

Course Syllabus

Course#: WET 2440 **Course Name:** Welding II Lab
Division: Engineering and Industrial Technologies

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Class Days:	Class Time:
Location:	Laboratory: D 102
Credit Hours: 2	Contact Hours: 4
	Lab Hours: 4
	Lecture Hours: 0

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Instructor: Bill McCleese	Office Location: D 102A
Phone: (419) 334-8400, Ext. 2444	Email Address: bmccl Reese@terra.edu

Office Hours: TBD

Division Office Location: Engineering Bldg.

Division Fax: (419) 334-2300

Full-Time Contact Person: Jayne Bowersox

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Course Description: Laboratory work involves the use of GMAW and GTAW as they are used today. The use of various modes of metal transfer, joint styles, welding positions, and manipulative techniques will be emphasized in the required laboratory assignments, which will include flux-cored arc welding (FCAW).

Mild carbon steel and aluminum alloys will be GMAW, and mild carbon steel, stainless steel, and aluminum alloys will be GTAW.

Prerequisites: None.

Co-requisite(s): None, however, certificate and degree seeking students should also take WET 2430, Welding II.

Entry Level Skills and Knowledge: This course requires good eye-hand co-ordination and manipulative skills.

Grading:

The following grading system will be utilized. However, points less than 100 indicate an individual's inability to correct welding flaws by changing technique and manipulative patterns during welding. Therefore, if at all possible, through repeat demonstrations and practice, all weld flaws will be removed, so each student's welding will meet industry standards and practices.

- 93 – 100 = A
 85 – 92 = B
 75 – 84 = C
 65 – 74 = D
 <65 = F

Learning Outcomes:

General Education

1. **Communicate effectively**
2. **Evaluate arguments in a logical fashion**—Competence in analysis and logical argument are explicit learning goals for most general education programs, although these skills go by a variety of names (e.g., critical thinking, analysis, logical thinking, etc.). **Students will be able to demonstrate competence in problem solving in communication, mathematics, and in team settings.**
3. **Employ the methods of inquiry characteristic of natural sciences, social sciences, mathematics, and the arts and humanities;** general education introduces students to methods of inquiry in several fields of study and thereby prepares students to integrate information from different disciplines.

Plan of Work:

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| Week 1 | GMAW mild carbon sheet steel fillets in all positions and a full penetration flat, open square groove weld for guided bend testing |
| Week 2 | GMAW mild carbon sheet steel continued |
| Week 3 | GMAW mild carbon steel plate fillets in all welding positions and a full penetration vertical-up open butt groove weld for guided bend testing. |
| Week 4 | GMAW mild carbon steel plate continued |
| Week 5 | FCAW mild carbon steel plate fillets |
| Week 6 | GMAW aluminum fillets in the flat, horizontal, & vertical-up positions |
| Week 7 | GMAW aluminum fillets continued and GMAW a full penetration flat square aluminum groove weld |
| Week 8 | GTAW mild carbon sheet steel fillets in all positions and a full penetration flat, open square groove weld for guided bend testing |
| Week 9 | GTAW mild carbon sheet steel continued |
| Week 10 | GTAW a mild carbon steel plate open groove weld in the vertical-up position for guided bend testing (GBT) |
| Week 11 | GTAW stainless sheet steel fillets and open butt groove weld for GBT |
| Week 12 | GTAW stainless sheet steel continued |
| Week 13 | GTAW aluminum sheet fillets and open butt groove weld for GBT |
| Week 14 | GTAW aluminum sheet continued |
| Week 15 | Spray arc transfer mode on fillet welds for both GMAW & FCAW |

NOTE: Welding involves a very high degree of manipulative skills and excellent eye-hand co-ordination. Not all students will have the same abilities and/or the same amount of prior welding experience, if any. Therefore, some individuals

may not require the entire 15 weeks to complete laboratory requirements, while other students will require the entire 15 weeks to complete their requirements.

Course Requirements: Complete all assignments required.

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Policies:

Course Withdrawing: If for any reason you need to withdraw from this course, be certain that you do so according to College procedure. It is your responsibility to know and follow this procedure. If you simply stop coming to class, without officially withdrawing from the course, your grade is an automatic “F.” Please follow official College procedure for withdrawing from this or any course.

College Academic Policies are located in the College Catalog. A copy of the current Catalog may be picked up in any of the division offices or admissions. The list of college policies is also available online at <https://www.terra.edu/register/Collegecat/policies.asp>.

Support Services: The college offers a number of support services to assist in your success in this course and all courses. Among these services are the Writing & Math center in B105, the Office of Learning Support Services, which coordinates the campus disability services and tutoring programs, the computer labs, and the computers in the atriums.

Any student who feels he/she may need an accommodation based on the documentation of a disability should contact the Office of Learning Support Services privately to discuss his/her specific issues. Please contact the OLSS at (419) 334-8400 X 208 or visit 100 Roy Klay Hall (Building A) to coordinate reasonable accommodations.

If you have a documented disability and are receiving academic accommodations through the Office of Learning Support Services, please schedule a meeting with your instructor in a timely manner so that we may discuss how these services will be arranged.

Tutoring services are available to students beginning the second week of every Semester. Students requesting tutoring services should obtain a tutor request form from the OLSS in 100 Roy Klay Hall (Building A) or online at the Terra website. Please note that instructor verification and acceptance of the Student Learner Agreement is necessary for all tutoring requests. All requests should be submitted to 100

Roy Klay Hall (Building A).

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