SYLLABUS

DATE OF LAST REVIEW: 02/2013

CIP CODE: 48.0508

SEMESTER: Departmental Syllabus

COURSE TITLE: Fabrication Welding

COURSE NUMBER: WELD0265

CREDIT HOURS: 4

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, http://www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION: Through a variety of classroom and/or shop/lab learning and assessment activities, the students in this course will: learn to weld as in a shop setting. This includes project planning, layout, tacking, welding, and dealing with distortion of weldments. Students will end the class with a project that they may take home. Students will be required to supply materials for project.

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. Project planning
   A. Drawing/ sketching projects
   B. Project estimation
      1. Materials
      2. Man hours
   C. Weld procedure planning
      1. Size and type of weld
      2. Distortion and correction
II. Preparing materials
A. Parts list
B. Layout of materials
C. Cutting materials
D. Cleaning and preparing for welding

III. Welding
   A. Tacking
   B. Checking for project accuracy
   C. Welding of projects

IV. Project finishing
   A. Post weld cleaning
   B. Surface finish
      1. Paint
      2. Powder coating
      3. Texturing

EXPECTED LEARNER OUTCOMES:
Upon successful completion of this course:
A. The student will be able to produce a drawing and/or sketch that a project can be created from.
B. The student will be able to determine welding procedure for a job.
C. The student will be able to estimate costs for projects.
D. The student will be able to prepare materials for project.
E. The student will be able to successfully complete welding project.
F. The student will be able to successfully complete project finishing.

COURSE COMPETENCIES:
The student will be able to produce a drawing and/or sketch that a project can be created from.
1. The student will be able to demonstrate ability to produce simple sketches for projects.
2. The student will be able to determine if sketch should be made into a proper print.
3. The student will be able to demonstrate ability to produce a drawing for a simple project.

The student will be able to determine welding procedure for a job.
4. The student will be able to determine best welding process for project.
5. The student will be able to create a weld procedure for project including machine settings and deposit rates.
6. The student will be able to determine total length and volume of weld needed for project.

The student will be able to estimate costs for projects.
7. The student will be able to figure lengths and types of materials needed.
8. The student will be able to obtain price quotes for materials needed.
9. The student will be able to determine amount and cost of weld consumables needed for project.
10. The student will be able to determine approximate man hours needed to complete a project.
11. The student will be able to create a quote that factors in all aspects of project including profit.

The student will be able to prepare materials for project.
12. The student will be able to create bill of materials for project.
13. The student will be able to lay out raw materials to make parts for project.
14. The student will be able to cut raw materials to size with maximum tolerance of 1/16”.
15. The student will be able to prepare parts for assembly and welding.

The student will be able to successfully complete welding project.
16. The student will be able to layout parts and check to drawing.
17. The student will be able to fit up and tack parts together for sub assemblies.
18. The student will be able to ensure that sub assemblies are still correct to drawing.
19. The student will be able to weld sub assemblies.
20. The student will be able to ensure that sub assemblies are still correct to drawing.
21. The student will be able to remove any spatter or defects from sub assemblies.
22. The student will be able to fit up and tack sub assemblies for final assembly.
23. The student will be able to ensure that final assembly is still correct to drawing.
24. The student will be able to weld final assembly.
25. The student will be able to complete final fabrication inspection to ensure project is correct to drawing.

The student will be able to successfully complete project finishing.
26. The student will be able to clean up any spatter, defects or burrs on project.
27. The student will be able to prepare project for final finish (paint, powder coat, abrasive texturing, etc.
28. The student will be able to apply finish to project.
29. The student will be able to inspect project for proper finish/appeal.
30. The student will be able to touch up any flaws found during inspection.

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.