**Practical Metallurgy**

**WD4.252**

Syllabus

***Notice: The following is subject to change per Coronavirus updates/mandates.***

Instructor: Dean Dowless for Weeks 1,2,3,4,5,6,7 and 11. *Contact at* dowlesd@linnbenton.edu

Instructor: Scott Ballard, LBCC NDT Program for Weeks 8, 9, 10.

Practical Metallurgy For Welders is a 3-credit course required for 2nd Year Welding Technology majors

that includes practical metallurgy information, an introduction to Inspection, and references to Code

Welding and the A.W.S. D1.1 Structural Welding Code. Prerequisites: Advanced Arc Welding or

instructor approval. Please note that this course is only offered Spring Term each year.

1. **1. Required Items (furnished by the student):**

Textbook: Modern Welding Technology by Howard B. Cary

Textbook: Metals And How To Weld Them by Jefferson & Woods (book is available for order

online at low cost from the James F. Lincoln Arc Welding Foundation)

Leather welding gloves with long gauntlet sleeves (see **2.** **Format** Section below)

Safety Glasses with side shields\* (see **2.** **Format** Section below)

Leather welding gloves with long gauntlet sleeves (see **2.** **Format** Section below)

High Top Hard Top Boots [no tennis shoes] (see **2.** **Format** Section below)

Suitable clothing that is non-flammable (see **2. Format** Section below)

Pen or pencil and notebook or folder with paper for taking notes (see **2.** **Format** Section below)

Optional, recommended: Ear plugs (see **2.** **Format** Section below)

\*Note: Safety glasses are required to be worn all times in the shop, including under

welding helmets, goggles, and face shields.

**2. Format:**

This class meets one day per week. There will be a new assignment(s) in class each week. Due to

the Corona Virus, Moodle will be used instead of meeting one day per week until further notice.

1. **3. Assignments:**

Due to the Corona Virus, class assignments will be online via Moodle until further notice.

**4. Grading:**

Grading is based on fully completing all assignments, and final exam score.

**Student Grade Options Available for this course:**

A through F Letter Grade basis

Pass / No Pass (P/NP) basis

**5. Safety:**

The student is responsible to follow all safety rules and shop procedures, and to perform all tasks

in a safe and conscientious manner. This includes wearing the required safety items (safety glasses,

high top hard top boots, etc.) during the lab time.

NOTE: The instructor will verbally warn the student when required safety items are not being worn in the

shop, or when safety procedures are not being followed. Upon the third verbal warning, the student will be

withdrawn from the course by the instructor.

**6. Additional Information For The Student:**

**Disabilities Services and Emergency Planning – Meet with Instructor Week One**

Students who may need accommodations due to documented disabilities, who have medical

information which the instructor should know, or who need special arrangements in an emergency

should speak with their instructor during the first week of class. If you believe you may need

accommodations but are not yet registered with the Center for Accessibility Resources (CFAR), please

visit the [**CFAR Website**](https://www.linnbenton.edu/cfar) for steps on how to apply for services or call [(541) 917-4789](tel:5419174789).

**LBCC Comprehensive Statement of Nondiscrimination**

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language,

national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other

status protected under applicable federal, state, or local laws.

(for further information <http://po.linnbenton.edu/BPsandARs/> )

**7. Outcomes:**

Upon successful completion of this course, students will be able to:

Practice safe work habits in heat-treating, destructive and non-destructive testing, and

metallurgy-related operations. Identify basic metallurgical concepts of importance to

the welder on a practical level. Interpret a Welding Procedure Specification (WPS).

List commonly-used types of inspection and inspection methods utilized for welding-related

applications. List basic steps involved in qualifying a Welding Procedure.