IND122 Welding – 1G & 2G SMAW Syllabus

Course Information

Credits: 3
Campus: Washburn Institute of Technology (Forbes Facility)
Address: 6530 SE Forbes Avenue
City/State/Zip: Topeka, Kansas 66619
Office Fax: 785-670-2734

Description
This course introduces basic concepts of general welding. Hands-on lab activities are provided for the participant to apply knowledge and develop skills in the following areas: Shop Safety, Cutting (oxy/acetylene) SMAW (Shielded Metal Arc Welding). Participants will work independently and as small teams in completing the lab activities.

Textbooks

Student Learning Outcomes:
A. Communicate effectively
B. Integrate technology
C. Learn effectively
D. Demonstrate cooperative teamwork skills
E. Apply safety in the workplace
F. Think critically and creatively
G. Demonstrate responsible work ethics

Competencies
1. Review safety and health standards for welders to provide a safe working environment with 100% accuracy.
2. Clarify the terms and fundamentals of S.M.A.W. (Shielded Metal Arc Welding) process.
3. Identify Oxy/Acetylene cutting.
4. Demonstrate Oxy/Acetylene Cutting with 100% accuracy.
5. Identify power source classifications when working with welding equipment.
6. Identify the factors necessary for choosing proper electrodes.
7. Identify the safety procedures for welding.
8. Apply the safety procedures for welding.
9. Identify striking the arc.
10. Demonstrate striking the arc.
11. Identify controlling the arc.
12. Demonstrate controlling the arc.
13. Identify padding in the flat position.
14. Demonstrate padding in the flat position.
15. Identify padding in the horizontal position.
17. Identify a groove weld in the flat position.
18. Demonstrate a groove weld in the flat position.
19. Identify a groove weld in the horizontal position.
20. Demonstrate a groove weld in the horizontal position.

**Guidelines for Success**

**Assessment Plan**
Assessment is an integral part of the educational process at Washburn Tech and accurate feedback is an important tool in continuously improving the institution’s technical programs. Students can expect to participate in assessment activities prior to entry into programs, within specific courses and following program completion for specific fields of study.

**Grading Rationale**
Class sessions and assignments will include daily homework, in-class review of homework, quizzes. Grades will be based on: Attendance and general participation, daily homework, quizzes and tests and final exam.

**Grading Scale**
- 90% or higher: A
- 80% to 89%: B
- 70% to 79%: C
- 60% to 69%: D
- Less than 60%: F

**Attendance**
Tardies and absences will affect the daily grade for attendance. Students who miss class should inform the instructor beforehand whenever possible, and are responsible for course content, for turning in any required homework, and for taking the initiative to make up any missed tests, labs or quizzes.
**Disability**

The Special Support Services (SSS) Office is responsible for assisting in arranging accommodations and for identifying resources at Washburn Institute of Technology for persons with disabilities. Qualified students with disabilities MUST register and provide documentation with the office to be eligible for services. New requests for accommodations should be submitted two months or more prior to the date services should begin; however, contact the SSS Office as soon as a need may arise. Depending on the accommodation request, four to eight week lead time may be needed for timely and effective provision of services. SSS coordinates and assist in arranging services it deems appropriate of eligible students on a case-by-case basis.

If you are a student with a disability that may substantially limit your ability to participate in this class and believe you will need accommodations, it is your responsibility to contact:

Special Support Services Coordinator  
Phone: 785-228-6356  
E-Mail: ssscoordinator@washburn.edu