Wayne County Community College District

COURSE SYLLABUS

WLT102   Arc Welding

CREDIT HOURS: 5.00

CONTACT HOURS: 75.00

COURSE DESCRIPTION:
Instruction is provided in arc welding using both AC and DC arc welding equipment. Emphasis is on out-of-position welded joints in mild steel, testing procedures, and beveling and fabricating various welded joints. Related theory, codes and standards are included.

PREREQUISITES: *WLT 101*

EXPECTED COMPETENCIES:
Upon completion of this course, the student will be able to:
- Know and follow all arc/oxy-acetylene welding safety practices
- Use line burner (oxygen-acetylene automated bevel edge table) to cut and prep coupons with 100% accuracy
- Weld bevel edge V-groove samples root/multi-pass/cover-pass using 1/8 E6010 root and 1/8 E7018 multi and cover-pass in the flat with 100% accuracy; with backing plate, as needed
- Run Horizontal stringers/butt weld with 80% accuracy
- Run vertical up and down stringers 1/8 E6010 and 3/32 E7018 with 80% accuracy
- Run vertical up butt welds E6010 1/8 and E7018 3/32 with 80% accuracy
- Run vertical up cover-pass using two different weave patterns E7018 3/32 and 1/8 with 100% accuracy
- Run a vertical up lap 3/32 and 1/8 E7018 with 80% accuracy
- Run vertical root pass on 1/8 mild steel and introduce the flip/whip motion 1/8 E6010
- Run a stringers overhead 3/32 and 1/8 E7018 with 100% accuracy
- Run a lap weld 3/32 and 1/8 lap joint with 100% accuracy
- Run vertical up inside/outside corners E 7018 with 80% accuracy
- Complete overhead stringers and Butt joint/Inside corner E6010/E7018 with 80% accuracy
- Weld tee and lap weld in the horizontal using 1/8 and 3/32 E7018 with 100% accuracy
- Perform a vertical up bevel edge V-groove root/multi-pass/cover-pass using 1/8 E6010 root and 3/32 E7018 multi- and cover-pass with 50% accuracy; with backing plate, as needed
- Perform a horizontal bevel edge V-groove root/multi-pass/cover-pass using 1/8 E6010 root and 3/32 E7018 multi and cover-pass with 50% accuracy; with backing plate, as needed

ASSESSMENT METHODS:
Student performance may be assessed by examination, quizzes, case studies, oral conversation, group discussion, oral presentations. The instructor reserves the option to employ one or more of these assessment methods during the course.

GRADING SCALE:
90%-100% = A
80%-89.9%= B
70%-79.9%= C
60%-69.9%= D
<60% = E