**COLLEGE OF DUPAGE**

**WELDING 1100-007**

**Instructor: Ronald Nelson Welding 1100-001 TEC 1028**

[**Nelson8214@cod.edu**](mailto:Nelson8214@cod.edu) **Monday 1:00 PM – 4:50 PM**

**lab phone 630-942-8382 Welding Coordinator: Jim Filipek**

**filipek@cod.edu**

**630-942-2038**

**Course Name:** Welding 1100-007

**Credit and Contact Hours:** 3 credit hours (2 lecture hours, 2 lab hours)

**Prerequisites:** None

**Textbook & Lab Manual: *Welding, Principles and Applications, 7th edition, Larry Jeffrus***

***Welding, Principles and Applications, Study Guide/Lab Manual, Larry Jeffrus***

**Course Description:**

Basic electric arc, oxy-fuel, gas metal arc, and gas tungsten arc welding processes. Safety procedures required to set up and shut down welding equipment for the various processes. Hands-on experience includes practice with the four welding systems using various thickness materials. Industrial standards and American Welding Society (AWS) standards for quality are discussed.

**Course Objectives:**

Upon successful completion of the course the student should be able to do the following:

1. Produce quality welded joints in the flat position utilizing oxy-acetylene welding , Shielded Metal Arc Welding(SMAW), Gas Metal Arc Welding (GMAW), and Gas Tungsten Arc Welding (GTAW)
2. Demonstrate the safety practices of a variety of welding processes
3. Identify the terms and definitions of a variety of welding processes
4. Identify the careers in the welding field and the employability skills needed for them
5. Identify safe welding practices and procedures conforming to American Welding Society (AWS) Z 49 standards.
6. Demonstrate practical knowledge of making welds with all types of mild steel electrodes, arc air gouging and the welding of mild steel in all positions in a safe manner.
7. Interpret both basic and advanced welding fabrications blueprints including: welding symbols, weld testing symbols, structural steel shapes, and welding specifications.
8. Document advanced knowledge and techniques for the safe and successful operation of gas tungsten welding, shielded metal arc welding, gas metal arc welding, and oxy fuel gas welding.
9. Perform an American Welding Society (AWS)1G with a backing strip test or 3G with an open root.

**Topical Outline:**

1. General shop safety rules
2. General welding theory
3. Laboratory operations
4. Basic welding blueprint reading
5. Oxyacetylene welding
   1. Safety precautions to use when welding
   2. Theory of oxyacetylene welding
   3. Working with welder (hands on)
6. Arc welding
   1. Safety precautions to use when welding
   2. Theory of arc welding
   3. Working with welders (hands on)
7. Introduce GTAW
   1. Definition of GTAW
   2. Safety precautions when using GTAW
   3. GTAW equipment
   4. Working with welders (hands on)
8. Introduce GMAW
   1. Definition of GMAW
   2. Safety precautions
   3. GMAW equipment
   4. Working with welders (hands on)

**Course Requirements:** Class attendance and participation are essential if students are to receive maximum benefit from this class. The grading rubric will be: laboratory work 50%, attendance 25% and exams 25%. All work must be completed by the last day of class.

**Make-up Policy:** If you cannot attend class, is the responsibility of the student to work with the instructor to insure all work is completed.

**General Note:** In order to achieve the course objectives, it is essential that you enjoy the class in addition to complying with the above requirements and the rules and policies of College of DuPage contained in the catalog and other College materials. If you are having course/College related problems, please feel free to contact me so that we can resolve them to your satisfaction and benefit

**Student Evaluation:** All welding exercises (Practices from your Study Guide/Lab Manual) will be evaluated by the instructor based on the standard practices for weld evaluation outlined in your text. The specific welding exercises required for each course are found on your course assignment sheet. **You must check with your instructor for your grading.**

**Minimum Grade Average**

|  |  |  |  |
| --- | --- | --- | --- |
| **Exercise Score** | **C=8.5** | **B=8.7** | **A=9.3** |

**Other Requirements**

1. Carefully check your Assignment Sheets for specific exercises for your course. Consult with the instructor before beginning each exercise.
2. Complete the text book reading and workbook written exercise and have them checked with the instructor.
3. All courses have unit pre and post tests and Mid-term exam. All unit tests must be completed before lab work begins. Only post test scores will be used for grading.
4. Your final grade is calculated as the total points of the following:
   1. Score on all Unit Post Tests
   2. Completed Activities Exercises from your workbook
   3. Mid-Term test score
   4. Final Test Score
   5. Workbook exercises
5. Incomplete grades **will not** be given for poor attendance!

SAFETY

Safety glasses must be supplied by the student and worn at all times in the shop. They must be Z-87 rated with side shields. Your instructor will also list what other equipment is needed for laboratory participation. Failure to observe these rules will result in a verbal warning followed by a reduction in the student’s grade! Students will be instructed in other laboratory safety rules and these must be followed or you may be removed from the class.

TOOLS AND CLEANUP

Each student is responsible for cleaning his or her station at the completion of the period. This applies even if the machine was found in a dirty condition. All tools should be returned to the tool cabinet and the student should secure all projects and materials.

INSTRUCTOR OFFICE HOURS

The instructor is available on campus in the TEC building, room 1024 by appointment only.

This workforce solution was funded by a grant awarded by the U.S. Department of Labor’s Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timelines, usefulness, adequacy, continued availability, or ownership. This solution is copyrighted by the institution that created it. Internal use, by an organization and/or personal use by an individual for  non-commercial purposes, is permissible. All other uses require the prior authorization of the copyright holder.

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| **Code of Conduct/Plagiarism/Academic Dishonesty:** |
| See COD catalog (2013-2015), p. 108, regarding Student Code of Conduct (Board Policy 20-35) [http://www.cod.edu/catalog/studentservices\_11-13.pdf](http://www.cod.edu/catalog/StudentServices_11-13.pdf%20) This policy is incorporated by reference into this document. An atmosphere of respect, civility and honor is expected to exist in the classroom, and each student should do his or her best to make sure such an atmosphere flourishes. |
| Academic dishonesty is prohibited. Disciplinary action will be pursued in all instances in which it is determined that academic dishonesty has occurred. Disciplinary action may include, but is not limited to |
| 1. Assignment of a failing grade for a test, examination or assignment.  2. Assignment of a failing grade for a course.  3. Referral to a dean for disciplinary sanction, or to the Judicial Review Board (Administrative Procedure 20-40), college catalogue p. 109. |

**Incomplete grades:**

The instructor may give an incomplete of “I” grade when a student has been unable to complete the course within the prescribed time due to unforeseen circumstances. The student is responsible for contacting the instructor or when the instructor is no longer employed at the college, the appropriate dean regarding course completion. Coursework must be completed within the time limits prescribed by the instructor but not to exceed twelve (12) months from the end of the term in which the “I” grade was assigned. The “I” grade may be changed within the time limit prescribed by the instructor of record. If the “I” has not been changed by the instructor of record at the end of them twelve (12) month period, the “I” will automatically change to an “F”. During the time the “I” is on the student’s record, it will not be calculated into the cumulative grade point average. [***Http://www.cod.edu/catalog/academicpolpro\_11-13.pdf***](http://www.cod.edu/catalog/AcademicPolPro_11-13.pdf)

**Satisfactory/Fail (S/F) Grade Option:**

A Student who would like to take a class Satisfactory/Fail must obtain approval from the instructor prior to the last day to withdraw from the class. See the withdraw date below.

**Withdrawal policy:**

**The final day for a student to withdraw from any course will be equal to 75% of the time for the respective academic session (**[**see the Registration Calendar**](http://cod.edu/registration/pdf/reg_calendar.pdf)**) through [myaccess](https://myaccess.cod.edu/) or in person at the Registration office, Student Services Center (SSC), Room 2221.**

After the deadline, students will be required to appeal for late withdrawal and provide appropriate documentation to the Student Registration Services Office for all requests. Students who are granted approval to withdraw by petition will not be eligible for refunds of tuition or fees and will receive a ‘W’ grade on their transcript

**THE LAST DAY TO WITHDRAW FROM THE 16WEEK CLASSES IS 4/17/14**

A.W.S. is now being offered Spring 2014

**MANUF 1820 003 – AWS SENSE I**

**03/17/2014**-05/05/2014 Lecture/Lab Discussion Monday 06:00PM - 09:50PM, Technical Education Ctr, t**alk to your instructor or Welding Coordinator Jim Filipek if interested**

Covers Occupational Orientation, Safety and Health of Welders, Drawing and Welding Symbol Interpretation, Thermal Cutting Processes and Welding Inspection and Training utilizing AWS Sense 1 standards.

**COURSE SCHEDULE**

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| --- | --- |
| **WELD 1100 -007** | |
| **Monday** | **Class #** |
| 1/27/2014 | 1 |
| 2/3/2014 | 2 |
| 2/10/2014 | 3 |
| 2/17/2014 | 4 |
| 2/24/2014 | 5 |
| 3/3/2014 | 6 |
| 3/10/2014 | 7 |
| 3/17/2014 | 8 |
| 3/24/2014 | 9 |
| 3/31/2014 | SPRING BREAK |
| 4/7/2014 | 10 |
| 4/14/2014 | 11 |
| 4/21/2014 | 12 |
| 4/28/2014 | 13 |
| 5/5/2014 | 14 |
| 5/12/2014 | 15 |
| 5/19/2014 | 16 |

“This workforce solution was funded by a grant awarded by the U.S. Department of Labor’s Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timelines, usefulness, adequacy, continued availability, or ownership. This solution is copyrighted by the institution that created it. Internal use, by an organization and/or personal use by an individual for  non-commercial purposes, is permissible. All other uses require the prior authorization of the copyright holder.”