

MFG 107 : WELDING TECHNOLOGY III

Transcript title

Welding Technology III

Credits

4

Grading mode

Standard letter grades

Total contact hours

80

Other hours

80

Prerequisites

instructor approval.

Prerequisites with concurrency

MFG 105.

Course Description

Final course in a three-course sequence focused on introductory level skills used in structural plate welding in accordance to AWS D1.1 Structural Steel Welding code. Advancing to more difficult weld joints such as 1G and 2G V-groove butt joint on plate using the SMAW and GMAW process and destructive bend test. Perform outside corner joints in all positions. Introduces the GTAW process in 1F and 2F positions on mild steel and aluminum.

Course learning outcomes

1. Demonstrate safe practices in the MATC Welding Lab.
2. Weld common (basic) outside corner and groove assemblies with SMAW and GMAW processes to AWS D1-1 Structural Steel Welding Code.
3. Demonstrate appropriate set up, maintenance, and use of GTAW equipment for basic weldments.
4. Weld common (basic) joint assemblies with GTAW processes to AWS D1-1 Structural Steel Welding Code.
5. Demonstrate appropriate set up, maintenance, and use of FCAW equipment for basic weldments.
6. Apply visual and destructive examination principles and practices in accordance with AWS D1-1 W.

Required materials

This class requires the purchase of safety equipment, reference books, measurement equipment, and tools.