

JEFFERSON COLLEGE

COURSE SYLLABUS

WLD244

GAS TUNGSTEN ARC WELDING (TIG)

5 Credit Hours

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Revised by
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December 2003

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WLD244 Gas Tungsten Arc Welding (TIG)

I. CATALOGUE DESCRIPTION

Prerequisite: WLD243

5 Semester Hours Credit

Gas Tungsten Arc Welding (TIG) deals with principles of and develops skill in inert gas- arc welding. Included are tungsten inert gas welding (TIG) and inspection and testing of welded joints. (F,S)

II. GENERAL COURSE OBJECTIVES

Upon completion of the course, the student should be able to:

- A. Achieve professional standards in gas tungsten arc welding.
- B. Become familiar with procedures and techniques of testing and quality assurance.
- C. Develop qualities of craftsmanship and professionalism.
- D. Further studies permitting advancement in the art and science of welding.

III. OUTLINE OF TOPICS

- A. Gas Tungsten Arc Welding Equipment, Setup, Operation, and Filler Metals
 - 1. Tungsten types
 - 2. Sharpening tungsten
 - 3. GTA equipment
- B. Gas Tungsten TIG
 - 1. Weld currents
 - 2. Shielding gas
 - 3. Remote controls
- C. Gas Tungsten (TIG) Welding of Plate
 - 1. Torch angle
 - 2. Rod manipulation
 - 3. Contamination
- D. TIG Welding of Plate
 - 1. Current setting
 - 2. Gas flow
 - 3. Practice welds - A-flat, B-vertical, C-horizontal

IV. UNIT OBJECTIVES

The student should be able to describe the difference between manual, semi-automatic, machine, and automatic welding processes.

V. METHOD(S) OF INSTRUCTION

10% Lecture

90% Lab Performance

VI. REQUIRED TEXTBOOK(S)

Welding - Principles and Applications, Larry Jeffus

VII. REQUIRED MATERIALS

Safety Glasses

#1 Victor Welding Tip 1-W-1

Tip Cleaners

Chipping Hammer

Wire Brush

Cutting Goggles with #5 Lens

Welding Hood with #10 Lens

Soap Stone

Combination Square

Vise Grip

Flint Type Striker

Welding Gloves

Welding Jacket

Padlock for Locker

Boots or Shoe Protector

VIII. SUPPLEMENTAL REFERENCES

None

IX. METHOD OF EVALUATION

A. Distribution of the Final Grade

30% - Welding Manipulative Skills - Practical Welding Tests

30% - Examination of Welding Theory - Semester Tests and Chapter Reviews

20% - Instructor Evaluation - Attitude and attendance, emphasis being placed on positive work attitudes, initiative and cooperation.

20% - Final Examination

B. Attendance Policy

Attendance for this class is mandatory. According to the Attendance Policy listed in the Jefferson College Catalog, AIf a student misses more than 15 percent of the total time (including lecture and laboratory) that the class meets in a term, the student may be removed from the class.@

For this class, four (4) tardies constitute one absence.

C. Assignment of Final Letter Grade

A - 90 -100

B - 80 - 89

C - 70 - 79

D - 60 - 69

F - Below 59

X. ADA AA STATEMENT

Any student requiring special accommodations should inform the instructor and the Coordinator of Disability Support Services (Technology Center 101; phone 636-481-3169).

XI. ACADEMIC HONESTY STATEMENT

All students are responsible for complying with campus policies as stated in the Student Handbook (see College website <http://www.jeffco.edu>).

XII. ATTENDANCE STATEMENT

Regular and punctual attendance is expected of all students. Any one of these four options may result in the student being removed from the class and an administrative withdrawal being processed: (1) Student fails to begin class; (2) Student ceases participation for at least two consecutive weeks; (3) Student misses 15 percent or more of the coursework; and/or (4) Student misses 15 percent or more of the course as defined by the instructor. Students earn their financial aid by regularly attending and actively participating in their coursework. If a student does not actively participate, he/she may have to return financial aid funds. Consult the College Catalog or a Student Financial Services representative for more details.

XII. OUTSIDE OF CLASS ACADEMICALLY RELATED ACTIVITIES

The U.S. Department of Education mandates that students be made aware of expectations regarding coursework to be completed outside the classroom. Students are expected to spend substantial time outside of class meetings engaging in academically related activities such as reading, studying, and completing

assignments. Specifically, time spent on academically related activities outside of class combined with time spent in class meetings is expected to be a minimum of 37.5 hours over the duration of the term for each credit hour.