SYLLABUS

DATE OF LAST REVIEW: 02/2013
CIP CODE: 48.0508
SEMESTER: Departmental Syllabus
COURSE TITLE: Cutting Processes
COURSE NUMBER: WELD0110
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: WELD0100

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

COURSE DESCRIPTION:
Through classroom and/or shop/lab learning and assessment activities, students in this course will: distinguish several types of mechanical and thermal cutting equipment and processes used in the welding trade; demonstrate the safe and correct set up, operation and shut down of the Oxy-fuel (OFC) workstation; demonstrate the safe and correct set up, operation and shut down of the Plasma Arc (PAC) workstation; demonstrate the safe and correct set up, operation and shut down of the Carbon Arc Cutting with Air (CAC-A) workstations; demonstrate safe and proper operation of several types of mechanical cutting equipment; and inspect quality and tolerance of cuts according to industry standards.

METHOD OF INSTRUCTION:
A variety of instructional methods may be used depending on content area. These may include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.
COURSE OUTLINE:

I. Cutting basics
   A. Methods of cutting
   B. Measurement for cutting
   C. Cutting safety
      1. Mechanical cutting hazards
      2. Thermal cutting hazards

II. Mechanical cutting
   A. Sawing
   B. Shearing
   C. Punching
   D. Machining

III. Thermal Cutting
   A. PAC
   B. OFC
      1. Oxy Acetylene
      2. Other fuels
   C. CAC-A

EXPECTED LEARNER OUTCOMES:

Upon successful completion of this course:

A. The student will be able to Distinguish several types of mechanical and thermal cutting equipment and processes used in the welding trade
B. The student will be able to Demonstrate the safe and correct set up, operation and shut down of the Oxy-fuel (OFC) workstation
C. The student will be able to Demonstrate the safe and correct set up, operation and shut down of the Plasma Arc (PAC) workstation
D. The student will be able to Demonstrate the safe and correct set up, operation and shut down of the Carbon Arc Cutting with Air (CAC-A) workstations
E. The student will be able to Demonstrate safe and proper operation of several types of mechanical cutting equipment
F. The student will be able to Inspect quality and tolerance of cuts according to industry standards

COURSE COMPETENCIES:

Distinguish several types of mechanical and thermal cutting equipment and processes used in the welding trade

1. Identify types of cutting process
2. Define the cutting process advantage
3. Define the cutting process disadvantage
4. Identify different components of the process equipment
5. Describe required safety procedures of the process
6. Describe the set-up procedures of the process

Demonstrate the safe and correct set up, operation and shut down of the Oxy-fuel (OFC) workstation
7. Use the proper personal protective equipment (PPE)
8. Identify safety hazards of the equipment
9. Properly set up the equipment
10. Properly light and adjust the torch
11. Make a variety of quality cuts
12. Properly shut down the equipment

_Demonstrate the safe and correct set up, operation and shut down of the Plasma Arc (PAC) workstation_
13. Use the proper personal protective equipment (PPE)
14. Identify the safety hazards of the equipment
15. Properly set up the equipment
16. Properly shut down the equipment
17. Make a variety of quality cuts on various types and sizes of metal

_Demonstrate the safe and correct set up, operation and shut down of the Carbon Arc Cutting with Air (CAC-A) workstations_
18. Use the proper personal protective equipment (PPE)
19. Identify the safety hazards of the equipment
20. Properly set up the equipment
21. Make a variety of quality gouges and cuts on various metals
22. Properly shut down the equipment

_Demonstrate safe and proper operation of several types of mechanical cutting equipment_
23. Identify safety hazards of the equipment
24. Use the proper personal protective equipment (PPE)
25. Properly set up the mechanical cutting equipment
26. Make a variety of quality cuts on various metals
27. Properly shut down the equipment

_Inspect quality and tolerance of cuts according to industry standards_
28. Inspect that the quality of edges are to industry standard
29. Use the proper inspection tools for the cutting process

**ASSESSMENT OF LEARNER OUTCOMES:**
Student progress is evaluated by means that include, but are not limited to, exams, written assignments 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 at 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. KCKCC 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.