

Bossier Parish Community College
Master Syllabus

Course Prefix and Number: WELD 100

Credit Hours: 4-3-3

Course Title: Intermediate Welding I

Course Prerequisites: READ 099; MATH 098; Prior Welding experience and/or education is required; Instructor Permission required

Textbook: Modern Welding Common Cartridge - ISBN 978-1-63563-888-2: 12th edition, Goodheart Wilcox Publisher.

Course Description: This course covers the knowledge, skills, and abilities required of an AWS Certified Level I Intermediate Welder including welding safety, equipment, proper measurement for layout tool procedures, welding symbols interpretation, thermal cutting processes and welding principles for gas metal arc welding. (aligned with AWS Certified Level I Welder)

Learning Outcomes:

At the end of this course, the student will:

- A. demonstrate knowledge of occupational orientation skills including: safe operation practices, preparation of job reports, and follow verbal and written instructions to complete work assignments;
- B. demonstrate a fundamental knowledge of the equipment used including following the appropriate safety procedures and interpretation of welding symbols;
- C. recognize the principles related to the thermal cutting processes including square edge and straight bevel edge cutting operations in the flat position on carbon steel; and
- D. demonstrate the ability to use arc welding principles and practices including: shielded metal arc welding (SMAW) both structural and pipe and gas metal arc welding (GMAW, GMAW-S).

To achieve the learning outcomes, the student will or will be able to:

(The letter designations at the end of each statement refer to the learning outcome(s).)

1. follow safe practices; (A)
2. prepare time or job cards, reports, or records; (A)
3. perform housekeeping duties; (A)
4. follow verbal instructions to complete work assignments; (A)
5. follow written instructions to complete work assignments; (A)
6. demonstrate proper use and inspection of personal protection equipment; (PPE) (B)
7. demonstrate proper safe operation practices in work area; (B)
8. demonstrate proper use and inspection of ventilation equipment; (B)
9. demonstrate proper Hot Work operation; (B)
10. demonstrate proper work actions for working in confined spaces; (B).
11. demonstrate proper use of precautionary labeling and SDS information; (B)

12. demonstrate proper inspection and operation of equipment used for each welding and thermal cutting process used; (B)
13. interpret basic elements of a drawing or sketch; (B)
14. interpret welding symbol information; (B)
15. fabricate parts from a drawing or sketch; (B)
16. operate manual OFC equipment on carbon steel; (C)
17. perform shape, square edge cutting operations in the flat position on carbon steel; (C)
18. perform straight, bevel edge cutting operations in the flat position on carbon steel; (C)
19. perform gouging operations to remove base and weld metal, in flat and horizontal positions on carbon steel; (C)
20. operate mechanized OFC equipment on carbon steel; (C)
21. operate manual PAC equipment on carbon steel, austenitic stainless steel, and aluminum; (C)
22. perform shape, square edge cutting operations in the flat position on carbon steel, austenitic stainless steel and aluminum; (C)
23. perform straight, bevel edge cutting operations in the flat position on carbon steel, austenitic stainless steel and aluminum; (C)
24. perform safety inspections of GMAW equipment and accessories; (D)
25. make minor external repairs to GMAW equipment and accessories; (D)
26. set up for GMAW-S operations on carbon steel; (D)
27. operate GMAW-S equipment on carbon steel; (D)
28. make fillet welds in all positions on carbon steel; (D)
29. make groove welds in all positions on carbon steel; (D)
30. set up for GMAW (spray) operations on carbon steel; (D)
31. operate GMAW (spray) equipment on carbon steel; (D) and
32. make fillet welds in the 1F and 2F positions on carbon steel (D).

Course Requirements: Complete all homework assignments, in-class equipment exercises, in class tests, and final exam.

Course Grading Scale:

- 90 – 100 = A
- 80 – 89 = B
- 70 – 79 = C
- 60 – 69 = D
- 0 – 59 = F

Attendance Policy: The college attendance policy is available at <http://www.bpcc.edu/catalog/current/academicpolicies.html>

Course Fees: This course is accompanied with an additional non-refundable fee for supplemental materials, laboratory supplies, software licenses, certification exams and/or clinical fees.

Nondiscrimination Statement: Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status,

veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

Title VI, Section 504, and ADA Information

Angie Cao, Student and Disabilities Services Specialist

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Equity/Compliance Coordinator

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