     A. Specific hand tools.
     B. Specific power tools.
     C. Commonly-used lifting tools.
     D. Fall protection equipment.
     E. Storing, handling, and inspecting scaffolding materials.

IV. MODULE 31104 – TRADE MATH
    A. Perimeters of plane surfaces.
    B. 3-dimensional shapes.
    C. Determining weights.
    D. Types of loads on scaffold platforms.
    E. Loads on scaffold platforms.
    F. Wind loads on scaffolds.

V. MODULE 31105 – STATIONARY SCAFFOLDS
   A. Safety of tubular welded frame scaffolding.
   B. Erecting tubular welded frame scaffolding.
   C. Safety of tube and coupler scaffolding.
   D. Erecting tube and coupler scaffolding.
   E. Safety considerations of system scaffolds.
   F. Erecting system scaffolding.
   G. Safety of ladder-type and outrigger scaffolding.
   H. Erecting ladder-type and outrigger scaffolding.
   I. Safety of pump-jack scaffolding.
   J. Methods for erecting pump-jack scaffolding.
VI. MODULE 31106 – MOBILE SCAFFOLDS
A. Erecting and using rolling scaffolding.
B. Erecting and using scaffold wagons.
C. Safe operation of scissors lifts.
D. Applications and operation of boom lifts.

VII. MODULE 31107 – SUSPENSION SCAFFOLDS
A. Safety of suspension scaffolding.
B. Methods for rigging suspension scaffolding.
C. Safety of boatswain’s chairs, work cages, and beam suspended scaffolding.
D. Methods for rigging boatswain’s chairs, work cages, and beam suspended scaffolding.

VIII. 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 31101 The student will be able to identify and describe apprenticeships, jobs, trade math, and types of scaffolds.
B. Module 31102 The student will be able to identify and describe OSHA regulations, PPE, guidelines, fall protection, and electrical safety.
C. Module 31103 The student will be able to identify and describe hand and power tools, PPE, lifting techniques, and storage methods.
D. Module 31104 The student will be able to identify and describe perimeter, shapes, weights, and types of loads.
E. Module 31105 The student will be able to identify and describe types of scaffolds, erection, and safety.
F. Module 31106 The student will be able to identify and describe types of mobile scaffolds, safety and operation of boom lifts.
G. Module 31107 The student will be able to identify and describe suspension scaffold safety, rigging and types of lifts.
H. The student will identify and describe sound environmental practices for scaffold systems including waste disposal, life cycle analysis, green practices and low impact.
COURSE COMPETENCIES:

Module 31101 – The student will be able to identify and describe apprenticeships, jobs, trade math, and types of scaffolds.

1. The student will be able to identify and those personal qualities that are positively related to job success.
2. The student will be able to identify and explain the apprenticeship training process.
3. The student will be able to identify and explain the scaffolding trade, trade math, and the regulations and standards associated with the scaffolding trade.
4. The student will be able to identify and explain stationary scaffolds.
5. The student will be able to identify and explain mobile scaffolds.
6. The student will be able to identify and explain suspended scaffolds.
7. The student will be able to identify and describe module 31102 – trade safety

Module 31102 – The student will be able to identify Occupational Safety and Health Act (OSHA) regulations that regulate the scaffolding industry.

8. The student will be able to identify and explain the basic guidelines for planning, erecting, and using scaffolding.
9. The student will be able to identify and explain personal protective and life-saving equipment.
10. The student will be able to identify and explain fall protection.
11. The student will be able to identify and explain electrical hazards.

Module 31103 – The student will be able to identify and describe OSHA regulations, PPE, guidelines, fall protection, and electrical safety.

12. The student will be able to identify and describe the use of specific hand tools.
13. The student will be able to identify and describe the use of specific power tools.
14. The student will be able to identify and explain commonly-used lifting tools.
15. The student will be able to identify and describe the proper use of fall protection equipment.
16. The student will be able to identify and explain the proper methods of storing, handling, and inspecting scaffolding materials.

Module 31104 - The student will be able to identify and describe perimeter, shapes, weights, and types of loads.

17. The student will be able to identify and calculate areas and perimeters of plane surfaces.
18. The student will be able to identify and calculate volumes of 3-dimensional shapes.
19. The student will be able to identify and describe the use tables to determine weights.
20. The student will be able to identify and describe the types of loads on scaffold platforms.
21. The student will be able to identify and calculate loads on scaffold platforms.
22. The student will be able to identify and calculate wind loads on specified scaffold configurations.
Module 31105 – The student will be able to identify and describe types of scaffolds, erection, and safety.

23. The student will be able to identify and describe the safety considerations and components of tubular welded frame scaffolding.
24. The student will be able to identify and explain the proper methods for erecting tubular welded frame scaffolding.
25. The student will be able to identify and describe the safety considerations and components of tube and coupler scaffolding.
26. The student will be able to identify and explain the proper methods for erecting tube and coupler scaffolding.
27. The student will be able to identify and describe the safety considerations and components of system scaffolds.
28. The student will be able to identify and explain the proper methods of erecting system scaffolding.
29. The student will be able to identify and describe the safety considerations and components of ladder-type and outrigger scaffolding.
30. The student will be able to identify and explain the proper methods for erecting ladder-type and outrigger scaffolding.
31. Identify the safety considerations and components of pump-jack scaffolding.
32. Explain the proper methods for erecting pump-jack scaffolding.

Module 31106 – The student will be able to identify and describe types of mobile scaffolds, safety and operation of boom lifts.

33. Explain the proper methods for safely erecting and using rolling scaffolding.
34. Explain the proper methods for safely erecting and using scaffold wagons.
35. Explain the safe operation of scissors lifts.
36. Describe the applications and operation of boom lifts.

Module 31107 – The student will be able to identify and describe suspension scaffold safety, rigging and types of lifts.

37. Identify the safety considerations and components of suspension scaffolding.
38. Explain the proper methods for rigging suspension scaffolding.
39. Identify the safety considerations and components of boatswain’s chairs, work cages, and beam suspended scaffolding.
40. Explain the proper methods for rigging boatswain’s chairs, work cages, and beam suspended scaffolding.
The student will identify and describe sound environmental practices for Scaffold systems, including waste disposal, life cycle analysis, green practices and low impact.

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