

WELDING 1

The welding program fosters the developmental skills listed below.

The student:

- Maintains appropriate personal appearance.
- Uses time wisely.
- Maintains a neat and clean work area.
- Follows instructions.
- Attends regularly and on time.
- Takes proper care of tools, equipment and facilities.
- Communicates effectively.
- Solves problems using a mix of logic and intuition appropriate to the situation.

Competencies for welding:

FIRST NINE WEEKS

1. Identify and follow general shop, personal safety, and first aid rules.

Oxyfuel Cutting (OAC)

2. Change cylinders; set up oxyacetylene equipment for operation; pressure test for leaks; turn on , light, and adjust torch; and shut down equipment.
3. Operate manual oxyfuel cutting equipment.
4. Operate automatic oxyfuel cutting equipment.
5. Perform straight cutting.
6. Perform bevel cutting.
7. Perform shape cutting.

Shielded Metal Arc Welding (SMAW)

8. Make fillet welds in the horizontal (2F) position using E6010 electrodes. Sizes- 1\4, 3\8, 1\2.
9. Make fillet welds in the (2F), **Vertical (3F)** position using E7018 electrodes. Sizes- 1\4, 3\8, 1\2.
- 10.

Related Instruction

11. Reading a ruler.
12. Welding theory and terminology.
13. Employability skills.
14. Tooling U

SECOND NINE WEEKS

Air Carbon Arc Cutting (ACE)

15. Operate manual air cutting equipment.
16. Perform metal removal operations.
- 17.

Shielded Metal Arc Welding (SMAW)

18. Make fillet welds in the overhead (**4F**) position using E7018 electrodes. Sizes- 1\4, 3\8, 1\2.

Rotation to Mig, Flux or Tig Welding (fillet welds in all positions)

Related Instruction

19. Welding theory and terminology.
20. Employability skills.
21. Interpret welding symbols.

THIRD NINE WEEKS

Rotation to Mig, Flux or Tig Welding (fillet welds all positions).

Plasma Arc Cutting (PAC)

22. Set up manual air cutting operations.
23. Operate plasma arc cutting operations.
24. Perform shape cutting operations.

Related Instruction

25. Employability skills training.
26. Welding theory and terminology.
27. Interpret basic elements of a drawing.
28. Tooling U

FOURTH NINE WEEKS

Rotation to Mig, Flux or Tig (fillet welds in all positions)

Related Instruction

29. Employability skills training.
30. Welding theory and terminology.
31. Work various projects.
32. Tooling U
33. NOCTI Certification

WELDING 2

The welding program fosters the developmental skills listed below.

The student:

- Maintains appropriate personal appearance.
- Uses time wisely.
- Maintains a neat and clean work area.
- Follows instructions.
- Attends regularly and on time.
- Takes proper care of tools, equipment and facilities.
- Communicates effectively.
- Solves problems using a mix of logic and intuition appropriate to the situation.

Competencies for welding:

FIFTH NINE WEEKS

34. Tig Groove welds carbon steel all positions.
35. Tig Aluminum 2F, 2G, 3F, 3G

Related Instruction

36. Employability skills training.
37. Welding theory and terminology.
38. AWS Certification work.
39. Projects
40. Tooling U

SIXTH NINE WEEKS

This is on a quarterly rotation

Shielded Metal Arc Welding (SMAW)

41. Groove welds all positions

Gas Metal Arc Welding (GMAW)

42. Groove welds all positions

Flux Core Arc Welding (FCAW)

43. Groove welds all positions.

Related Instruction

- 44. Employability skills training.
- 45. Welding theory and terminology.
- 46. AWS Certification work.
- 47. Projects
- 48. Tooling U

SEVENTH NINE WEEKS

This in on a quarterly rotation

Shielded Metal Arc Welding

- 49. Make Groove Welds in all positions

Gas Metal Arc Welding

- 50. Make groove welds all positions

Flux Core Arc Welding

- 51. Make Groove Welds All positions

Related Instruction

- 52. Employability skills training.
- 53. Welding theory and terminology.
- 54. AWS Certification work.
- 55. Projects

EIGHTH NINE WEEKS

This is on a quarterly rotation

Shielded Metal Arc Welding

- 56. Groove Welds All Positions

Gas Metal Arc Welding

- 57. Groove welds All Positions

Flux Core Arc Welding

- 58. Groove Welds All Positions

Related Instruction

- 59. Employability skills training.
- 60. Welding theory and terminology.
- 61. AWS Certification work.
- 62. NOCTI Certification
- 63. Projects
- 64. Tooling U