



Articulation Agreement Course Competencies and Provisions

WLD 111 Welding Process I

1- 6 credits

Introduction to arc welding processes. Welding of E-6010 and various kinds and sizes of electrodes in all positions, manipulative skills including stringer beads and weave beads on plate and corner joints with AC and DC welding machines.

PROVISIONS

1. Teachers will arrange for testing with the BBCC welding instructor before awarding Tech Prep credits unless otherwise approved by the college.
2. Teachers approved by the college may test and award credit to students in the following competencies.
 - Part 1, Steps 4-12 SMAW Carbon Steel Flat Position 1F & 1G 1 Credit
 - Part 2, Steps 13-21 SMAW Carbon Steel Horizontal Position 2F & 2G 1 Credit
 - Part 3, Steps 22-30 SMAW Carbon Steel Vertical Position 3F & 3G 2 Credits
 - Part 4, Steps 31-39, SMAW Carbon Steel Overhead Position 4F & 4G 2 Credits
3. Student must be enrolled in the required high school class.
4. Student must receive an A or B grade (minimum 2.9 or better) and complete all competencies.
5. All required Tech Prep forms must be sent to BBCC **within 30 days** of high school course completion.
6. Teachers must assign student grades and credits **within 30 days** of high school course completion.

COMPETENCIES

Upon successful completion of the following competencies, students may earn Tech Prep credits.

General

1. Perform safety inspection of equipment and accessories
2. Make minor repairs to equipment and accessories
3. Set up a shielded metal arc welding operation on plain carbon steel

Part 1, Steps 4-12 SMAW Carbon Steel Flat Position 1F & 1G

1 Credit

4. Make stringer beads with E-6010 in the flat position
5. Make stringer beads with E-7018 in the flat position
6. Make pad of stringer beads with E-6010 flat position
7. Make pad of stringer beads with E-7018 flat position
8. Make single pass ¼" fillet weld passing visual inspection and fillet break test using E-6010 in the 1F position
9. Make single pass ¼" fillet weld passing visual inspection and fillet break test using E-7018 in the 1F position
10. Make multi pass ½" fillet weld passing visual inspection using E-6010 in the 1F position
11. Make multi pass ½" fillet weld passing visual inspection using E-7018 in the 1F position
12. Make 1G groove weld with backing using E-6010 & E-7018 passing visual inspection and guided bend test (Use 3/8" to 1" plate)

Part 2, Steps 13-21 SMAW Carbon Steel Horizontal Position 2F & 2G 1 Credit

13. Make stringer beads with E-6010 in the horizontal position
14. Make stringer beads with E-7018 in the horizontal position
15. Make pad of stringer beads with E-6010 horizontal position
16. Make pad of stringer beads with E-7018 horizontal position
17. Make single pass ¼" fillet weld passing visual inspection and fillet break test using E-6010 in the 2F position
18. Make single pass ¼" fillet weld passing visual inspection and fillet break test using E-7018 in the 2F position
19. Make multi pass ½" fillet weld passing visual inspection using E-6010 in the 2F position
20. Make multi pass ½" fillet weld passing visual inspection using E-7018 in the 2F position
21. Make 2G groove weld with backing using E-6010 & E-7018 passing visual inspection and guided bend test (Use 3/8" to 1" plate)

Part 3, Steps 22-30 SMAW Carbon Steel Vertical Position 3F & 3G 2 Credits

22. Make stringer beads with E-6010 in the vertical position
23. Make stringer beads with E-7018 in the vertical position
24. Make pad of stringer beads with E-6010 vertical position
25. Make pad of stringer beads with E-7018 vertical position
26. Make single pass ¼" fillet weld passing visual inspection and fillet break test using E-6010 in the 3F position
27. Make single pass ¼" fillet weld passing visual inspection and fillet break test using E-7018 in the 3F position
28. Make multi pass ½" fillet weld passing visual inspection using E-6010 in the 3F position
29. Make multi pass ½" fillet weld passing visual inspection using E-7018 in the 3F position
30. Make 3G groove weld with backing using E-6010 & E-7018 passing visual inspection and guided bend test (Use 3/8" to 1" plate)

Part 4, Steps 31-39, SMAW Carbon Steel Overhead Position 4F & 4G 2 Credits

31. Make stringer beads with E-6010 in the overhead position
32. Make stringer beads with E-7018 in the overhead position
33. Make pad of stringer beads with E-6010 overhead position
34. Make pad of stringer beads with E-7018 overhead position
35. Make single pass ¼" fillet weld passing visual inspection and fillet break test using E-6010 in the 4F position
36. Make single pass ¼" fillet weld passing visual inspection and fillet break test using E-7018 in the 4F position
37. Make multi pass ½" fillet weld passing visual inspection using E-6010 in the 4F position
38. Make multi pass ½" fillet weld passing visual inspection using E-7018 in the 4F position
39. Make 4G groove weld with backing using E-6010 & E-7018 passing visual inspection and guided bend test (Use 3/8" to 1" plate)

NOTE: For a list of detailed competency requirements, contact Big Bend Community College (509-793-2057).