



Articulation Agreement Course Provisions and Competencies

WLD 112 Thermal Cutting & Welding

1- 3 Credits

Various techniques of steel cutting with oxy-fuel, air carbon arc, shielded metal arc, and plasma arc processes and oxy-acetylene welding, and brazing with various metals.

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 1-14 Thermal Cutting (36 Hours Minimum) 2 Credits
Part 2, Steps 15-25 Oxy-Acetylene Gas Welding (24 Hours Min) 1 Credit
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. Teacher 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.

Part 1 Thermal Cutting (36 Hours Minimum)

2 Credits

1. Straight Cutting – using 3/8" x 4" x 8" Plate
2. Straight Cutting – using 3/4" x 4" x 8" Plate
3. Round Bar – 1/4" x 1" material; 90° cut and 35° bevel
4. Square Tube (or rectangular tube)- Any size or thickness or material
5. H & I Beam – any available material; any size or thickness
6. Angle Iron (or Channel Iron) – any available material; any size or thickness
7. Bevel 35° Straight Cut – 3/8" and 3/4" plate
8. Scarfing – remove cracks, seams, scabs, breaks
9. Piercing Holes – plate size: 1/4", 3/8", 1/2", 3/4", and up to 1"; hole size: 1/4", 3/8", 1/2", 3/4" and 1" in each size plate
10. Pipe Straight, bevel 30° - any 4", 6", 8" or 10" pipe; any 40 – 120 schedule thickness
11. Machine Cutting (Repeat Task #1, #2 and #7)
12. (Optional) Machine Cutting (Repeat Task #10)
13. (Optional) Plasma Arc Cutting
14. (Optional) Carbon Arc Cutting

Part 2 Oxy-Acetylene Gas Welding (24 Hours Minimum)

1 Credit

15. Carbon Steel Running Bead without Rod
16. Carbon Steel Running Bead with Rod
17. Butt Joint
18. T or Corner Joint
19. Lap Joint
20. Brazing Running Beads
21. Brazing Butt Joint
22. Brazing Lap Joint
23. Brazing T Joint
24. Aluminum Running Beads (Optional)
25. Aluminum Butt Joint (Optional)

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