



Course Title: Pipe Welding II- WLD 150

Credit Hours: 3 Credits

Semester: Spring 2022

Cap: 15

Faculty: Hank Charleston

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Office Hours: Monday 1 pm to 8:30 pm, Tuesday & Thursday 1pm to 8:30 pm, Friday 9 am to 12 pm

Class Location: Red Mesa CTE Building

Class Meeting Time: Thursday 5:30 pm to 8:30 pm

Required Materials: Safety glasses, Welding hood, Welding gloves, Cutting goggles, Protective clothes, hand tools, 4.5 angle grinder & work boots

Textbooks: Larry Jeffus/ Bryan Baker (2017), Pipe Welding (1st edition), ISBN-13: 978-1-133-69184-6

Tools: One-time issued to students @ \$500.00

Lab Fee: Included in tuition

Mission Statement

Navajo Technical University's mission is to provide university readiness programs, certificates, associates, baccalaureate, and graduate degrees. Students, faculty, and staff will provide value to the Dine community through research, community engagement, service learning, and activities designed to foster cultural and environmental preservation and sustainable economic development. The University is committed to a high quality, student-oriented, hands-on-learning environment based on the Dine cultural principals:

Course Description

WLD-150 (3 Credits)

Pipe Welding II

Continuation of WLD-125, in this course students will acquire knowledge with groove welding joints in the horizontal position and in 45 degree angle fixed positions on plate (5F, 6F) before it's transferred to pipe. Students will be introduced to TIG welding. Learn operation requirements for portable equipment, bend test and lab procedures. Perform mild steel TIG welding on plate before pipe applications in various positions (1F, 2G, 3G) using TIG root pass, fill and cap. [^]*prerequisite WLD-105*

Week	Date	Academic Calendar	Chapters Assignments	Quizzes
1	1/20		TBD	Pre-Assessment
		Last day to add/drop 1/21		
2	1/27		Chapter 1	Quiz 1
3	2/3		Chapter 2	
4	2/10		Chapter 3	
5	2/17		Chapter 4	Quiz 2
6	2/24		Chapter 5	
7	3/3		Chapter 6	
8	3/10	Midterm	FINALS	Test
		Grades are due to the Register.		Test/ Pre-bend Test
9	3/17	Spring Break	Spring Break	Spring Break
10	3/24		Chapter 7	
11	3/31		Chapter 8	
12	4/7		Chapter 9	
13	4/14		Chapter 10	
14	4/21		Chapter 11	Student Survey
15	4/28			Post Assessment
16	5/5	Finals	FINALS	Test/ Bend Test
17	5/12	Grades are due to the Registrar		
18	5/13	Graduation		

COURSE OUTCOMES	COURSE MEASUREMENTS
Students should be able to demonstrate proper safety features in the shop and during welding.	Complete chapter reading assignments/ review questions, work assignments, exams, projects, and quizzes.
Explain which combination of welding processes can be more efficient and why	
Explain the various specifications that may be used to specify pipe and tubing.	
Describe the steps of preparing the welding pipe using two different processes.	
Explain the importance of tack welds	
Discuss the advantages and disadvantages of the freehand and walking the cup techniques	
Explain the relationship between a welding procedure specification (WPS) and effects that it can have on the efficiency of producing a weld fabrication.	
Explain the causes of suck-back and how to control it.	
Explain how changing the welding gun angle affects the weld produced	

Grading Plan

Homework	20%	A= 90- 100%
Midterm	20%	

Final Exam	25%	B= 80- 89%
Project	10%	
Quizzes	20%	C= 70- 79%
Class Participation	3%	D= 60- 69%
Portfolio	2%	F= 0- 59%

Grading Policy

Each student must do his or her own homework and case studies. Discussion among students on homework and cases is encouraged for clarification of assignments, technical details of using software, and structuring major steps of solutions- especially on the course's Web site. Students must do their own work on the homework and exam. Cheating and Plagiarism are strictly forbidden. Cheating includes but is not limited to: Plagiarism, submission of work that is not the student's own, submission or use of falsified data, unauthorized access to exam or assignment, use of unauthorized material during an exam, supplying or communication unauthorized information for an assignment or exam.

Participation

Students are expected to attend and participate in all class activities- as listed above, as it is 3% of their grade. Points will be given to students who actively participate in class activities including field trips, laboratories, and ask questions of guest speakers and other presenters.

Cell phone and head phone usage

Please turn cell phones off or place them on silence or vibrate mode **before** coming to class. Also, answer cell phones **outside of class** (not in the classroom). Exercising cell phone usage in courtesy is appreciated by both the instructor and classmates. Headphones are to be removed before coming to class and students should not wear it during lab hours (safety factor).

Attendance Policy

Students are expected to regularly attend all classes for which they are registered. A percentage of the student's grade will be based on class attendance and participation. Absence from class, regardless of the reason, does not relieve the student of his/her responsibility to complete all course work by the required deadlines. Furthermore, it is the student's responsibility to obtain notes, handouts, and any other information covered when absent from class and to arrange to make up any in-class assignments or tests if permitted by the instructor. Incomplete or missing assignments will necessarily affect the student's grades. Instructor will report excessive and/or unexplained absences to the Counseling Department for investigation and potential intervention. **Instructors may drop students from the class after three (3) absences unless prior arrangements are made with the instructor to make up work and the instructor deems any excuse acceptable.**

Study Time Outside of Class for Face-to-Face Courses

For every credit hour spent in a class, a student is expected to spend two hours (2) outside of class studying the course materials.

Study Time for Hybrid or Blended Courses

For a hybrid or blended course of one (1) credit hour, a student is expected to spend three (3) hours per week studying the course materials.

Study Time for Online Courses

For an online course of one (1) credit hour, a student is expected to spend four hours (4) per week studying the course materials.

Academic Integrity

Integrity (honesty) is expected of every student in all academic work. The guiding principle of academic integrity is that a student's submitted work must be the student's own. Students who engage in academic dishonesty diminish their education and bring discredit to the University community. Avoid situations likely to compromise academic integrity such as: cheating, facilitating academic dishonesty, and plagiarism; modifying academic work to obtain additional credit in the same class unless approved in advance by the instructor, failure to observe rules of academic integrity established by the instructor.

Dine Philosophy of Education

The Dine' Philosophy of Education (DPE) is incorporated into every class for students to become aware of and to understand the significance of the four Dine' Philosophical elements, including its affiliation with the four directions, four sacred mountains, the four set of thought processes and so forth; Nitsahakees, Nahat'a, Iina and Siih Hasin which are essential and relevant to self-identity, respect and wisdom to achieve career goals successfully.

Students with Disabilities

The Navajo Technical University and the welding program are committed to serving all enrolled students in a non-discriminatory and accommodating manner. Any student who feels he/she may need an accommodation based on the impact of disability, or needs special accommodations should inform NTU in accordance with the procedures of the subsection entitled "Students with Disabilities" under section 7: Student Support Programs, NTU student handbook.