SYLLABUS

DATE OF LAST REVIEW: 02/2013

CIP CODE: 48.0508

SEMESTER: Departmental Syllabus

COURSE TITLE: Welding Blueprints

COURSE NUMBER: WELD0105

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: None

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

COURSE DESCRIPTION:
The students in this course will: identify basic lines, views and abbreviations used in blueprints; interpret basic 3D sketches using orthographic projection and blueprints; solve applicable mathematical equations; use basic measuring tools; interpret scale ratios on a blueprint; identify basic welding joints and structural shapes; interpret a bill of materials; and identify standard AWS weld symbols.

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. Introduction to prints
   A. What is a print?
   B. Measurement
   C. Fractions and decimals
II. Basics
   A. Lines on a print
   B. Types of prints
   C. Print formats
   D. Dimensioning prints
   E. Circles, triangles and angles on prints
   F. Finding area and volume for parts
III. Materials and joining them
   A. Threaded fasteners
   B. Non-threaded fasteners
   C. Structural materials
   D. Weld joints and weld types
IV. Welding symbols for prints
   A. Overview of welding symbols
   B. Groove welds
   C. Fillet welds
   D. Plug and slot welds
   E. Resistance welds
   F. Flange welds
   G. Weld examination symbols

EXPECTED LEARNER OUTCOMES:
Upon successful completion of this course:
   A. The student will be able to Identify basic lines, views and abbreviations used in blueprints
   B. The student will be able to Interpret basic 3D sketches using orthographic projection and blueprints
   C. The student will be able to Solve applicable mathematical equations
   D. The student will be able to Use basic measuring tools
   E. The student will be able to Interpret scale ratios on a blueprint
   F. The student will be able to Identify basic welding joints and structural shapes
   G. The student will be able to Interpret a bill of materials
   H. The student will be able to Identify standard AWS weld symbols

COURSE COMPETENCIES:
Identify basic lines, views, and abbreviations used in blueprints
   1. Identify types of lines associated with industrial blueprints
   2. Identify the views associated with an orthographic projection
   3. Identify the placement of the views of an orthographic projection on a 2D surface
   4. Utilize abbreviations where appropriate
Interpret basic 3D sketches using orthographic projection and blueprints
   5. Describe each view of an orthographic projection
6. Explain the part based on the view
7. Accurately lay out the part based on the sketches tolerances

Solve applicable mathematical equations
8. Demonstrate use of fractions and decimals
9. Compute areas
10. Compute volumes
11. Use basic geometric equations

Use basic measuring tools
12. Use a variety of measuring tools and layout devices appropriate to the task
13. Can read a tape measure to a minimum of 1/16th of an inch or 1mm

Interpret scale ratios on a blueprint
14. Apply appropriate mathematical principles to assigned tasks

Identify basic welding joints and structural shapes
15. Identify welding joints
16. Identify structural shapes

Interpret a bill of materials
17. Identify the material description
18. Identify the quantities of materials
19. Identify parts and item numbers

Identify standard AWS weld symbols
20. Identify a joint design
21. Identify a weld process
22. Identify other symbols’ components

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.

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