Clarendon College
WLDG 1435 Introduction to Pipe Welding

I. General Course Information

Jay C. Anders, Spring 2012
Course Number: WLDG 1435
Course Title: Introduction to Pipe Welding
Credit Hours: 2-8-4

Recommended Prerequisite: WLDG 1457 Intermediate Shield Metal Welding or Industrial Equivalent experience. (See Instructor)
Course Description: An introduction to welding of pipe using the shielded metal arc welding process (SMAW), including electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 1G and 2G using various electrodes.
End-of-Course Outcomes: Describe equipment and required pipe preparation and perform 1G and 2G welds using various electrodes.

A series of basic intellectual competencies--reading, writing, speaking, listening, critical thinking, and computer literacy--are essential to the learning process in any discipline and thus should inform any core curriculum. Although students can be expected to come to college with some experience in exercising these competencies, they often need further instruction and practice to meet college standards and, later, to succeed in both their major field of academic study and their chosen career or profession. This course will further develop the following basic intellectual competencies:

READING: Reading at the college level means the ability to analyze and interpret a variety of printed materials--books, articles, and documents. A core curriculum should offer students the opportunity to master both general methods of analyzing printed materials and specific methods for analyzing the subject matter of individual disciplines.

WRITING: Competency in writing is the ability to produce clear, correct, and coherent prose adapted to purpose, occasion, and audience. Although correct grammar, spelling, and punctuation are each a sine qua non in any composition, they do not automatically ensure that the composition itself makes sense or that the writer has much of anything to say. Students need to be familiar with the writing process including how to discover a topic and how to develop and organize it, how to phrase it effectively for their audience. These abilities can be acquired only through practice and reflection.

SPEAKING: Competence in speaking is the ability to communicate orally in clear, coherent, and persuasive language appropriate to purpose, occasion, and audience. Developing this competency includes acquiring poise and developing control of the language through experience in making presentations to small groups, to large groups, and through the media.

LISTENING: Listening at the college level means the ability to analyze and interpret various forms of spoken communication.
CRITICAL THINKING: Critical thinking embraces methods for applying both qualitative and quantitative skills analytically and creatively to subject matter in order to evaluate arguments and to construct alternative strategies. Problem solving is one of the applications of critical thinking, used to address an identified task.

COMPUTER LITERACY: Computer literacy at the college level means the ability to use computer-based technology in communicating, solving problems, and acquiring information. Core-educated students should have an understanding of the limits, problems, and possibilities associated with the use of technology, and should have the tools necessary to evaluate and learn new technologies as they become available.

II. Objectives/Terminal Objectives

All Clarendon College courses work together to meet the following objectives:

1. Establish broad and multiple perspectives on the individual in relationship to the larger society and world in which he or she lives, and to understand the responsibilities of living in a culturally and ethnically diverse world;
2. Stimulate a capacity to discuss and reflect upon individual, political, economic, and social aspects of life in order to understand ways in which to be a responsible member of society;
3. Recognize the importance of maintaining health and wellness;
4. Develop a capacity to use knowledge of how technology and science affect their lives;
5. Develop personal values for ethical behavior;
6. Develop the ability to make aesthetic judgments;
7. Use logical reasoning in problem solving; and
8. Integrate knowledge and understand the interrelationships of scholarly disciplines.

In addition, the following objectives that are specific to Introduction to Pipe Welding will be met:

Learning Outcomes.

1. . Identify code requirements for pipe welding.
2. . Differentiate setup procedures based on job parameters.
3. . Perform 2G pipe weld with 6010 root-pass, 7018 filler and cap.
4. . Perform 5G pipe weld with 6010 uphill root-pass, 7018 uphill filler and cap.
5. . Perform 5G pipe weld with 6010 downhill root-pass, 7018 uphill filler and cap.
6. . Bend Test welds for quality based on code criteria.

III. Textbook and Other Required Materials

(ASME) American Society of Mechanical Engineers Section IX Welder Qualification Standards

IV. Classroom Policy and Instructor Expectations

Students are expected to conduct themselves in a manner which promotes a safe learning environment for all students. Students should participate in classroom and lab activities/discussions, complete assignments on time and be prompt to class.

The use of a cell phone during shop classes is restricted only to when an instructor is actively instructing the student. The student will be asked to turn off the phone during this period.

V. Additional/Supplemental References N/A

VI. Methods of Evaluation

Evaluation Testing and Grade Distribution:

Class discussion, verbal exam, familiarization	10 pts
Lab exercises/ Pipe Prep/Set up	10 pts
Lab exercise 2G Pipe Weld	20 pts
Lab exercise 5G Pipe Weld Uphill Root	20 pts
Lab exercise 5G Pipe Weld Downhill Root	20 pts
Final Exam Bend Test	20 pts

Total Points Possible 100

Attendance = 70%
Exams = 30%

Grade Scale:

90 - 100 = A
80 - 89 = B
70 - 79 = C
60 - 69 = D
Below 60 = F

VII. Attendance Requirements

Attendance at all class sessions is expected of all students. This is a significant part of instilling a good work ethic for future employers. For this reason if a student must be absent for any reason he/she will be required to notify a welding instructor(s) as soon as practical for each absence and its reason. If a student is absent from class for four unexcused absences they will be placed on the "Attendance Probation List" for the Welding Program. After six unexcused absences the student will be administratively withdrawn from the entire welding program.

Attendance Percentage **Grade**

90 – 100	**=**	**100**
80 – 90	**=**	**90**
70– 80	**=**	**80**
60 – 70	**=**	**70**
0 – 60	**=**	**50**

VIII. Scans/Or Core Competencies That Will Be Addressed in the Class

Resources:
- Allocates Material & Facility Resources

Information:
- Acquires & Evaluates Information
- Organizes & Maintains Information
- Interprets & Communicates Information

Interpersonal:
- Serve Clients/Customers.

Systems:
- Understands Systems
- Monitor and Correct Performance

Technology:
- Select Technology
- Applies Technology
- Maintain and Troubleshoot Equipment

Basic Skills:
- Reading
- Listening

Thinking Skills:
- Creative Thinking
- Decision Making
- Problem Solving
- Reasoning

Personal Qualities:
- Responsibility
- Self-Management

IX. Next Recommended Course in Sequence—N/A

X. Correlation to Stated Mission Goals of Clarendon College

A. Provide general college academic course for students who plan to enter senior colleges and universities with junior standing.
B. Provide a classroom setting that is conducive to learning.

C. Provide, assist, and promote the use of learning resources.
D. Participate in and contribute to the democratic society in which we live.
E. Acquire skills, facts, values, and attitudes necessary to function and contribute to our society.

XI. Grievance Policy

If you have a dispute concerning your grade or policies in this class, it is your responsibility to FIRST contact the instructor, either by e-mail or in person, to discuss the matter. Should things remain unresolved after this initial contact, please follow the procedures described in the Clarendon College Catalogue. In the vast majority of cases, the matter can be resolved at the instructor/student level, and learning to communicate your concerns in a civilized manner is part of the college experience.

XII. Instructor's Contact Information and Office Hours

My office is located in the Clarendon College Pampa Welding & Wind Center. I will be available during posted office hours, before and after class, or contact me by phone 806-669-1632. My e-mail address is jay.anders@claredoncollege.edu.

Attention: Disabled Students; please see me after class or during office hours if you have a disability that requires special accommodations

Cell Phone & Electronic Devise Policy

Personal computers are allowed. Cell phones will be allowed only on high priority bases if they are set on silent vibrate. They should be answered in a manner that in not disruptive to the class. If a person's cell phone becomes a nuisance they may be asked to leave the class with no opportunity for making that class up.