

Course Description**PMT0071 | Welder Assistant 2 | 5.00 credits**

In the Welder Assistant 2 course students will advance their skills in metal fabrication techniques, focusing on cutting and welding processes vital for industry professionals. They will learn to apply intermediate oxy-fuel gas cutting principles, mastering the control and precision required for intricate cuts. Additionally, the program introduces plasma arc cutting, providing hands-on experience with this high-precision technology. Students will also gain foundational knowledge of shielded metal arc welding (SMAW), understanding its core principles and applications. Finally, they will put theory into practice by creating a tangible product using SMAW techniques, demonstrating their ability to weld safely and effectively. This comprehensive approach ensures students are well-prepared for careers in metalworking and fabrication.

Course Competencies

Competency 1: The student will enhance their intermediate oxy-fuel gas and plasma arc cutting skills, which are essential for precision metal fabrication by:

1. Mastering intermediate oxy-fuel gas cutting principles to achieve intricate cuts with control and accuracy
2. Applying plasma arc cutting techniques in hands-on exercises to understand the technology's high-precision capabilities
3. Evaluating the advantages and limitations of different cutting methods to select the appropriate technique for specific projects

Competency 2: The student will develop a solid understanding of shielded metal arc welding and its practical applications in metal fabrication by:

1. Learning the core principles of SMAW to understand its role and applications in various welding scenarios
2. Practicing SMAW techniques through hands-on projects to demonstrate safe and effective welding practices
3. Creating a tangible product using SMAW techniques to showcase proficiency in welding and fabrication

Competency 3: The students will apply their theoretical knowledge and practical skills in metal fabrication to prepare for careers in the industry by:

1. Integrating cutting and welding processes in a comprehensive project to simulate real-world metal fabrication tasks
2. Collaborating with peers on fabrication projects to enhance teamwork and communication skills professionally
3. Demonstrating adherence to safety protocols throughout all fabrication processes to ensure a safe working environment

Learning Outcomes:

1. Communicate effectively using listening, speaking, reading, and writing skills
2. Solve problems using critical and creative thinking and scientific reasoning
3. Formulate strategies to locate, evaluate, and apply information