



# Wayne County Community College District

## COURSE SYLLABUS

### WLT103 GAS TUNGSTEN ARC WELDING (GTAW)

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**CREDIT HOURS:** 5.00

**CONTACT HOURS:** 75.00

**COURSE DESCRIPTION:**

This course provides instruction on Gas Tungsten Arc Welding (GTAW). Students will be able to identify high quality welds in ferrous and non-ferrous metals and apply them to the five basic welding joints.

**PREREQUISITES:** *WLT 101*

**EXPECTED COMPETENCIES:**

Upon completion of this course, the student will be able to:

- Know and follow all arc/oxy-acetylene welding safety practices
- Know all torch parts and proper machine settings with 100% accuracy
- Run stringer beads using 3/32 tungsten on 1/8 cold rolled steel (flat) 3/32 and 1/16 filler rod with 50% accuracy
- Run Tee/lap beads using 3/32 tungsten on 1/8 cold rolled steel (flat) with 80% accuracy
- Run Inside/outside corners using 3/32 tungsten on 1/8 cold rolled steel (flat) 3/32 and 1/16 filler rod with 80% accuracy
- Butt weld using 3/32 tungsten on 1/8 cold rolled steel (flat) 3/32 and 1/16 filler rod with 80% accuracy
- Weld Stainless steel Tee/lap using 3/32 tungsten on 1/8 stainless steel (flat) 3/32 and 1/16 stainless filler rod with 80% accuracy
- Continue Stainless Inside/Outside using 3/32 tungsten on stainless steel (flat) 3/32 and 1/16 stainless filler rod with 80% accuracy
- Continue stainless butt weld and edge joint with 100% accuracy
- Run aluminum stringers using 3/32 tungsten on 1/8 aluminum (flat) 3/32 and 1/16 aluminum filler rod with 100% accuracy
- Continue Tee/lap beads using 3/32 tungsten on 1/8 Aluminum (flat) 3/32 and 1/16 filler rod with 90% accuracy
- Continue Inside/outside corners using 3/32 tungsten on 1/8 Aluminum (flat) 3/32 and 1/16 filler rod with 100% accuracy
- Fabricate a steel tube to steel flat stock using welding turn table, metal roller to complete exercise with 80% accuracy
- Simulate a repair 1/2 round stock chamfer end join together use v-blocks to tack and finish weld with 80% accuracy

**ASSESSMENT METHODS:**

Student performance may be assessed by examination, quizzes, case studies, oral conversation, group discussion, oral presentations. The instructor reserves the option to employ one or more of these assessment methods during the course.

**GRADING SCALE:**

90%-100% = A

80%-89.9% = B

70%-79.9% = C

60%-69.9% = D



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<60% = E

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