SYLLABUS

DATE OF LAST REVIEW: 02/2013
CIP CODE: 46.0201
SEMESTER: Departmental Syllabus
COURSE TITLE: Painting (Level 1)
COURSE NUMBER: CONS0140
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 the basic course in Painting. It is aligned with NCCER (selected modules) and the Kansas Board of Regents. The course topics include: Environmental sustainability, Careers in the Painting Trade, Safety, Ladders, Scaffolds, Lifts, and Fall Protection, Identifying Surface/Substrate Materials and Conditions, Protecting Adjacent Surfaces, Basic Surface Preparation, Sealants and Repair/Fillers, Introduction to Paints and Coatings and Brushing and Rolling Paints and Coatings.

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 07101 - CAREERS IN THE PAINTING TRADE
   A. History of the painting trade.
   B. Career opportunities.
   C. Apprentice training program.
   D. Characteristics of professionals.

II. MODULE 07102 - SAFETY
    A. The Occupational Safety and Health Administration (OSHA).
    B. Hazard(s) and safety rules relating to:
       1. Personal hygiene and work clothing
       2. Personal protective and life saving equipment
       3. Respiratory hazards
       4. Fall hazards
       5. Hazardous chemicals and materials
       6. Lead hazards
       7. Asbestos hazards
       8. Confined space hazards
       9. Painting tool and equipment hazards
      10. Hot and cold weather hazards
      11. Electrical hazards
    C. Hazardous Communication (HazCom) including:
       1. The HazCom program
       2. Material Safety Data Sheets (MSDSs)
       3. Hazardous Materials Identification System (HMIS)

III. MODULE 07103 - LADDERS, SCAFFOLDS, LIFTS, AND FALL PROTECTION
     A. Ladders, including:
        1. Stepladders
        2. Single ladders
        3. Extension ladders
        4. Trestle and extension trestle ladders
     B. Scaffolds, including:
        1. Built-up scaffolds
        2. Swing scaffolds
        3. Beam-suspended scaffolds
     C. Aerial work platforms and scissor lifts.
D. Fall protection equipment, including:
   1. Body harnesses and belts
   2. Lanyards
   3. Deceleration devices
   4. Lifelines
   5. Anchoring devices and equipment connectors

IV. MODULE 07104 - IDENTIFYING SURFACE/SUBSTRATE MATERIALS AND CONDITIONS
A. Substrates used in construction:
   1. Wood
   2. Masonry, concrete, and stucco
   3. Plaster/drywall
   4. Synthetic
   5. Metal
B. Surface condition of substrates and coatings:
   1. New
   2. Aged
   3. Previously coated
C. Surface preparation methods.

V. MODULE 07105 - PROTECTING ADJACENT SURFACES
A. Tools and materials required for protecting surfaces:
   1. Tape dispensers
   2. Types of tape
   3. Types of masking material, such as paper, film, light-duty plastic sheeting, and liquid or gel
   4. masking
   5. Paint shields
   6. Covering materials, such as dropcloths, netting, and heavy-duty plastic sheeting
B. Applying interior and exterior masking.
C. Proper cleanup.

VI. MODULE 07106 - BASIC SURFACE PREPARATION
A. Tools and materials:
   1. Cleaning agents
   2. Surface conditioning agents
   3. Repair agents
   4. Hand tools
   5. Power tools
B. Preparation methods:
   1. Washing and cleaning
   2. Hand tool cleaning
   3. Power tool cleaning
4. Etching and neutralization
5. Vacuuming
6. Checking for moisture in concrete, stucco, masonry, wood, or plaster substrates
7. Repair/replacement of substrates

C. Preparation procedures for surfaces/substrates:
   1. Wood
   2. Concrete and masonry
   3. Plaster and drywall
   4. Metal
   5. Synthetic

VII. MODULE 07107 - SEALANTS AND REPAIR/FILLERS
A. Sealants and fillers.
B. Properties for product selection.
C. Sealant application.
D. Products for the following joints:
   1. Inside corner joint.
   2. Outside corner.
   3. Expansion joint.
   4. Long, wide, deep crevice.
E. Post-primer sealant.

VIII. MODULE 07108 - INTRODUCTION TO PAINTS AND COATINGS
A. Pigments, resins, solvents, and additives.
B. Water-based and oil-based paints.
C. Coating(s) recommended for use with various substrates.
D. Describe the properties and/or functions of paints or coatings.
   1. Properties:
      a. Alkyd
      b. Latex
      c. Epoxy
      d. Urethane (polyurethane)
   2. Functions:
      a. Primers/undercoats
      b. Tie coats
      c. Finish coat
      d. Sealers
      e. Shellacs, varnishes, and lacquers
      f. Stains
      g. Special purpose coatings
E. Methods used for the cleanup.

IX. MODULE 07109 - BRUSHING AND ROLLING PAINTS AND COATINGS
A. Types of paint brushes.
   1. Wall brushes
   2. Varnish brushes
3. Sash and trim brushes  
4. Stain brushes  
5. Special purpose brushes  
6. Decorative brushes  

B. Rollers and roller covers:  
1. Dip rollers  
2. Self-feeding rollers  
3. Special purpose rollers  

C. Mixing paint.  
D. Apply paint.  
E. Clean and store paint brushes and rollers.  

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 07101. The student will be able to describe and identify the careers in the painting trade, history, personal qualities of painters.  
B. Module 07102. The student will be able to describe and identify safety issues, PPE and hazards.  
C. Module 07103. The student will be able to describe and identify the types and uses of ladders, scaffolds, lifts, and fall protection.  
D. Module 07104. The student will be able to describe and identify types of surface/substrate materials and conditions.  
E. Module 07105. The student will be able to describe and identify the proper ways of protecting adjacent surfaces.  
F. Module 07106. The student will be able to describe and identify basic surface preparation methods for different surfaces, and tools.  
G. Module 07107. The student will be able to describe and identify the types and uses of sealants and repair/fillers.  
H. Module 07108. The student will be able to describe and identify the types, functions and clean-up of paints and coatings.  
I. Module 07109. The student will be able to describe and identify the types of brushes/rollers, application and clean-up.  
J. The student will identify and describe sound environmental practices for painters, including waste disposal, life cycle analysis, green practices and low impact.
COURSE COMPETENCIES:

*Module 07101. The student will be able to describe and identify the careers in the painting trade, history, personal qualities of painters.*

1. The student will be able to briefly describe the history of the painting trade, including how the Clean Air and Lead Abatement laws and regulations have changed the paint industry.
2. The student will be able to identify career opportunities available for people in the painting trade.
3. The student will be able to explain the purpose and objectives of an apprentice training program.
4. The student will be able to describe the desired characteristics of professionals in the painting trade.

*Module 07102. The student will be able to describe and identify safety issues, PPE and hazards.*

5. The student will be able to explain the obligations and responsibilities of workers, employers, and the Occupational Safety and Health Administration (OSHA) with regard to safety.
6. The student will be able to describe the nature of the hazard(s) and safety rules and guidelines for job site safety relating to:
   - Personal hygiene and work clothing
   - Personal protective and life saving equipment
   - Respiratory hazards
   - Fall hazards
   - Hazardous chemicals and materials
   - Lead hazards
   - Asbestos hazards
   - Confined space hazards
   - Painting tool and equipment hazards
   - Hot and cold weather hazards
   - Electrical hazards
7. The student will be able to explain the purpose of Hazardous Communication (HazCom) programs including:
   - The elements or parts required of a HazCom program
The use of Material Safety Data Sheets (MSDSs)
The use of Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) codes

Module 07103. The student will be able to describe and identify the types and uses of ladders, scaffolds, lifts, and fall protection.

8. The student will be able to recognize, erect, and safely use the different kinds of ladders, including:
   - Stepladders
   - Single ladders
   - Extension ladders
   - Trestle and extension trestle ladders
9. The student will be able to recognize, erect, and safely use the different kinds of scaffolds, including:
   - Built-up scaffolds
   - Swing scaffolds
   - Beam-suspended scaffolds
10. The student will be able to recognize and safely use aerial work platforms and scissor lifts.
11. The student will be able to recognize and safely use fall arresting and other fall protection equipment, including:
    - Body harnesses and belts
    - Lanyards
    - Deceleration devices
    - Lifelines
    - Anchoring devices and equipment connectors

Module 07104. The student will be able to describe and identify types of surface/substrate materials and conditions.

12. The student will be able to identify various substrates used in construction:
    - Wood
    - Masonry, concrete, and stucco
    - Plaster/drywall
    - Synthetic
    - Metal
13. The student will be able to identify the surface condition of substrates and coatings:
    - New
    - Aged
    - Previously coated
14. The student will be able to be aware of the basic surface preparation methods and coatings required for various substrates.

Module 07105. The student will be able to describe and identify the proper ways of protecting adjacent surfaces.
15. The student will be able to describe the tools and materials required for protecting surfaces:
   - Tape dispensers
   - Types of tape
   - Types of masking material, such as paper, film, light-duty plastic sheeting, and liquid or gel masking
   - Paint shields
   - Covering materials, such as dropcloths, netting, and heavy-duty plastic sheeting

16. The student will be able to describe the methods of applying interior and exterior masking and coverings to various surfaces.

17. The student will be able to understand the importance of proper cleanup.

Module 07106. The student will be able to describe and identify basic surface preparation methods for different surfaces, and tools.

18. The student will be able to describe preparation tools and materials:
   - Cleaning agents
   - Surface conditioning agents
   - Repair agents
   - Hand tools
   - Power tools

19. The student will be able to describe or demonstrate preparation methods:
   - Washing and cleaning
   - Hand tool cleaning
   - Power tool cleaning
   - Etching and neutralization
   - Vacuuming
   - Checking for moisture in concrete, stucco, masonry, wood, or plaster substrates
   - Repair/replacement of substrates

20. The student will be able to describe or demonstrate general preparation procedures for various types of surfaces/substrates:
   - Wood
   - Concrete and masonry
   - Plaster and drywall
   - Metal
   - Synthetic

Module 07107. The student will be able to describe and identify the types and uses of sealants and repair/fillers.

21. The student will be able to describe the composition and function of various sealants and fillers.

22. The student will be able to select an appropriate product for a given application and surface, stating the important properties for product selection.

23. The student will be able to describe tools and additional materials required for sealant
application.

24. The student will be able to apply and smooth suitable products to the following joints using appropriate tools:
   - Fixed inside corner joint between two types of substrate
   - Fixed outside corner joint between two pieces of the same substrate
   - Expansion joint with 25%-50% expected movement
   - Long, wide, deep crevice in substrate

25. The student will be able to based on application conditions, judge whether a post-primer sealant or filler will adhere properly after curing.

   *Module 07108. The student will be able to describe and identify the types, functions and clean-up of paints and coatings.*

26. The student will be able to explain the function(s) of pigments, resins, solvents, and additives.

27. The student will be able to describe the basic differences between water-based and oil-based paints and coatings, including the film forming mechanisms, advantages, and disadvantages of both types.

28. The student will be able to use manufacturer’s literature and/or product labels to identify coating(s) recommended for use with various substrates (wood, metal, etc.) and exposure conditions. Also identify the recommended method of surface preparation for each coating.

29. The student will be able to describe the properties and/or functions of paints or coatings.
   - Properties:
     - Alkyd
     - Latex
     - Epoxy
     - Urethane (polyurethane)
   - Functions:
     - Primers/undercoats
     - Tie coats
     - Finish coat
     - Sealers
     - Shellacs, varnishes, and lacquers
     - Stains
     - Special purpose coatings

30. The student will be able to demonstrate and/or explain the general methods used for the cleanup and disposal of water-based and oil-based paints.

   *Module 07109. The student will be able to describe and identify the types of brushes/rollers, application and clean-up.*

31. The student will be able to recognize the various types of paint brushes and select the proper paint brush for the application.
   - Wall brushes
Varnish brushes
Sash and trim brushes
Stain brushes
Special purpose brushes
Decorative brushes

32. The student will be able to recognize the different kinds of rollers and roller covers and select the proper roller and cover for the application.
   Dip rollers
   Self-feeding rollers
   Special purpose rollers

33. The student will be able to demonstrate how to properly mix paint.
34. The student will be able to demonstrate how to properly apply paint to surfaces using the brush and the roller.
35. The student will be able to demonstrate how to clean and store paint brushes and rollers.

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

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