



SIWET

SEB INSTITUTE WELDING & TECHNOLOGY

ADVANCING THE FUTURE CAREERS OF WELDING

COURSE TRAINING CATALOG

- * Skill Training
- * Technical Training
- * Specialized Training
- * Online Education
- * Certification and Qualification
- * Training at Your Facility
- * Training Materials

"Where welding meets technology"

@Seb Institute of Welding and Technology 2021

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SIWET programs of welding training in common pipeline and structural training, we look at the application of Welding Virtual Simulation Training system.(VR Technology)

With our Skills Welding Development training Modules, trainees can ensure a highly specialized and result-oriented training process. Work with us to create better standards in your workforce, and take your employee efficiency to the next level.

VR Technology makes learning effective and interesting for trainees to have more practice time.train students on welding processes; 135- GMAW, 136- FCAW, 111-SMAW, 145-GTAW.

Industrial Training software Package - for VR Technology

1. Oil and Gas
2. Shipyard & Shipbuilding
- 3.Cargo
4. Aviation
5. Factory
6. Automotive
7. Port Welding.

The SIWET VR application System in the welding training programs will provide:

- 1.Real industrial welding torches for a life-like welding experience
- 2.Real-time feedback with didactic learning, depth perception, sound, touch.
- 3.Graphical reports and analysis of complete welding performance



.....advancing the future of welding...

SIWET LOCATION

1/9/2021

SEB INSTITUTE OF WELDING AND TECHNOLOGY - Google Maps



Address: Plot 211, Kayunga Gombe B, Wakiso Hoima Road

Postal Address: C/o, P.O. Box 12494 Kampala Uganda

Telephone: +259-776-983365, +256-752-983365

Website: www.sebinstitute.com (under construction)

Email: sebiwt@yahoo.com, info@sebinstitute.com

Facebook: seb institute of welding and technology

Twitter: @siwet

...advancing the future of welding

The mission of Seb institute of welding and technology (SIWET) is to identify and meet the educational and workforce needs of the community through innovative, accessible, and dynamic programs. Our partnerships with local business and industry ensure that our programs are constantly evolving, so that you will be ready to succeed in tomorrow's careers.

History formations of SIWET

SEB Institute of Welding and Technology is an educational arm of SEB Engineering Services Ltd, a fully a registered company (Reg No: 19692), and DIT assessment center level 1 and 2 with its line of engagement in Manufacturing, Engineering, Education and Consultancy. SEB Engineering has embraced a holistic view to enterprise-based training. In Uganda, Vocational/ technical training has been synonymous with public/private vocational/ technical training institutions, which are instruction based. This has continually created challenges of passing out trainees with more theories and knowledge but less in practical experience as required by the industry/ workplace. Since then, Seb Engineering has incorporated the dimension of training interested workers in specialized welding and its applications. The component of training has been in offering for now 5years since 2015 with 250 trainees so far have benefited with a goal of Empowering workforce for increased productivity and improved competitiveness in the welding and metal fabrication Industry.

SEB Engineering working with other partners like HWK has played a major role in the training of company workers and in activities such as to;

1. Develop work-based training material, which are modular in nature for improved access, equity, and relevance;
2. Conduct up skilling training for Assess/recognize prior learning, Training trainees (experienced practitioners) in line with Competence Based Education and Training (CBET) principles;
3. Create opportunities of industry placement for consolidation of acquired skills in which SEB Engineering provides industry placement opportunities and Network with enterprises for industry placement of apprentices;

Therefore, with high demand of highly skilled and competent workers for the metal industry both local and on international labour market, SEB Engineering resolves to open up a separate wing that will deal with the later at international level, So the birth formation of **SEB INSTITUTE OF WELDING AND TECHNOLOGY (SIWET) in 2019.**

About SIWET

Established in 2019, SEB Institute of welding and technology is a Ugandan nationally recognized Welding Institute of Technology, an educational research center in the welding industry. Fully registered with URSB 2020. **Reg No: 80020002743105, SIWET**, programs are designed to produce plant-level welding engineering technology graduates who are involved in the concept, design and engineering of weldments and implementation of welding processes in the manufacturing world both local and intentional. This overall

knowledge of weldments and the ability to engineer welding and joining systems produces graduates who are in great demand and highly compensated.

As a recognized registered institute of welding expertise, we provide industry-focused certification, training and resources to help educators and their students to pursue higher levels of welding excellence. From actively teaching every spectrum of welding knowledge at our Welding Training & Technology Center.

The SEB Welding Technology & Training Center is dedicated to training educators, industry leaders and skilled trade workers in the craft and science of welding. Our curriculum and programs are designed to meet the needs of industry by addressing every segment of the skills and knowledge spectrum – from basic welding and teaching concepts up through the latest in advanced manufacturing technologies. The Center will be an internationally recognized foundation for the development of best practices in welding education, which we share with welding educators at every level.

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SIWET MAIN OBJECTIVES

To promote the Educational advancement of the science, art, process, occupation, practice and standard of welding and other processes associated with or having the same or similar functions or purposes as welding or other allied, ancillary or complementary sciences, arts, processes and occupations and industries (welding, associated processes and other allied, ancillary or complementary sciences, arts, processes and occupations being hereinafter referred to as 'welding').

- To undertake, arrange, supervise, provide facilities for and otherwise promote and assist in research with respect to welding and its technology.
- To undertake, arrange and promote the transfer of welding technology for the benefit of the welding manufacturing industry.
- To undertake, arrange and promote education, training, qualification, certification, consultancy and technical support for the benefit of the welding industry in Uganda and internationally.
- To promote the advancement of welding technology and associated industries locally and across borders.
- To undertake training in taking care of the environment during the welding process, through ensuring that all the negative impacts to the environment are mitigated.

SIWET MISSION

The mission of Seb institute of welding and technology (SIWET) is to identify and meet the workforce needs in the community through innovative, accessible, and dynamic programs. Our partnerships with training institutions, local business and industry ensure that

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our programs are constantly relevant, so that you will be ready to succeed in tomorrow's careers.

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SIWET GOAL

To bridge the gap of skilled welding professionals in the welding manufacturing industry.

SIWET Philosophy

Principle and Purpose

"Real life training for real life work environments"

Mission Statement

SIWET is committed to using its vast knowledge in the field of welding to provide services to our students that facilitate personal growth, professional development, and a sense of responsibility.

SIWET is committed to helping individuals develop marketable welding skills through quality training at a minimum cost. We are also committed to making industry more competitive by conducting training to solve welding related problems.

The primary purpose SIWET is developing a high level of competency, with an emphasis on work ethic; which is accomplished through the pursuit, assimilation and dissemination of knowledge in academic programs.

SIWET aims to increase student knowledge to the level of professionalism required in today competitive work environment. We will also strive to create an awareness of professional and social responsibilities and instill an appreciation of the principles of ethical conduct.

SIWET does not discriminate on the basis of disability, race, color, religion, sex, national origin or age.

SIWET Vision

SIWET encourages each student to aspire to the best he or she can be in academic, business, social, professional, and personal endeavors. Whatever the academic interest, we strive to offer the best education possible. Through our emphasis on curriculum, low student-teacher ratios (maximum of 1 instructor per 10 students) and practical, real life experience we hope to ensure that the SIWET student has is meticulously prepared.

SIWET Values

INTEGRITY

- Promoting the highest level of ethical behavior and professionalism.
- A sense of honesty and fairness.

DIVERSITY/RESPECT

- We acknowledge the dignity, the equality and the value of every individual.
- We encourage individual differences of opinions, thoughts, and ideas.

TEAMWORK/RESPONSIBILITY

- We promote excellence and quality in programs and services.
- We provide opportunities to work together to further excellence, efficiency and growth.

SIWET CAREER IN WELDING:

The **SIWET** Institute is concerned not only about the professional development of our established engineers but also with the creation of new welding engineers for the future. We are always seeking new ways to encourage the uptake of engineering related disciplines in the next generation, as well as providing advice and information to those who have already begun their first steps into an engineering career.

SIWET Skills Welding Competitions

The Welding Institute will engage, setup and support a number of skills competitions nationally and across border. These competitions are aimed at young welders/fabricators at the early stages of their career. Participation in competitions offers the opportunity to develop competitors technical, communication and networking skills.

SIWET Educational Outreach

The Welding Institute will be keen to work with and embrace schools, colleges and other educational institutions, teachers and students, who are interested in learning more about welding and joining technologies.

Our educational outreach activities will be carried out by SIWET Welding Institute's Younger Members' Committee, the numerous Science Technology Engineering and Maths (STEM) Ambassadors as well as our staff and our ever growing volunteer base, build on local associations with schools and colleges, finding ways to link real industry challenges with science and engineering curriculum topics.

From primary, secondary, further education, university and to postgraduate level, we have put into place structured learning activities and annual programme. This includes fun, hands-on workshops delivered in schools or at local science fairs; work experience and technical mentoring via our partner-schools arrangements or through educational supporting bodies and undergraduate placements.

ACCREDITATIONS AND APPROVALS

SEB Institute of Welding Technology is looking towards being accredited by the American Welding Society (QC4) to perform qualification of welders in accordance with the AWS® QC7 certificate program and IIW.

SEB Institute of welding and Technology training curriculum is based on American welding Society (AWS) standards and also related to ANS/ZS Australia Standards. from welder Level 1,2 and 3.

AFFILIATIONS

SEB Institute of welding and Technology is looking forward to affiliate with other training providers in the same line of welding training and its technologies, like Nigerian Institute of welding for also welders certification as member to IIW,EastAfrication Institute Kenya,

SIWET WELDING TECHNOLOGY

INSTRUCTOR STAFF

The SEB Institute of Welding and Technology features a full dedicated training instructors' with over 15 years of combined, practical teaching experience, with backgrounds in industry, construction welding. Instructors are qualified in all the welding processes they teach and are dedicated full-time to teaching welding and welding-related activities to ensure that they spend maximum time working with students.

TYPES OF TRAINING

The SEB Institute of Welding and Technology can arrange the following types of training:

1. **Welding Skill Training** designed to teach actual welding techniques and manipulative skills in all major arc welding processes.



2. **Technical Training** designed to teach the theory of welding and related subjects through short courses for technical and management personnel.

3. **Customized Field Training** designed to solve specific performance problems at any location worldwide

4. **Specialized Training** designed to train personnel for specialized welding needs. Training is conducted at the Institute by special arrangement.

5. **Online Education** available from your computer at your own pace. www.siwet.com.

6. **Certification** SEB Institute of Welding and Technology qualifies operators and procedures to the following codes: AWS®, ASME, API, MIL Specs and ECITB (Engineering Construction Industrial Training Board. UK).

Training Materials SEB Institute of Welding and Technology develops and produces complete video and DVD-based training programs including workbooks, instructor's guides, technical guides and tests – on the major welding processes. We also offer a wide selection of textbooks and other welding-related training materials. For a Training Materials catalog.

PRACTICE MATERIALS

SIWET has a full-time support staff to prepare certification quality base metal for student exercises. Scrap metal is not used in training.

TRAINING METHODS

Welding training is skills-based and is continually updated to reflect the best industrial practices. We follow specific performance objectives and programs are designed to meet specific criteria for each phase of training. We use four proven strategies to teach welding:

Lecture/discussion with audio visual aids to introduce key concepts.

Demonstration to model proper technique.

Supervised individual practice with one-on-one instructor coaching to give students an opportunity to incorporate new skills.

Systematic practical and written testing to ensure that students have mastered key concepts and skills. Weld testing (fracturing, bending or sectioning) is a major part of each skill course to help overcome the fear of on-the-job qualification tests.

SIWET CLASS SIZE

For welding skill training, class size is approximately 12 to 16 students per 1 instructor. For Welding Technology and Oxyacetylene courses, where booths are not required for individual practice, the student/instructor ratio is approximately 20 to 1.

SIWET FACILITIES

The Institute is housed in facility on our 350Sq.m. facility featuring 10 arc welding booths for hands-on training; A/V equipped classroom. Welding booths are shield and state-of-the-art ventilation to exhaust smoke and fumes. Booths are equipped with the latest welding power sources (inverters, DC rectifiers, and AC/ DC combination units.) Each booth is fully equipped with a custom-designed welding table for all-position welding, positioner and fixture. And safety signs and welding information charts The oxyacetylene area has 10 welding stations and 2 flame-cutting stations both manual and semiautomatic fuel cutting equipment.



Safety & Health Note: Tobacco or electronic cigarettes use are not permitted inside the Institute. There are areas outside the facility designated for tobacco users. Complete safety and health information is provided during student orientation and safety institutional rules and policies

STUDENT RESOURCE CENTER

The Student Resource Center merges the Employment Assistance Center and Welding Resource Library into a facility that includes amenities designed to better serve students and prospective employers. A large video screen features a continuous scrolling of open welding job postings and profiles of prospective employers will set for students.

SIWET WELDING PROGRAMS

Fundamental welding skills in the major processes should be acquired before specializing in a more advanced technique. Such courses are found in the Structural Welding Program. This program covers all processes and prepares the student for advanced and specialized positions. Only the Combination Structural and Pipe Welding and the Structural Welding programs listed on this page are approved by ACCSC and fall within the school's accredited scope.

PROGRAM 1: COMBINATION STRUCTURAL AND PIPELINE WELDING PROGRAM

38 WEEKS 1330 CLOCK HOURS TUITION \$16,880.00 BOOK FEES \$425.00

This sequence of courses is recommended for the student interested in the major welding processes for all position welding skills on plate and pipe, safety and technical information. The program includes the opportunity to test for five AWS®-QC7 National Welder Certifications during the hours of the applicable course after all other course requirements have been met; AWS® D1.1 Shielded Metal Arc Pipe 6G, AWS® D1.1 Structural Flux Cored, AWS® D1.1 Gas Tungsten Arc Pipe, AWS® D17.1 Gas Tungsten Arc Titanium, and AWS® D1.1 Gas Metal Arc (pulsed spray transfer.) Successful completion of this program gives the student the necessary welding skills required for entry level employment as a Combination Welder.

SN code	WP	Course description	Duration weeks	Training Hours
WTB027		Welding Technology & Blueprint Reading	2	70
HSE001		Introduction to Health, Safety and Environment	1	30
WTB028		Advanced Blueprint Reading	2	70
OAW001	311	Oxyacetylene Welding & Cutting	2	70
SMA002	111	Shielded Metal Arc Welding Basic	4	140
SMA003	111	Shielded Metal Arc Welding Structural Advanced	4	140
SMA006	111	Shielded Metal Arc Welding 6" Pipe 2G & 5G Uphill	4	140
SMA106	111	Shielded Metal Arc Welding 6" Pipe Uphill	2	70
SMA107	111	Shielded Metal Arc Welding 2" Pipe Uphill	2	70
GTA008	141	Gas Tungsten Arc Welding	2	70
GTA109	143	Gas Tungsten Arc Welding Stainless & Titanium	1	35
GTA108	143	Gas Tungsten Arc Welding 2" Pipe	2	70
GTA009	143/111	Gas Tungsten Arc Welding/SMAW 6" Pipe	4	140
GMA011	131	Gas Metal Arc Welding Basic	2	70
GMA016	135	Gas Metal Arc Welding Advanced	1	35
GMA013	135	Gas Metal Arc Welding Pipe	1	35
FCA015	136	Flux Cored Arc Welding	2	70

PROGRAM 2: STRUCTURAL WELDING PROGRAM

23 WEEKS 805 CLOCK HOURS TUITION \$10,210.00 BOOK FEES \$335.00

This sequence of courses is recommended for the student interested in the major welding processes for all position welding skills on plate, safety and technical information. The program includes the opportunity to test for four AWS®-QC7 National Welder Certifications during the hours of the applicable course after all other course requirements have been met; AWS® D1.1 Structural Shielded Metal Arc, AWS® D1.1 Structural Flux Cored, AWS® D17.1 Gas Tungsten Arc Titanium, and AWS® D1.1 Gas Metal Arc (pulsed spray transfer.) Successful completion of this program gives the student the necessary welding skills required for entry level fabrication work, construction work, job shops and other entry level related jobs.

SN code	WP code	Course description	Duration weeks	Training Hours
WTB027		Welding Technology & Blueprint Reading	2	70
HSE001		Introduction to Health, Safety and Environment	1	30
WTB028		Advanced Blueprint Reading	2	70
OAW001	311	Oxyacetylene Welding and Cutting	2	70
SMA002	111	Shielded Metal Arc Welding	4	140
SMA003	111	Shielded Metal Arc Welding Structural Advanced	4	140
GTA008	141	Gas Tungsten Arc Welding	2	70
GTA109	143	Gas Tungsten Arc Welding Stainless & Titanium	1	35
GMA011	131	Gas Metal Arc Welding Basic	2	70
GMA016	135	Gas Metal Arc Welding Advanced	1	35
FCA015	136	Flux Cored Arc Welding	2	70

Note: The SIWET reserves the right to modify the sequence of courses as needed.



WELDING SKILLS TRAINING

The purpose of Welding Skill Training at the SEB Institute of Welding and Technology is to teach learners the welding techniques and manipulative skills required for each major welding process. Welding techniques are stressed above welding theory – as the learners must be able to meet the welding performance demands of industry. Consequently, a minimum amount of course time (10% to 20%) is spent in classroom study. The remaining time is used for supervised welding practice.

Students may take courses to develop skill in one major process in order to achieve broad welding skills, The learner may take courses as outlined in the accredited welding programs (see later pages). Only the Combination Structural and Pipe Welding and the Structural Welding programs listed in this document are approved by ACCSC and fall within the institution's accredited scope. The training offered under "Welding Skill Training" as individual courses does not fall within the institution's accredited scope.

COURSE CODE	WTB027			
DESCRIPTION	WELDING TECHNOLOGY AND BLUEPRINT READING			
DURATION	2 WEEKS, 72 HOURS	TUITION \$ 850	REG FESS: \$45	

This course is important to the development of knowledge required by industry for employment of welders. Upon completion of the course, the student should have knowledge of all arc welding processes including industrial applications, arc characteristics, among others. The student should have the ability to read symbols, and blueprints interpret them as they apply to welding.

Course objective: To develop a practical understanding of welding with regard to welding processes, and auxiliary welding equipment for a welder. Also, to develop a technical understanding of the information contained in engineering drawings and the use of the information to communicate set-up and welding instructions from the designer to the welder and fitter.

Course content: The first week of the course presents information on welding safety, welding terms and definitions, weld defects and discontinuities, welding processes, and symbols for welding according to AWS® A2.4. The second week of the course presents information on mathematics including fractions, decimals, and metric conversions. It also presents orthographic views and engineering drawing lines, the bill of materials, set-up tools, relationships of surfaces, edges and centerlines as applied to a set-up procedure, and fabrication of a weldment from a print.

Testing: To pass this course, the student must pass the welding knowledge tests and must have the ability to fabricate a weldment from a print.

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COURSE CODE	WTB028		
DESCRIPTION	ADVANCED BLUEPRINT READING		
DURATION	2 WEEKS ,70 HOURS	TUITION \$900.00	REG FEES \$75.00



This course is important to enhance the student's knowledge and abilities entering the welding industry. Upon completion of this course, the student should have knowledge of the design procedure and interpreting blueprints and shop drawings and applying this information, the use of measuring tools in layout and assembly, have a basic understanding of codes, specifications and standards and also to be aware of the responsibility of a welder in quality control.

Course Objective: To develop an understanding of the blueprint design process and interpreting blueprint information for selecting materials, layout, and assembly. To familiarize students with measuring tools, common shop equipment, and interpreting information, symbols, and abbreviations for design blueprints, shop and erection drawings and to create as-built drawings for project level communication.

Course Content: Week one presents the blueprint design process; how codes, specifications and standards are used and how to navigate through them as they relate to blueprints. Common material shapes and how to use tables for material dimensions, weight, and orientation in assemblies. Non-destructive testing and the related abbreviations and symbols are presented. General notes, plan views, architectural drawings, elevations, plan section details, plan legends and material schedules will be covered.

During week two, applied math and training on the use of various layout tools are presented. The student will practice layout and assembly from blueprints utilizing orthographic views and a bill of materials. Training on the use of weld measuring tools and

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gauges and their role in quality control will be discussed. Cutting, forming and drilling equipment commonly used in the industry will be covered as will structurally bolting.

Testing: To pass this course, the student is required to complete assigned classroom work and 11 written tests with scores averaging a passing grade.

COURSE CODE	OAW001, WP 311		
DESCRIPTION	OXY-ACETYLENE WELDING & THERMAL CUTTING		
DURATION	2 WEEKS ,70 CLOCK HOURS	TUITION \$850.00	REG FEES \$15.00



Upon completion, the student should be able to perform the industrial requirements of oxyacetylene welding and flame cutting that are essential for maintenance welding and cutting.

Course objective: To be able to produce quality fillet and groove welds on carbon steel, and to be able to produce quality cuts on carbon steels by hand or by machine. This course develops skills for Oxyacetylene Welder (DOT 811.684-014), Oxyacetylene Welder Assembler portion of Combination Welder (DOT 819.384-010), Production Line Welder (DOT 819.684-010), and Thermal Cutter, Hand I (DOT 816.464-010).

Course content: This course provides understanding of oxyacetylene welding and cutting, as well as safety practices. It provides training to develop the manual skill necessary to produce quality 11-gauge fillet welds and open root 3/16" V-bevel welds (all positions). Skill

is developed in the areas of flame cutting mild steel plate. Related information is included on weld quality and applications of fuel gases not used in this course.

Testing: To pass this course, the student is required to pass two written tests. The student must also pass three visual tests (flat, vertical, and overhead) and guided bend test in two test positions (flat and vertical). A flame-cutting test is also required.

COURSE CODE	SMAW002 WP 111		
DESCRIPTION	SHIELDED METAL ARC WELDING BASIC ENTRY LEVEL		
DURATION	4 WEEKS 140 CLOCK HOURS	TUITION \$1530.00	REG FEES \$25.00



Upon completion, the student should be able to perform production welding, millwright and general maintenance welding.

Course objective: To be able to produce quality multi-pass fillet and square groove welds in all positions using E6010, 6011, E6013 and E7018 electrodes. This course also develops skills to perform in accordance with Welder, Arc (DOT 810.384- 014), Production Line Welder (DOT 819.684-010), Tack Welder (DOT 810.684-010) and the arc welding portion of Combination Welder (DOT 819.384-010). (**DOT- Dictionary of Occupational Titles**) in Levels.

Course content: This course provides the student with a thorough technical understanding of arc welding, welding safety, arc welding power sources, electrode classifications and selection. It also provides training to develop the skills

necessary to make quality shielded metal arc welds in all positions on mild steel from 3/16 inch to 1/2-inch plate, single and multiple pass, using mild steel, low hydrogen, and iron powder electrodes, with DC welding current.

Testing: To pass this course, the student is required to pass four written tests. The student also must pass the following four skill tests: visual and break tests on fillet welds in the horizontal and overhead positions (E6010), visual and guided bend tests on square groove welds in the horizontal, vertical up and overhead positions (E6011 and E7018).

COURSE CODE	SMAW003 WP 111		
DESCRIPTION	SHIELDED METAL ARC WELDING STRUCTURAL ADVANCED		
DURATION	4 WEEKS 140 CLOCK HOURS	TUITION \$1530.00	REG FEES \$25.00

Upon completion of this course, the student should be able to perform bridge code welds and other related structural work, as well as preparation for pipe welding.

Prerequisites: The student must have successfully passed the SEB Institute of Welding and Technology Shielded Metal Arc Welding course. If the student has not completed the above course, skill must be demonstrated by successfully completing the following tests: Pass a visual and AWS® break test on a fillet weld in the horizontal and overhead position (E6010); pass a visual and AWS® guided bend test on a square groove weld in the vertical and horizontal positions (E6011 and E7018) – and pass a written test. Prerequisite testing charge is \$100.00.

Course objective: To produce quality multi-pass groove welds with backing in all positions using E7018 electrodes on 1" mild steel in the horizontal, vertical, and overhead positions. To produce quality, multi-pass open root groove welds in all positions using E6010 and E7018 electrodes on 3/8" mild steel plates. The quality of welds is in accordance with the various recognized welding codes. This course also develops skills for Welder, Arc (DOT 810.384-014).

Course content: This course provides training to develop skills necessary to produce quality multi-pass groove welds with backing on 1" plate in the horizontal, vertical, and overhead positions; and to produce quality open root single V-groove welds on 3/8" mild steel plate in horizontal, vertical, and overhead positions. Welding related information is also provided on hard surfacing, repair of cast iron and metal identification. In addition, welding related information is included about procedure and welder qualification on destructive and nondestructive testing methods.

Testing: To pass this course, the student is required to pass four written tests. The student also must pass visual and guided bend tests on single V-groove welds with backing on 1" mild steel plates in the vertical and overhead positions. Tests are also given on single V-groove welds on 3/8" mild steel plates in the horizontal, vertical and overhead positions.

COURSE CODE	SMA006 WP 111		
DESCRIPTION	SHIELDED METAL ARC WELDING 6" PIPE 2G & 5G UPHILL		
DURATION	4 WEEKS 140 CLOCK HOURS	TUITION \$1630.00	REG FEES \$15.00

Upon completion of this course, the student should have developed skills for the pressure vessel and piping fields.

Prerequisites: The student must have successfully passed the SEB Institute of Welding Technology Shielded Metal Arc Welding and Advanced courses. If the above courses have not been completed, the following prerequisite tests are required: Pass a guided bend test on 3/8" plate in the horizontal, vertical and overhead positions – and pass a written test. Prerequisite testing charge is \$150.00.

Course objective: To produce high quality single V-groove welds on 6" diameter schedule 80 carbon steel pipe in all positions. Quality is determined through visual inspection and mechanical testing. This course also develops skills for Welder, Arc (DOT 810.384-014).

Course content: This course provides the student with a thorough understanding of uphill pipe welding and weld quality. This course helps to develop the welding skills necessary to produce quality multi-pass welds on 6" diameter schedule 80 mild steel pipe in the 2G and 5G positions, using E6010 and E7018 electrodes.

Testing: To pass this course, the student is required to pass three written tests. The student also must pass visual and guided bend tests on welds produced in the 2G and 5G positions.

COURSE CODE	SMAW106 WP 111		
DESCRIPTION	SHIELDED METAL ARC WELDING 6" PIPE UPHILL		
DURATION	2 WEEKS, 70 CLOCK HOURS	TUITION \$920.00	REG FEES \$15.00

Upon completion of this course, the student should have developed skills for the pressure vessel and nuclear piping fields.

Prerequisites: The student must have successfully passed the SEB Institute of Welding Technology Shielded Metal Arc Welding Pipe Uphill course. If the above course has not been completed, the following prerequisite tests are required: Pass a single V-groove pipe weld visual and guided bend test in the 2G and 5G positions using E6010 and E7018 electrodes – and pass a written test. Prerequisite testing charge is \$100.00.

Course objective: To produce quality single V-groove welds on 6" diameter schedule 80 carbon steel pipe in the 6G position. Quality is determined through visual inspection and mechanical testing according to ASME requirements. This course also develops skills for Welder, Arc (DOT 810.384- 014).

Course content: This course provides the student with a thorough understanding of pipe welding, weld quality, uphill pipe procedures and preheating and inter-pass heat treatments. This course helps to develop welding skills to produce quality multi-pass welds on 6" diameter schedule 80 mild steel pipe in the 6G position, using E6010 and E7018 electrodes.

Testing: To pass this course, the student is required to pass two written tests. The student also must pass a visual and guided bend test on a weld produced in the 6G position.

COURSE CODE	SMA107 WP 111		
DESCRIPTION	SHIELDED METAL ARC WELDING 2" PIPE UPHILL		
DURATION	2 WEEKS,70 CLOCK HOURS	TUITION \$920.00	REG FEES \$15.00

Upon completion of this course, the student should have developed skills for the pressure vessel and nuclear piping fields.

Prerequisites: The student must have successfully passed the SEB Institute of Welding Technology Shielded Metal Arc Welding Pipe 6G Position Uphill course. If the above course has not been completed, the following prerequisite tests are required: Pass a visual and guided bend test on a weld produced in the 6G position using E6010 and E7018 electrodes -- and pass a written test. Prerequisite testing charge is \$100.00.

Course objective: To produce quality single V-groove welds on 2-inch diameter schedule 80 and XX heavy wall carbon steel pipe in the 6G position. Quality is determined through visual inspection and mechanical testing. This course also develops skills for Welder, Arc (DOT 810.384-014).

Course content: This course provides the student with a thorough understanding of pipe welding, weld quality, uphill pipe procedures and preheating and inter-pass heat treatments. This course helps to develop welding skills to produce quality multi-pass welds on 2-inch diameter schedule 80 and XX heavy wall mild steel pipe in the 6G position, using E6010 and E7018 electrodes.

Testing: To pass this course, the student is required to pass two written tests. The student also must pass a visual and guided bend test on a weld produced in the 6G position on both schedule 80 and XX heavy wall, 2-inch pipe.

COURSE CODE	SMA007 WP111		
DESCRIPTION	SHIELDED METAL ARC WELDING PIPE DOWNHILL		
DURATION	2 WEEKS 70 CLOCK HOURS	TUITION \$1025.00	REG FEES \$15.00

Upon completion of the course, the student should have developed downhill pipe welding techniques for the service transmission piping fields.

Prerequisites: The student must have successfully passed the SEB Institute of Welding Technology Shielded Metal Arc Welding and Shielded Metal Arc Welding Advanced courses. Students in the 36-week Combination Structural & Pipe Welding Program must successfully complete Shielded Metal Arc Welding Pipe courses including 2G, 5G, and 6G prior to taking downhill. Any other student must pass the Shielded Metal Arc Welding Pipe courses or must pass the downhill prerequisite testing. If the above courses have not been completed, the following prerequisite test is required: Pass a 3/8-inch (9.5) plate open root guided bend test in the vertical down and 45° position – and pass a written test. Prerequisite testing charge is \$100.00.

Course objective: To produce quality open root groove welds on 6-inch schedule 80 carbon steel pipe in the 5G and 6G positions using E7010 electrodes. This course also develops skills for Welder, Arc (DOT 810.384-014).

Course content: This course provides the student with a thorough understanding of downhill pipe welding procedures and weld quality. It provides training to develop the skills necessary to produce quality welds on open root carbon steel pipe in the 5G and 6G positions, using E7010 electrodes.

Testing: To pass this course, the student is required to pass two written tests. The student also must pass a visual test on 6-inch diameter schedule 80 pipe in the 5G position, and must pass a visual guided bend and nick break test in the 6G position.



COURSE CODE	PLF026		
DESCRIPTION	PIPE LAYOUT FOR PIPEFITTERS & WELDERS		
DURATION	2 WEEKS 70 CLOCK HOURS	TUITION \$1025.00	REG FEES \$35.00

Upon completion of the course, the student should have the ability to fit and weld the piping, making the student much more competitive in the job market.

Course objective: To provide fundamentals for layout and fabrication of typical pipe connections and to use mathematics, basic equations and charts for properly fabricating and welding these connections

Course content: This course provides the student with a basic understanding of the types of joints – with hands-on layout, fit-up, and welding of branch connections, laterals, circumferential sleeves and bull plugs.

Testing: To pass this course, the student is required to pass two written tests. The student must also pass a 45° lateral as well as a 90° branch connection test

COURSE CODE	GTAW008		
DESCRIPTION	GAS TUNGSTEN ARC WELDING		
DURATION	2 WEEKS 70 CLOCK HOURS	TUITION \$850.00	REG FEES \$25.00



Upon completion of the course, the student should be able to perform production and maintenance welding on mild steel, stainless steel, and aluminum used in the aircraft and missile industry.

Course objective: To be able to produce quality fillet and square groove welds on thin carbon steel, stainless steel and aluminum in the flat, horizontal and vertical positions, using the gas tungsten arc welding process. This course also develops skills for Welder, Arc (DOT 810.384-014), Production Line Welder (DOT 819.684-010), Tack Welder (DOT 810.684- 010) and the Arc Welding portion of Combination Welder (DOT 819.384-010).

Course content: This course provides the student with a thorough technical understanding of gas tungsten arc welding, arc characteristics and welding safety. It provides training to develop the skill necessary to make quality gas tungsten arc welds on 16 and 11 gauge mild steel, .062-inch gauge stainless steel and .125-inch aluminum, using both direct and alternating current. In addition, material is presented on the weld characteristics of carbon steel, stainless steel and aluminum. Information on pulsed current is included to prepare the student for more detailed applications of pulsed current used in gas tungsten arc welding pipe.

Testing: To pass this course, the student is required to pass two written tests. The student also must pass a visual guided bend test in the flat position on mild steel, and visual tests on stainless steel and aluminum.

COURSE CODE	GTAW109		
DESCRIPTION	GAS TUNGSTEN ARC WELDING STAINLESS & TITANIUM		
DURATION	1 WEEK 35 CLOCK HOURS	TUITION \$700.00	REG FEES \$15.00

Upon completion of the course, the student should have the ability to weld on thin stainless steel and titanium for use in aircraft, missiles, medical areas, and many other applications.

Prerequisites: The student must have successfully passed the SEB Institute of Welding Technology Gas Tungsten Arc Welding course. If the student has not completed the above course, skill must be demonstrated by successfully completing the following tests: Pass a visual test of a T-joint on .062-inch stainless steel in the flat position and pass a visual and guided bend test of a square groove weld on 11-gauge carbon steel plate in the flat position using the gas tungsten arc welding process, and a pass a written test. Prerequisite testing charge is \$50.00.

Course objective: To familiarize the student with the manipulative technique and the characteristics of stainless steel and titanium welding. To be able to produce quality welds on thin gauge materials.

Course content: This course is designed to provide the student with an understanding of gas tungsten arc welding on thin gauge stainless steel and titanium. The student will learn to develop the skill necessary to produce quality welds on .040-inch to .062-inch stainless steel and titanium in the flat and horizontal positions. In addition, information will be presented on the weld characteristics of titanium and stainless steel.

Testing: To pass this course, the student is required to pass a written test. The student is also required to pass tests on a five-plate assembly on .045-inch stainless steel (outside corner, butt joint, tee joint, and lap joints with and without filler), a visual tee joint and lap joints with and without filler on .062-inch titanium in the flat position, and submit .062- inch titanium square groove butt joints in the flat position for radiographic testing.

COURSE CODE	GTAW108		
DESCRIPTION	GAS TUNGSTEN ARC WELDING 2" PIPE		
DURATION	2 WEEKS 70 CLOCK HOURS	TUITION \$920.00	BOOK FEES \$15.00



Upon completion of this course, the student should have developed skills for process, pressure and nuclear piping work – as well as for the welding of cryogenic vessels.

Prerequisites: The student must have successfully completed the SEB Institute of Welding Technology

Gas Tungsten Arc Welding course. If the student has not completed the above course, skill must be demonstrated by successfully completing the following test: Pass a visual test of a T-joint on .062-inch stainless steel in the flat position and pass a visual and guided bend test of a square groove weld on 11-gauge carbon steel plate in the flat position using the gas tungsten arc welding process, and pass a written test. Prerequisite testing charge is \$50.00.

Course objective: To be able to produce quality single V-groove welds on 2-inch diameter schedule 80 steel pipe in all positions. Quality is determined through visual inspection and mechanical testing. This course also develops skills for Welder, Arc (DOT 810.384-014).

Course content: This course provides the student with a thorough technical understanding of gas tungsten arc welding preparation for welding pipe. It develops the skills necessary to produce quality groove welds on 2-inch schedule 80 steel pipe in the 2G, 5G, and 6G positions.

Testing: To pass this course, the student is required to pass one written test. The student also must pass visual and guided bend tests and/or radiographic testing on welds produced in the 2G and 5G positions.

COURSE CODE	GTAW009		
DESCRIPTION	GAS TUNGSTEN ARC WELDING/ SHIELDED METAL ARC WELDING 6" PIPE		
DURATION	4 WEEKS 140 CLOCK HOURS	TUITION \$1630.00	REG FEES \$15.00

Upon completion of the course, the student should have developed uphill pipe welding techniques and skills for the pressure vessel and nuclear piping fields. This process is also used for all utility work, nuclear and navy vessels.

Prerequisites: The student must have successfully passed the SEB Institute of Welding Technology Gas Tungsten Arc Welding course and Shielded Metal Arc Welding Pipe 6G Position Uphill course. If the student has not completed the above courses, skill must be demonstrated by successfully completing the following tests: Pass a visual and guided bend test of a square groove weld on 11 gauge carbon steel plate in the flat position, using the gas tungsten arc welding process; and pass a visual inspection on 6-inch schedule 80 mild steel pipe welded in the 2G, 5G and 6G positions with backing rings, using the shielded metal arc welding process and E7018 low hydrogen electrodes, and pass a written test. Prerequisite testing charge is \$200.00.

Course objective: To produce quality single V-groove welds on 6-inch diameter schedule 80 carbon steel pipe in all welding positions using the gas tungsten arc welding process and shielded metal arc welding process. Quality is determined through visual inspection and mechanical testing. This course also develops skills for Welder, Arc (DOT 810.384-014).

Course content: This course provides the student with a thorough technical understanding of joint designs, programmable gas tungsten arc welding equipment and methods of welding carbon steel and stainless-steel pipe. It provides training to develop welding skills to make welds on carbon steel open root, 6-inch diameter schedule 80 steel pipe in the 2G, 5G, and 6G positions. It also uses the gas tungsten arc welding process with stainless steel

filler material to deposit the root and second pass – and the shielded metal arc process to complete the weld.

Testing: To pass this course, the student is required to pass two written tests. The student also must pass visual and guided bend tests on welds produced on 6-inch schedule 80 steel pipe in the 2G, 5G and 6G positions.

COURSE CODE	GMAW011		
DESCRIPTION	GAS METAL ARC WELDING BASIC		
DURATION	2 WEEKS 70 CLOCK HOURS	TUITION \$850.00	BOOK FEES \$25.00



Upon completion of the course, the student should be able to perform production and maintenance welding on mild steel including high volume fabrication, automotive assembly and repair.

Course objective: To produce quality multiple pass fillet welds and groove welds on carbon steel plate in all positions, using short circuiting transfer. Quality is determined through visual inspection and mechanical testing. This course also develops skills for Welder, Arc (DOT 810.384-014), Production Line Welder (DOT 819.684-010), Tack Welder (DOT 810.684-010), and the arc welding portion of Combination Welder (DOT 819.384-010).

Course content: This course is designed to provide the student with a thorough technical understanding of welding safety, gas metal arc welding, equipment adjustments, metal transfer and shielding gases. It also provides training to develop the skill necessary to make quality gas metal arc welds in all positions on mild steel from 3/16-inch sheet to 3/8-inch plate, single and multiple pass, using short circuit transfer. This course also illustrates problems associated with welding situations and provides corrective information.

Testing: To pass this course, the student is required to pass two written tests. The student also must pass visual and guided bend tests in the horizontal, vertical down, and overhead positions.

COURSE CODE	GMAW016		
DESCRIPTION	GAS METAL ARC WELDING ADVANCED		
DURATION	1 WEEKS 35 CLOCK HOURS	TUITION \$650.00	BOOK FEES \$15.00

Upon completion of this course, the student should be able to perform structural welding related to buildings and bridges – and production welding on light, medium and heavy assemblies.

Prerequisites: The student must have successfully passed the SEB Institute of Welding Technology Gas Metal Arc Welding course. If this course has not been completed, the following prerequisite test is required: Pass a 3/8-inch plate open root guided bend test in the horizontal, vertical down, and overhead positions, and a written test. Prerequisite testing charge is \$150.00.

Course objective: To develop the ability to produce quality fillet and groove welds on carbon steel and aluminum using pulse or spray transfer. This course also develops skills for Welder, Arc (DOT 810.384-014).

Course content: This course provides training on pulse transfer other than the short-circuiting, which is covered in the Gas Metal Arc Welding course. The pulse transfer provides for high deposition rate for all position welding. This course also includes gas metal arc welding of aluminum.

Testing: To pass this course, the student is required to pass two written tests. The student also must pass one visual and guided side bend test and/or radiographic testing in the 2G position using pulsed spray transfers on carbon steel and two visual cut and etch tests on aluminum (vertical up and overhead). Pulse transfer will be used.

COURSE CODE	GMAW013		
DESCRIPTION	GAS METAL ARC WELDING BASIC		
DURATION	1 WEEKS 70 CLOCK HOURS	TUITION \$650.00	BOOK FEES \$15.00

Upon completion of the course, the student should be able to perform service and transmission pipeline related work.

Prerequisites: The student must have successfully passed the SEB Institute of Welding Technology Gas Metal Arc Welding course. If this course has not been completed, the following prerequisite test is required: Pass a 3/8-inch plate open root guided bend test in

the horizontal, vertical down, and overhead positions, and a written test. Prerequisite testing charge is \$150.00.

Course objective: To produce quality single V-groove welds on 6-inch schedule 80 carbon steel pipe in the 2G and 5G fixed positions, using short-circuiting metal transfer. This course also develops skills for Welder, Arc (DOT810.384-014).

Course content: This course provides the student with a thorough technical understanding of gas metal arc welding, preparation for welding pipe and pipe welding defects. It provides training to develop the skills necessary to produce quality groove welds on 6-inch diameter schedule 80 steel pipe in the 2G and 5G positions.

Testing: To pass this course, the student is required to pass two written tests. The student also must pass two practical tests on pipe welded in the 2G and 5G positions. The tests include visual examination and guided bend tests.

COURSE CODE	FCAW015		
DESCRIPTION	FLUX CORED ARC WELDING		
DURATION	2 WEEKS 70 CLOCK HOURS	TUITION \$850.00	BOOK FEES \$25.00



Upon completion of the course, the student should be able to perform structural welding related to buildings and bridges and production work related to heavy equipment manufacturing.

Prerequisites: The student must have successfully passed the SEB Institute of Welding Technology Gas Metal Arc Welding course. If this course has not been completed, the following prerequisite test is required: Pass a 3/8-inch plate open root guided bend test in

the horizontal, vertical down, and overhead positions, and pass a written test. Prerequisite testing charge is \$150.00.

Course objective: This course enables the student to produce quality fillet and groove welds on carbon steel using small diameter electrode wires, large diameter gas shielded electrode wires as well as metal cored wires. This course also develops skills for Welder, Arc (DOT 810.384-014).

Course content: This course is designed to provide training to develop welding skills on carbon steels using small and large diameter flux-cored electrodes in all positions on fillet and groove welds.

Testing: To pass this course, the student is required to pass two written tests. The student also must pass the five following visual and guided bend tests: flat, horizontal, vertical, and overhead groove welds using small diameter wire.

COURSE CODE	WEL530		
DESCRIPTION	WELDABILITY OF METALS, FERROUS & NONFERROUS		
DURATION	1 WEEKS 35 CLOCK HOURS	TUITION \$650.00	BOOK FEES \$45.00

Upon completion of the course, the student should have a better understanding of welding the different metals.

Course objective: This course will provide the non-metallurgist with basic knowledge of various metals and their weldability, including metal properties, heat input, preheating, post heating, and selecting filler metals.

Course content: This course is designed to provide training on metal properties, basic metallurgy, classification of ferrous metals, heat treatments, hard surfacing, and metals identification; along with weldability of stainless steels, tool steels, cast iron, nickel alloys, aluminum alloys, magnesium alloys and titanium alloys.

Testing: To pass this course, the student is required to pass two written tests.

COURSE CODE	CAD001		
DESCRIPTION	MANUFACTURING DESIGNING BY SOLID WORKS		
DURATION	4 WEEKS 70 CLOCK HOURS	TUITION \$950.00	BOOK FEES \$25.00

Course Overview:

SIWET offers complete SolidWorks Training Course which includes SolidWorks modules like Part Design, Assembly Design, Sheetmetal, Surfacing, Detailing, and Drafting. We also offer industry domain-oriented SolidWorks courses like SolidWorks Electrical, SolidWorks Routing, SolidWorks Simulation, SolidWorks Flow Simulation, and SolidWorks Plastics.

Why Choose SOLIDWORKS 3D CAD?

Dramatically improve the way you develop and manufacture products. As the foundation for the entire SOLIDWORKS suite of product development solutions, SOLIDWORKS CAD packages cover

design, simulation, cost estimation, manufacturability checks, CAD-CAM training, sustainable design, and data management.

Prerequisites:

- High configuration Desktop / Laptop with SolidWorks Software License preinstalled
- Headphones
- SIWET will provide you Training Input files and exercises Soft Copies in advanced which needs to be stored in your Desktop / Laptop.
- Students should have basic fundamental knowledge of subjects like Engineering Graphics & Machine Drawing with GD&T Symbols.

Intended Audience:

Undergraduate Students from Mechanical / Automobile / Production Engineering

Fresh Mechanical / Automobile / Production Engineers

Designers, Design Engineers and Manufacturing Engineers who need a thorough knowledge of the features available in the SolidWorks Mechanical Design

Case studies:

Practical industrial examples will be considered as case studies where students will not only study the modeling technique involved to create a complex industrial model but also students will study the design considerations and methodologies involved in the creation of the model. These case studies will be taught to students in detail and they will create the model under the guidance of the faculty.

Projects and Test:

Once students are proficient in using all the commands/features and once they have undergone the practical case studies, individual projects will be assigned to them in groups where they will design and build a model based on Engineering knowledge as well as CAD modeling philosophies of SolidWorks. This project and an objective questions test will be the benchmarks to judge the performance of a student.



Filter Lens 4 1/2" X 5 1/4"	\$5.00	GTA009		GMA013	
Cover Lens 4 1/2" X 5 1/4"	\$1.00	GAS TUNGSTENARCWELDING/SHIELDED		GAS METAL ARC WELDING PIPE	
Ear Muffs	\$8.00	METAL ARC WELDING6" PIPE			Total: \$188.00
Gloves, Stick Welding	\$12.00		Total: \$200.50	Face Shield	\$4.00
Chipping Hammer	\$9.50	Welding Cap	\$6.00	Head Gear	\$8.00
		Safety Glasses	\$3.00	Welding Cap	\$6.00
GTA008 & GTA109		Ear Plugs	\$1.50	Safety Glasses	\$3.00
GAS TUNGSTEN ARC WELDING & GAS TUNGSTEN		Carbon Steel Wire Brush	\$2.50	Ear Plugs	\$1.50
ARC WELDING STAINLESS & TITANIUM		Slip Joint Pliers	\$6.50	Carbon Steel Wire Brush	\$2.50
	Total: \$125.25	Half Round File w/Wooden Handle	\$20.50	Slip Joint Pliers	\$6.50
Safety Glasses	\$3.00	Padlock	\$6.00	Half Round File w/Wooden Handle	\$20.50
Ear Plugs	\$1.50	Leather Sleeves Welding Coat	\$32.00	Padlock	\$6.00
FR Sleeves	\$10.00	Helmet	\$35.00	Leather Sleeve Welding Coat	\$32.00
Slip Joint Pliers	\$6.50	Filter Lens 4 1/2" X 5 1/4"	\$5.00	Helmet	\$35.00
Diagonal Cutting Pliers	\$15.00	Cover Lens 4 1/2" X 5 1/4"	\$1.00	Filter Lens 4 1/2" X 5 1/4"	\$5.00
Padlock	\$6.00	Ear Muffs	\$8.00	Cover Lens 4 1/2" X 5 1/4"	\$1.00
Black Welding Jacket	\$25.00	Gloves, Stick Welding	\$12.00	Ear Muffs	\$8.00
Helmet	\$35.00	Gloves, TIG	\$12.00	Gloves, MIG	\$12.00
Filter Lens 4 1/2" X 5 1/4"	\$5.00	Knee Pads	\$25.00	Welpers (Mig Pliers)	\$17.00
Cover Lens 4 1/2" X 5 1/4"	\$1.00	Chipping Hammer	\$9.50	Needlenose Pliers	\$20.00
TIG Gloves	\$12.00	Diagonal Cutting Pliers	\$15.00		
Cotton Liners	\$1.00			GMA016	
Small Stainless Steel Wire Brush	\$1.75	GMA011		GAS METAL ARC WELDING ADVANCED	
Carbon Steel Wire Brush	\$2.50	GAS METAL ARC WELDING BASIC			Total: \$196.00
			Total: \$176.00	Welding Cap	\$6.00
GTA108		Welding Cap	\$6.00	Safety Glasses	\$3.00
GAS TUNGSTEN ARC WELDING 2" PIPE		Safety Glasses	\$3.00	Ear Plugs	\$1.50
	Total: \$130.50	Ear Plugs	\$1.50	Carbon Steel Wire Brush	\$2.50
Safety Glasses	\$3.00	Carbon Steel Wire Brush	\$2.50	Slip Joint Pliers	\$6.50
Ear Plugs	\$1.50	Slip Joint Pliers	\$6.50	Padlock	\$6.00
FR Sleeves	\$10.00	Half Round File w/Wooden Handle	\$20.50	Leather Sleeve Welding Coat	\$32.00
Slip Joint Pliers	\$6.50	Padlock	\$6.00	Helmet	\$35.00
Diagonal Cutting Pliers	\$15.00	Leather Sleeve Welding Coat	\$32.00	Filter Lens 4 1/2" X 5 1/4"	\$5.00
Padlock	\$6.00	Helmet	\$35.00	Cover Lens 4 1/2" X 5 1/4"	\$1.00
Leather Sleeve Welding Coat	\$32.00	Filter Lens 4 1/2" X 5 1/4"	\$5.00	Leather Cape & Bib	\$50.00
Helmet	\$35.00	Cover Lens 4 1/2" X 5 1/4"	\$1.00	Gloves, MIG	\$12.00
Filter Lens 4 1/2" X 5 1/4"	\$5.00	Ear Muffs	\$8.00	Stainless Steel Wire Brush	\$3.50
Cover Lens 4 1/2" x 5 1/4"	\$1.00	Gloves, MIG	\$12.00	Diagonal Cutting Pliers	\$15.00
Gloves, TIG	\$12.00	Welpers (Mig Pliers)	\$17.00	Welpers (MIG Pliers)	\$17.00
Cotton Liners	\$1.00	Needlenose Pliers	\$20.00		
Carbon Steel Wire Brush	\$2.50				

SIWET...advancing the future careers of welding

FCA015 FLUX CORED ARC WELDING		PLF026 PIPE LAYOUT FOR PIPEFITTERS & WELDERS	
Total: \$195.00		Total: \$177.25	
Welding Cap	\$6.00	Face Shield	\$4.00
Safety Glasses	\$3.00	Head Gear	\$8.00
Ear Plugs	\$1.50	Welding Cap	\$6.00
Carbon Steel Wire Brush	\$2.50	Safety Glasses	\$3.00
Slip Joint Pliers	\$6.50	Ear Plugs	\$1.50
Padlock	\$6.00	Carbon Steel Wire Brush	\$2.50
Leather Sleeve Welding Coat	\$32.00	Slip Joint Pliers	\$6.50
Helmet	\$35.00	Half Round File w/Wooden Handle	\$17.00
Filter Lens 4 1/2" X 5 1/4"	\$5.00	Padlock	\$6.00
Cover Lens 4 1/2" X 5 1/4"	\$1.00	Leather Sleeve Welding Coat	\$32.00
Ear Muffs	\$8.00	Helmet	\$35.00
Leather Cape & Bib	\$50.00	Filter Lens 4 1/2" X 5 1/4"	\$5.00
Cowhide Gloves, MIG	\$12.00	Cover Lens 4 1/2" X 5 1/4"	\$1.00
Chipping Hammer	\$9.50	Welding & Cutting Goggles	\$11.00
Welpers (Mig Pliers)	\$17.00	Gloves, Stick Welding	\$12.00
		Gloves, Mig/Oxy	\$12.00
		Chipping Hammer	\$9.50
		Tip Cleaners	\$2.00
		Flint Striker	\$1.75
		Soap Stone & Holder	\$1.50

Prices are subject to change without notice. Larger sizes may be higher priced.



2021-2022 SCHEDULE FOR WELDING SKILL TRAINING

Standard hours of training for first shift are 8:00 a.m. to 4:00 p.m (EAT), Monday through Friday. First shift students enrolled in the Combination Structural and Pipe Welding and Structural Welding programs should report at 8:00 a.m. for student orientation on the Friday preceding the starting date of the first course . Hours of training for second shift are 4:00 p.m. to 11:30 p.m. Monday through Friday. Second shift students should report at 2:00 p.m. on the Friday preceding the starting date of the second course for student orientation. Students enrolled in individual courses will attend orientation on the first day of class – first shift will report at 7:15 a.m. and second shift will report at 3:15 p.m.

Program 1

COMBINATION STRUCTURAL AND PIPE WELDING
TUITION: \$16,880.00, Book Fees \$425.00
38 weeks, 1330 hours

Program 2

STRUCTURAL WELDING
TUITION \$10,210.00 BOOK FEES \$335.00
23 weeks, 805 clock hours

Course code	Start Date	End Date
CSP -001	01/01/24	10/12/24
CSP -002	02/19/24	11/09/24
CSP -003	03/19/24	12/14/24
CSP -004	04/16/24	01/25/25
CSP -005	06/11/24	03/22/25
CSP -006	07/09/24	04/19/25
CSP -007	08/06/24	05/17/25
CSP -008	09/03/24	06/14/25
CSP -009	10/01/24	07/12/25
CSP -010	01/14/25	10/04/25
CSP -011	02/11/25	11/01/25
CSP -012	03/11/25	12/06/25
CSP -013	04/08/25	01/17/26
CSP -014	05/06/25	02/14/26
CSP -015	06/03/25	03/13/26

Course code	Start Date	End Date
SW -001	01/22/24	10/12/24
SW -002	02/19/24	11/09/24
SW -003	03/19/24	12/14/24
SW -004	04/16/24	01/25/24
SW -005	06/11/24	03/22/25
SW -006	07/09/24	04/19/25
SW -007	08/06/24	05/17/25
SW -008	09/03/24	06/14/25
SW -009	10/01/24	07/12/25
SW -010	01/14/25	10/04/25
SW -012	02/11/25	11/01/25
SW -013	03/11/25	12/06/25
SW -014	04/08/25	01/17/26
SW -015	05/06/25	02/14/26
SW -016	06/03/25	03/13/26



WTB027: WELDING TECHNOLOGY

AND BLUEPRINT READING

TUITION: \$850.00, Book Fees \$45.00 Duration:
2 weeks 70 clock hours

Course Code	Start Date	End Date
WTB - 001	01/04/24	01/16/24
WTB - 002	01/18/24	01/30/24
WTB - 003	02/01/24	02/13/24
WTB - 004	02/11/24	02/23/24
WTB - 005	05/14/24	05/25/24
WTB - 006	06/11/24	06/22/24
WTB - 007	07/09/24	07/20/24
WTB - 008	08/06/24	08/17/24
WTB - 009	09/03/24	09/14/24
WTB - 010	10/01/24	10/12/24
WTB - 011	10/29/24	11/09/24
WTB - 012	12/03/24	12/14/25
WTB - 013	01/14/25	01/25/25
WTB - 014	02/11/25	02/22/25
WTB - 015	03/11/25	03/22/25
WTB - 016	04/08/25	04/19/25
WTB - 017	05/06/25	05/17/25
WTB - 018	06/03/25	06/14/25

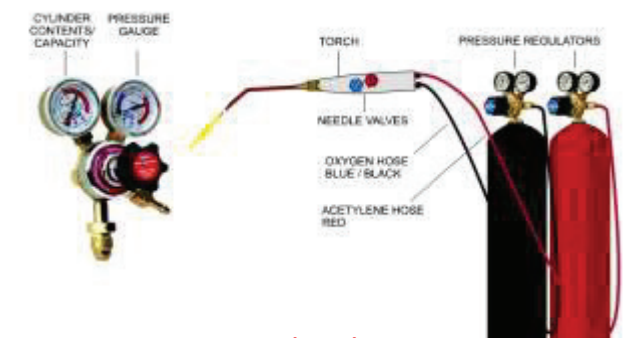
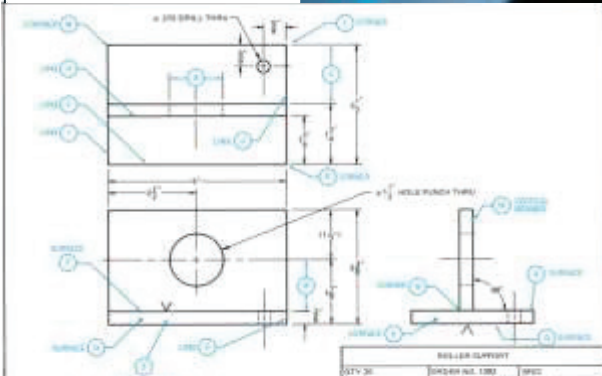
OAW001" OXYACETYLENE WELDING AND CUTTING

TUITION: \$850.00, Book Fees \$15.00
Duration: 2 weeks 70 clock hours

Course code	Start Date	End Date
OAW- 001	01/04/24	01/16/24
OAW- 002	01/18/24	01/30/24
OAW- 003	02/01/24	02/13/24
OAW- 004	02/11/24	02/23/24
OAW- 005	05/14/24	05/25/24
OAW- 006	06/11/24	06/22/24
OAW- 007	07/09/24	07/20/24
OAW- 008	08/06/24	08/17/24
OAW- 009	09/03/24	09/14/24
OAW- 010	10/01/24	10/12/24
OAW- 011	10/29/24	11/09/24
OAW- 012	12/03/24	12/14/24
OAW- 013	01/14/25	01/25/25
OAW- 014	02/11/25	02/22/25
OAW- 015	03/11/25	03/22/25
OAW- 016	04/08/25	04/19/25
OAW- 017	05/06/25	05/17/25
OAW- 018	06/03/25	06/14/25



WELDING TECHNOLOGY



SIWET...advancing the future careers of welding

**SMA003 SHIELDED METAL ARC WELDING
STRUCTURAL ADVANCED**
TUITION: \$1530.00, Book Fees \$25.00
Duration: 4 weeks 140 clock hours

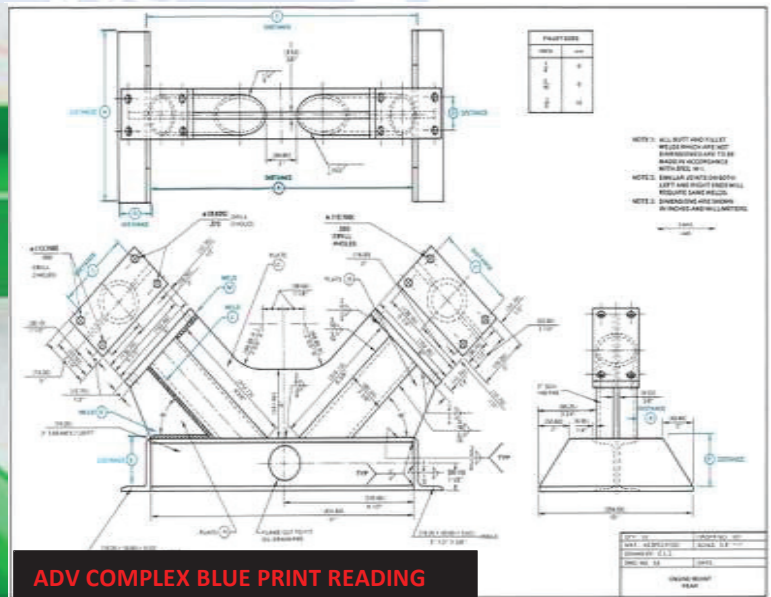
**WTB028 ADVANCED BLUEPRINT READING
TUITION: \$900.00 Duration: 2 weeks 70
clock hours**

Course code	Start Date	End Date
ASMA -001	01/04/24	01/16/24
ASMA -002	01/18/24	01/30/24
ASMA -003	02/01/24	02/13/24
ASMA -004	02/11/24	02/23/24
ASMA -005	05/14/24	05/25/24
ASMA -006	06/11/24	06/22/24
ASMA -007	07/09/24	07/20/24
ASMA -008	08/06/24	08/17/24
ASMA -009	09/03/24	09/14/24
ASMA -010	10/01/24	10/12/24
ASMA -011	10/29/24	11/09/24
ASMA -012	12/03/24	12/14/24
ASMA -013	01/14/25	01/25/25
ASMA -014	02/11/25	02/22/25
ASMA -015	03/11/25	03/22/25
ASMA -016	04/08/25	04/19/25
ASMA -017	05/06/25	05/17/25
ASMA -018	06/03/25	06/14/25

Course code	Start Date	End Date
AWTB -001	01/08/24	01/19/24
AWTB -002	02/05/24	02/16/24
AWTB -003	03/05/24	03/16/24
AWTB -004	04/02/24	04/13/24
AWTB -005	04/30/24	05/11/24
AWTB -006	05/28/24	06/08/24
AWTB -007	06/25/24	07/06/24
AWTB -008	07/23/24	08/03/24
AWTB -009	08/20/24	08/31/24
AWTB -010	09/17/24	09/28/24
AWTB -011	10/15/24	10/26/24
AWTB -012	11/12/21	11/30/24
AWTB -013	12/17/24	01/11/24
AWTB -014	01/28/25	02/08/25
AWTB -015	02/25/25	03/08/25
AWTB -016	03/25/25	04/05/25
AWTB -017	04/22/25	05/03/25
AWTB -018	05/20/25	05/31/25
AWTB -019	06/17/25	06/28/25



STRUCTURAL WELDING



ADV COMPLEX BLUE PRINT READING

SMA002 SHIELDED METAL ARC WELDING BASIC (SMAB)
TUITION: \$1530.00, Book Fees \$25.00 Duration: 4 weeks 140 clock hours

SMA006 SHIELDED METAL ARC WELDING 6" PIPE 2G & 5G UPHILL (SMAP)
TUITION: \$1630.00, Book Fees \$15.00 Duration: 4 weeks 140 clock hours

Course code	Start Date	End Date
SMAB- 001	01/08/24	01/19/24
SMAB- 002	02/05/24	02/16/24
SMAB- 003	03/05/24	03/16/24
SMAB- 004	04/02/24	04/13/24
SMAB- 005	04/30/24	05/11/24
SMAB- 006	05/28/24	06/08/24
SMAB- 007	06/25/24	07/06/24
SMAB- 008	07/23/24	08/03/24
SMAB- 009	08/20/24	08/31/24
SMAB- 010	09/17/24	09/28/24
SMAB- 011	10/15/24	10/26/24
SMAB- 012	11/12/24	11/30/24
SMAB- 013	12/17/24	01/11/25
SMAB- 014	01/28/25	02/08/25
SMAB- 015	02/25/25	03/08/25
SMAB- 016	03/25/25	04/05/25
SMAB- 017	04/22/25	05/03/25
SMAB- 018	05/20/25	05/31/25
SMAB- 019	06/17/25	06/28/25

Course code	Start Date	End Date
SMAP -001	01/04/24	02/29/24
SMAP -002	02/01/24	02/26/24
SMAP -003	03/01/24	03/26/24
SMAP -004	04/01/24	04/30/24
SMAP -005	05/03/24	05/28/24
SMAP -006	05/28/24	06/08/24
SMAP -007	06/25/24	07/06/24
SMAP -008	07/23/24	08/03/24
SMAP -009	08/20/24	08/31/24
SMAP -010	09/17/24	09/28/24
SMAP -011	10/15/24	10/26/24
SMAP -012	11/12/24	11/30/25
SMAP -013	12/17/24	01/11/25
SMAP -014	01/28/25	02/08/25
SMAP -015	02/25/25	03/08/25
SMAP -016	03/25/25	04/05/25
SMAP -017	04/22/25	05/03/25
SMAP -018	05/20/25	05/31/25
SMAP -019	06/17/25	06/28/25



SMAW BASIC WELDING



SMAW PIPE WELDING

**SMA007 SHIELDED METAL ARC WELDING
PIPE DOWNHILL (SMAP-DH)**
TUITION \$1025.00 2 weeks 70 clock
hours Book Fees \$15.00

**SMA107 -SHIELDED METAL ARC WELDING
2" PIPE UPHILL (SAM- UP)**
TUITION \$920.00 2 weeks 70 clock hours
Book Fees \$15.00

Course code	Start Date	End Date
SMAP -001	01/08/24	01/19/24
SMAP -002	02/05/24	02/16/24
SMAP -003	03/05/24	03/16/24
SMAP -004	04/02/24	04/13/24
SMAP -005	04/30/24	05/11/24
SMAP -006	05/28/24	06/08/24
SMAP -007	06/25/24	07/06/24
SMAP -008	07/23/24	08/03/24
SMAP -009	08/20/24	08/31/24
SMAP -010	09/17/24	09/28/24
SMAP -011	10/15/24	10/26/24
SMAP -012	11/12/24	11/30/24
SMAP -013	12/17/24	01/11/25
SMAP -014	01/28/25	02/08/25
SMAP -015	02/25/25	03/08/25
SMAP -016	03/25/25	04/05/25
SMAP -017	04/22/25	05/03/25
SMAP -018	05/20/22	05/31/22
SMAP -019	06/17/22	06/28/22

Course code	Start Date	End Date
SMAP- 001	01/08/24	01/19/24
SMAP- 002	02/05/24	02/16/24
SMAP- 003	03/05/24	03/16/24
SMAP- 004	04/02/24	04/13/24
SMAP- 005	04/30/24	05/11/24
SMAP- 006	05/28/24	06/08/24
SMAP- 007	06/25/24	07/06/24
SMAP- 008	07/23/24	08/03/24
SMAP- 009	08/20/24	08/31/24
SMAP- 010	09/17/24	09/28/24
SMAP- 011	10/15/24	10/26/24
SMAP- 012	11/12/24	11/30/24
SMAP- 013	12/17/24	01/11/25
SMAP- 014	01/28/25	02/08/25
SMAP- 015	02/25/25	03/08/25
SMAP- 016	03/25/25	04/05/25
SMAP- 017	04/22/25	05/03/22
SMAP- 018	05/20/22	05/31/22
SMAP- 019	06/17/22	06/28/22



PIPE WELDING DOWNHILL, 3G



PIPE WELDING UPHILL, 3G

PLF026 PIPE LAYOUT FOR PIPEFITTERS & WELDERS
TUITION \$1025.00. 2 weeks. 70 clock hours
Book Fees \$35.00

GTA008 GAS TUNGSTEN ARC WELDING BASIC (GTAW-B)
TUITION \$850.00.,2 weeks. 70 clock hours
Book Fees \$25.00

Course code	Start Date	End Date
PLF-W - 001	01/08/24	01/19/24
PLF-W- 002	02/05/24	02/16/24
PLF-W- 003	03/05/24	03/16/24
PLF-W- 004	04/02/24	04/13/24
PLF-W- 005	04/30/24	05/11/24
PLF-W- 006	05/28/24	06/08/24
PLF-W- 007	06/25/24	07/06/24
PLF-W- 008	07/23/24	08/03/24
PLF-W- 009	08/20/24	08/31/24
PLF-W- 010	09/17/24	09/28/24
PLF-W- 011	10/15/24	10/26/24
PLF-W- 012	11/12/24	11/30/24
PLF-W- 013	12/17/24	01/11/25
PLF-W- 014	01/28/25	02/08/25
PLF - W015	02/25/25	03/08/25
PLF-W- 016	03/25/25	04/05/25
PLF-W- 017	04/22/25	05/03/25
PLF-W- 018	05/20/25	05/31/25
PLF-W- 019	06/17/25	06/28/25

Course code	Start Date	End Date
GTAB -001	01/08/24	01/19/24
GTAB -002	02/05/24	02/16/24
GTAB -003	03/05/24	03/16/24
GTAB -004	04/02/24	04/13/24
GTAB -005	04/30/24	05/11/24
GTAB -006	05/28/24	06/08/24
GTAB -007	06/25/24	07/06/24
GTAB -008	07/23/24	08/03/24
GTAB -009	08/20/24	08/31/24
GTAB -010	09/17/24	09/28/24
GTAB -011	10/15/24	10/26/24
GTAB -012	11/12/24	11/30/24
GTAB -013	12/17/24	01/11/25
GTAB -014	01/28/25	02/08/25
GTAB -015	02/25/25	03/08/25
GTAB -016	03/25/25	04/05/25
GTAB -017	04/22/25	05/03/25
GTAB -018	05/20/25	05/31/25
GTAB -019	06/17/25	06/28/25



PIPE FITTING & LAYOUT



GTAW BASIC WELDING

**GTA109 GAS TUNGSTEN ARC WELDING
STAINLESS & TITANIUM**
TUITION \$700.00 1 week 35 clock hours
Book Fees \$15.00

Course code	Start Date	End Date
GTAB -001	01/08/24	01/19/24
GTAB -002	02/05/24	02/16/24
GTAB -003	03/05/24	03/16/24
GTAB -004	04/02/24	04/13/24
GTAB -005	04/30/24	05/11/24
GTAB -006	05/28/24	06/08/24
GTAB -007	06/25/24	07/06/24
GTAB -008	07/23/24	08/03/24
GTAB -009	08/20/24	08/31/24
GTAB -010	09/17/24	09/28/24
GTAB -011	10/15/24	10/26/24
GTAB -012	11/12/24	11/30/24
GTAB -013	12/17/24	01/11/25
GTAB -014	01/28/25	02/08/25
GTAB -015	02/25/25	03/08/25
GTAB -016	03/25/25	04/05/25
GTAB -017	04/22/25	05/03/25
GTAB -018	05/20/25	05/31/25
GTAB -019	06/17/25	06/28/25

**GTA108 GAS TUNGSTEN ARC WELDING
PIPE 2"**
TUITION \$920.00 2 weeks 70 clock hours
Book Fee \$15.00

Course code	Start Date	End Date
GTAP -001	01/08/24	01/19/24
GTAP -002	02/05/24	02/16/24
GTAP -003	03/05/24	03/16/24
GTAP -004	04/02/24	04/13/24
GTAP -005	04/30/24	05/11/24
GTAP -006	05/28/24	06/08/24
GTAP -007	06/25/24	07/06/24
GTAP -008	07/23/24	08/03/24
GTAP -009	08/20/24	08/31/24
GTAP -010	09/17/24	09/28/24
GTAP -011	10/15/24	10/26/24
GTAP -012	11/12/24	11/30/24
GTAP -013	12/17/24	01/11/25
GTAP -014	01/28/25	02/08/25
GTAP -015	02/25/25	03/08/25
GTAP -016	03/25/25	04/05/25
GTAP -017	04/22/25	05/03/25
GTAP -018	05/20/25	05/31/25
GTAP -019	06/17/25	06/28/25



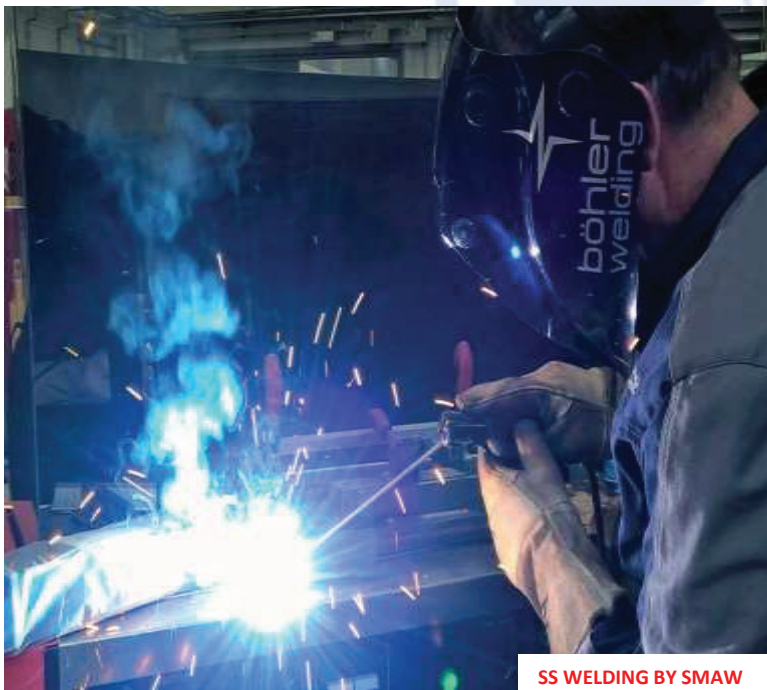
GTAW PIPE WELDING

**GTA009 GAS TUNGSTEN ARC
WELDING/SHIELDED METAL ARC WELDING
6" PIPE TUITION \$1630.00 4 weeks 140 clock
hours Book Fees \$15.00**

**GMAW011 GAS METAL ARC WELDING BASIC
TUITION \$850.00 2 weeks 70 clock hours
Book Fees \$25.00**

Course code	Start Date	End Date
GTA/SMA -001	01/08/24	01/19/24
GTA/SMA -002	02/05/24	02/16/24
GTA/SMA -003	03/05/24	03/16/24
GTA/SMA -004	04/02/24	04/13/24
GTA/SMA -005	04/30/24	05/11/24
GTA/SMA -006	05/28/24	06/08/24
GTA/SMA -007	06/25/24	07/06/24
GTA/SMA -008	07/23/24	08/03/24
GTA/SMA -009	08/20/24	08/31/24
GTA/SMA -010	09/17/24	09/28/24
GTA/SMA -011	10/15/24	10/26/24
GTA/SMA -012	11/12/24	11/30/24
GTA/SMA -013	12/17/24	01/11/25
GTA/SMA -014	01/28/25	02/08/25
GTA/SMA -015	02/25/25	03/08/25
GTA/SMA -016	03/25/25	04/05/25
GTA/SMA -017	04/22/25	05/03/25
GTA/SMA -018	05/20/25	05/31/25
GTA/SMA -019	06/17/25	06/28/25

Course code	Start Date	End Date
GMAW-B -001	01/08/24	01/19/24
GMAW-B -002	02/05/24	02/16/24
GMAW-B-003	03/05/24	03/16/24
GMAW-B -004	04/02/24	04/13/24
GMAW-B -005	04/30/24	05/11/24
GMAW-B -006	05/28/24	06/08/24
GMAW-B -007	06/25/24	07/06/24
GMAW-B -008	07/23/24	08/03/24
GMAW-B-009	08/20/24	08/31/24
GMAW-B -010	09/17/24	09/28/24
GMAW-B -011	10/15/24	10/26/24
GMAW-B -012	11/12/24	11/30/24
GMAW-B -013	12/17/24	01/11/25
GMAW-B -014	01/28/25	02/08/25
GMAW-B -015	02/25/25	03/08/25
GMAW-B -016	03/25/25	04/05/25
GMAW-B -017	04/22/25	05/03/25
GMAW-B -018	05/20/25	05/31/25
GMAW-B -019	06/17/25	06/28/25



SS WELDING BY SMAW



GMAW BASIC WELDING

GMA016 GAS METAL ARC WELDING ADVANCED
TUITION \$650.00 ,1 week, 35 clock hours, Book
Fees \$15.00

GMA013 GAS METAL ARC WELDING PIPE
TUITION \$650.00, 1 week, 35 clock hours ,Book
Fees \$15.00

Course code	Start Date	End Date
GMAW-AD -001	01/08/24	01/19/24
GMAW-AD -002	02/05/24	02/16/24
GMAW-AD -003	03/05/24	03/16/24
GMAW-AD-004	04/02/24	04/13/24
GMAW-AD -005	04/30/24	05/11/24
GMAW-AD -006	05/28/24	06/08/24
GMAW-AD -007	06/25/24	07/06/24
GMAW-AD -008	07/23/24	08/03/24
GMAW-AD -009	08/20/24	08/31/24
GMAW-AD -010	09/17/24	09/28/24
GMAW-AD-011	10/15/24	10/26/24
GMAW-AD-012	11/12/24	11/30/24
GMAW-AD -013	12/17/24	01/11/25
GMAW-AD -014	01/28/25	02/08/25
GMAW-AD -015	02/25/25	03/08/25
GMAW-AD -016	03/25/25	04/05/25
GMAW-AD -017	04/22/25	05/03/25
GMAW-AD -018	05/20/25	05/31/25
GMAW-AD -019	06/17/25	06/28/25

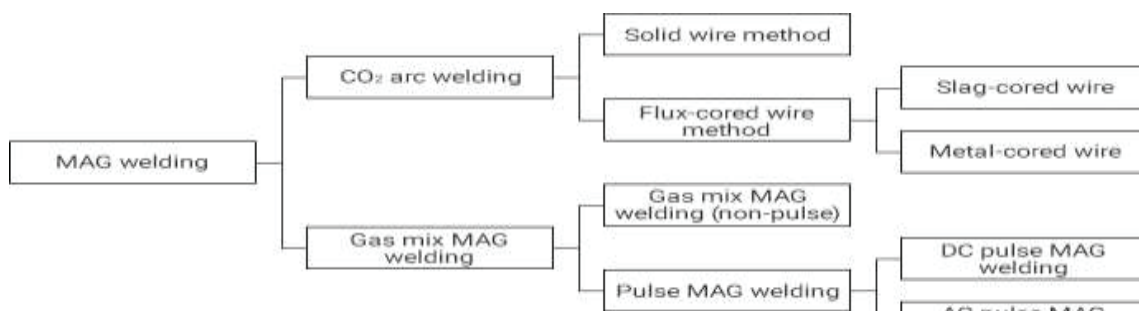
Course code	Start Date	End Date
GMAW-P -001	01/08/24	01/19/24
GMAW-AD -002	02/05/24	02/16/24
GMAW-AD -003	03/05/24	03/16/24
GMAW-AD-004	04/02/24	04/13/24
GMAW-AD -005	04/30/24	05/11/24
GMAW-AD -006	05/28/24	06/08/24
GMAW-AD -007	06/25/24	07/06/24
GMAW-AD -008	07/23/24	08/03/24
GMAW-AD -009	08/20/24	08/31/24
GMAW-AD -010	09/17/24	09/28/24
GMAW-AD-011	10/15/24	10/26/24
GMAW-AD-012	11/12/24	11/30/24
GMAW-AD -013	12/17/24	01/11/25
GMAW-AD -014	01/28/25	02/08/25
GMAW-AD -015	02/25/25	03/08/25
GMAW-AD -016	03/25/25	04/05/25
GMAW-AD -017	04/22/25	05/03/25
GMAW-AD -018	05/20/25	05/31/25
GMAW-AD -019	06/17/25	06/28/25



GMAW ADVANCED WELDING



GMAW PIPE WELDING



FCAW 015 FLUX CORED ARC WELDING
TUITION \$850.00, 2 weeks ,70 clock hours,
Book Fees \$25.00

WEL530 WELDABILITY OF METALS, FERROUS & NONFERROUS
TUITION \$650.00, 1 week ,35 clock hours ,
Book Fees \$45.00

Course code	Start Date	End Date
FCAW -001	01/08/21	01/19/21
FCAW -002	02/05/21	02/16/21
FCAW-003	03/05/21	03/16/21
FCAW-004	04/02/21	04/13/21
FCAW-005	04/30/21	05/11/21
FCAW-006	05/28/21	06/08/21
FCAW-007	06/25/21	07/06/21
FCAW-008	07/23/21	08/03/21
FCAW -009	08/20/21	08/31/21
FCAW-010	09/17/21	09/28/21
FCAW-011	10/15/21	10/26/21
FCAW-012	11/12/21	11/30/21
FCAW-013	12/17/21	01/11/19
FCAW -014	01/28/22	02/08/22
FCAW-015	02/25/22	03/08/22
FCAW-016	03/25/22	04/05/22
FCAW-017	04/22/22	05/03/22
FCAW-018	05/20/22	05/31/22
FCAW-019	06/17/22	06/28/22

Course code	Start Date	End Date
WMF-NF -001	01/08/21	01/19/21
WMF-NF -002	02/05/21	02/16/21
WMF-NF-003	03/05/21	03/16/21
WMF-NF-004	04/02/21	04/13/21
WMF-NF-005	04/30/21	05/11/21
WMF-NF-006	05/28/21	06/08/21
WMF-NF-007	06/25/21	07/06/21
WMF-NF-008	07/23/21	08/03/21
WMF-NF-009	08/20/21	08/31/21
WMF-NF-010	09/17/21	09/28/21
WMF-NF-011	10/15/21	10/26/21
WMF-NF-012	11/12/21	11/30/21
WMF-NF-013	12/17/21	01/11/19
WMF-NF -014	01/28/22	02/08/22
WMF-NF-015	02/25/22	03/08/22
WMF-NF-016	03/25/22	04/05/22
WMF-NF-017	04/22/22	05/03/22
WMF-NF-018	05/20/22	05/31/22
WMF-NF-019	06/17/22	06/28/22



METALS

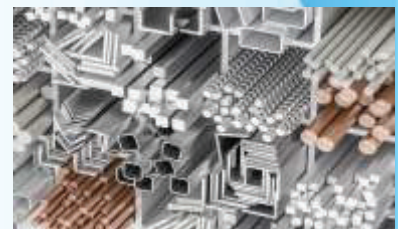
- The metals, which are used in construction, mainly divided into two groups.

- FERROUS METALS**

- Cast Iron
- Wrought Iron
- Steel

- NONFERROUS METALS**

- Aluminium
- Copper
- Lead
- Zinc
- Tin



INFORMATION AND POLICIES FOR TRAINING

VISITS

Visitors are welcome anytime throughout the year. Please call: 0776-98-33-65 for an appointment to see our facilities, discuss enrollment and schedule courses. All visitors must go to the main office and sign-in upon arrival. Tours can also be scheduled through our website www.sebinstitute.com. Cameras are not allowed during visits to the Institute.

APPLICANT INFORMATION

Applicants must be 18 and above. If you are under 18, you must have a letter of consent from your parents or guardian and must sign the Enrollment Agreement jointly with parent, guardian, or guarantor. You must be in good physical condition and be able to understand and speak English. You should have average use of at least one hand and one arm. You should be capable of dealing with the physical requirements in the welding profession such as lifting and necessary body motions. You should have good eyesight.

We recommend that you have your vision tested and corrected, if necessary, before starting school. Certain applicants with learning and/or physical disabilities may not be accepted for enrollment due to the technical and physical rigor of the welding programs. Individuals with a pacemaker or defibrillator are restricted from entering the welding labs and other high voltage areas due to the potential risk of electric shock. A high school diploma is preferred but not necessary for individual courses. However, you must have a high school diploma or equivalent eligible for the **Combination Structural & Pipe Welding Program or Structural Welding Program**.

APPLICATION FOR ADMISSIONS

Before completing the agreement/ enrollment form, give careful consideration to the welder job market and to your personal objectives for attending welding training. This will insure that the courses you select meet your personal goals.

1. Contact the Institute for guidance in setting your objectives and selecting your courses, if necessary. Call 0776-98-33-65.
2. Read and complete the agreement / enrollment form. Refer to the Welding Skill Training Schedule to select starting date preferences. Starting dates should be at least 30 days from the date of application.
3. Apply online at www.siwet.com or sign and date agreement/enrollment form and return it to the address at the top of the form along with your nonrefundable registration fee and high school diploma, certificates or final transcript.
Make your check or money order payable to SEB Institute of Welding Technology.
4. The Institute will acknowledge your enrollment by e-mail. We will also inform you of your start date and/or the dates for prerequisite testing. A list of required safety equipments and supplies is listed in the catalog. We will not issue a starting date until we receive your registration fee.
5. First shift students enrolled in the **Combination Structural & Pipe Welding and Structural Welding programs** should report at 8:00 a.m. on the Friday preceding the starting date of the first course you attend for student orientation. Hours of attendance for second shift are 10:00 a.m. to 11:30 p.m. Monday through Friday.
Second shift students should report at 2:00 p.m. on the Friday preceding the starting date of the first course you attend for student orientation. Students enrolled in individual courses will attend orientation on the first day of class – first shift will report at 7:15 a.m. and second shift will report at 3:15 p.m. Do not report to the Institute until you receive confirmation of your starting date.

REGISTRATION FEES

The SEB Institute of Welding Technology requires a \$100.00 registration fee before we can process your application. If you interrupt your training for twelve months, you must pay another \$100.00 registration fee before you can resume your training.

INTERNATIONAL STUDENTS

Admission requirements & the application process for International Students The SEB Institute of Welding Technology is authorized under law to enroll non-immigrant alien students. International students must make proper arrangements for entering the Uganda through the embassy from their country of leaving. "non-immigrant training" provisions.

International students must have sufficient funds to cover tuition, travel and living expenses. All training is conducted in English. If you require an interpreter, you are responsible for all interpreter fees.

The first step in the process is to obtain an agreement/enrollment form. This appears in the SEB Institute of Welding Technology Course Catalog or on our website at <http://www.siwet.com> You will need to complete the form and send it to the SEB Institute along with U.S. \$100.00 registration fee. You will then be enrolled and a confirmation will be sent to you by email.

CANCELLATION/REFUNDS POLICY

The \$100.00 registration fee is required with each agreement/enrollment. This registration fee is non-refundable after the five (5) day grace period and is required for each enrolled person. If training is interrupted for twelve months or more, a second payment of the registration fee is required.

WORKBOOKS & MANUALS

Workbooks and manuals are to be purchased at the Institute. Books and manuals are proprietary to SEB Institute of Welding Technology and are offered to students below competitive market rates. Book fees for the Combination Structural & Pipe Welding Program (Program 1) are \$425, and for the Structural Welding Program (Program 2) are \$335. Please see the course description and/or course schedule for book fees (\$15-\$75 each) if you are taking individual courses outside of the programs. Books received and used are not returnable. Fees for books not received and used will be refunded. Fees are subject to change without notice.

EQUIPMENT & MATERIALS

SEB Institute of Welding Technology supplies the necessary equipment for each welding station and all practice materials and filler metals (except for special applications). You are responsible for your own protective equipment and hand tools. (see pages 29-31) We include a price list for required protective equipment and supplies in this catalog. You can bring your own safety equipment and hand tools or you can purchase them at the Institute.

PREREQUISITE TESTING

If you wish to bypass our introductory courses to enter advanced training you must pass practical welding and written prerequisite tests. See individual course descriptions for tests required and cost for complete prerequisite testing for that course.

Note:

Prerequisite testing is not applicable for applicants enrolling in Program 1 Combination Structural & Pipe Welding or Program 2 Structural Welding.

Prerequisite testing is scheduled during the week prior to your starting date. Each student confirmation packet includes a schedule of prerequisite tests. All prerequisite testing must be completed prior to your start date. Any student failing a course is not allowed to do prerequisite testing in lieu of retaking the course. Any former student returning for additional training after an absence of more than one year may be required to take prerequisite testing to determine skill level. The Institute does not give credit for previous courses completed at other institutions. Only one attempt to pass any prerequisite test will be allowed.

GRADES

Each student is measured and graded in the following areas:

- **Welding Skill:** Welding skill tests are performed throughout the training. Each test is prepared and tested according to American Welding Society, (AWS) American Petroleum Institute, (API) American Society of Mechanical Engineers, (ASME) or SEB Institute of Welding Technology Standard Qualification Procedures.
- **Welding Knowledge:** The student completes written knowledge tests after each phase of training.
- **Attitude:** Students are also evaluated on safety habits, time management, care of equipment, use of materials, % attendance, promptness in completing assignments, and cooperation with instructors and other students.

Grades are awarded on a designation of 0 to 4. Students must maintain an average of 2.0 to remain in good standing.

0 to 1.9 = unsatisfactory/failed
2.0 to 4.0 = satisfactory/pass

SATISFACTORY/UNSATISFACTORY PROGRESS

Students unable to maintain a 2.0 grade point average can reschedule a course. If, by the Instructor and Director of Skill Education's judgment, your work or conduct is unsatisfactory, the Instructor may, with adequate warning, dismiss you for failure to comply with any of the school's published rules. A dismissed student may be readmitted at a later date if, in the opinion of the school staff, the student will attain adequate performance and conduct levels.

COURSE/CLASS INCOMPLETE/ WITHDRAWAL

A student may voluntarily, verbally or in writing, terminate training at any time. Any unused tuition money would be refunded according to SEB Institute of Welding Technology and Dept. of Education policies. A student who starts a class and officially withdraws before the class is thirty percent completed will receive an incomplete for the class. A student who starts a class and officially withdraws after the class is thirty percent completed will receive 0 (F) for the class. The effective date of any termination or withdrawal is the last date of attendance.

The student is required to contact the school Registrar for withdrawal procedures when dropping a course or withdrawing from the school. Students will not receive financial aid funds for the course in which credit for prior training is granted. Should a student withdraw during a course, re-entry would be at the beginning of the course. Financial aid eligibility will not be granted for that course when the student retakes it. Any student placed on financial aid probation for failure to meet the satisfactory progress standards established by the Institute due to mitigating circumstances may submit a written appeal describing the circumstances to the Director of Skill Education of SEB Institute of Welding Technology. The Director of Skill Education, in conjunction with the Financial Aid Officer, will notify the student within two weeks of acceptance or rejection of the appeal.

COURSE REPEAT

Students will be allowed to reschedule a class no more than once during the period of the program. Course repeats will be taken at the individual course tuition rate. Students failing the same course twice will be dismissed from the Institute. The Institute reserves the right to make exceptions to this policy based on a review of individual circumstances.

Classes that must be repeated will count in the calculation of hours attempted and completed hours earned if the student receives a passing grade for the repeated classes. Course incomplete and noncredit remedial courses have no effect upon the satisfactory progress standards.

ACCREDITED PROGRAM GRADUATION POLICY

To graduate from a program, the student must successfully complete all required courses, maintaining a 2.0 grade point average, meet all financial obligations, and must complete the program within a specified time frame. Completion time shall not exceed 1.5 times the normal number of weeks/clock hours specified, based on actual attendance. Maximum completion times are as follows:

Combination Structural & Pipe Welding Program

(Program 1), within 57 weeks/1995.0 clock hours

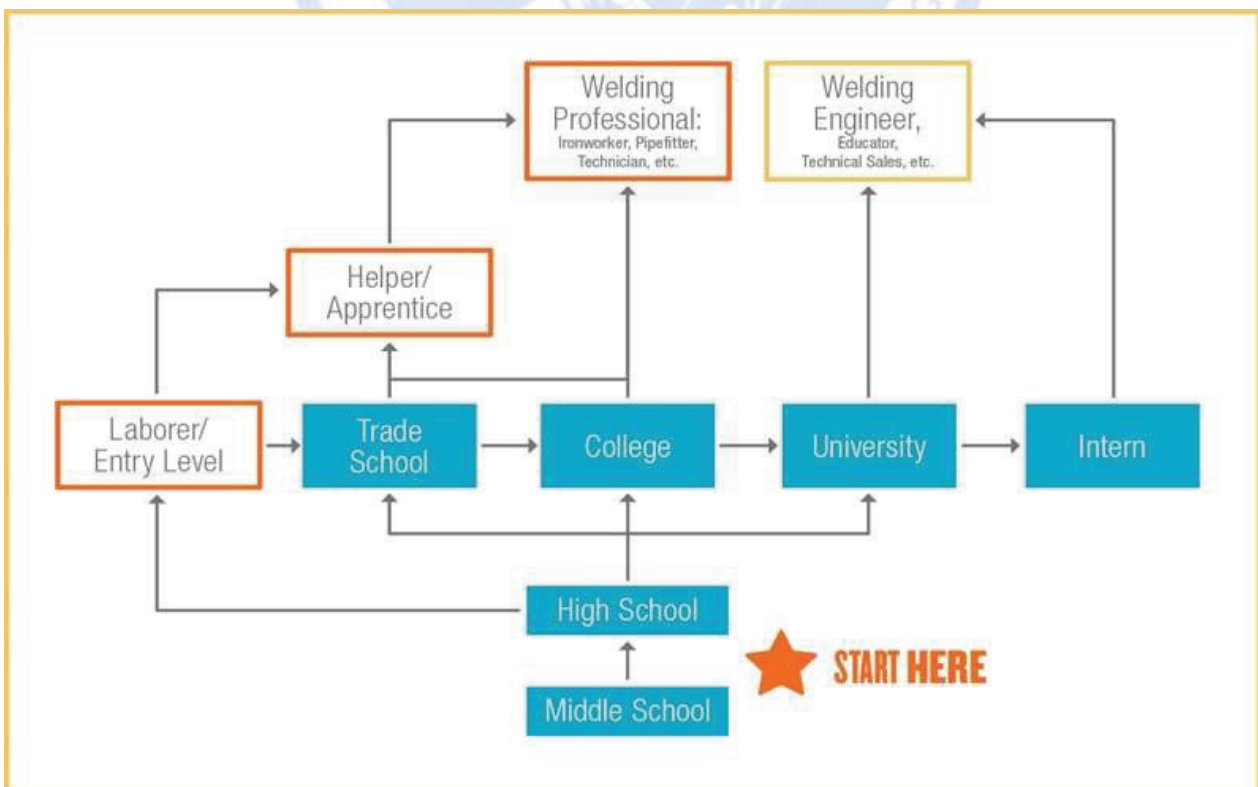
Structural Welding Program

(Program 2), within 34.5 weeks / 1207.5 clock hours Progress will be measured each time that a student is required to reschedule a course. A student who exceeds the 1.5 times the normal number of weeks/clock hours will lose eligibility for Title IV aid.

COURSE GRADE RECORDS/CERTIFICATES/DIPLOMAS

Students receive a grade record for each course/class in which they participate. Each course/class grade is based on skill, knowledge and attitude. Upon successful completion of the Combination Structural & Pipe Welding Program or the Structural Welding Program, the student will receive a diploma. Students successfully completing individual skill courses/classes will receive a certificate of completion. The certificate and diploma displays the number of Continuing Education Units earned

WELDING TRAINING PATHWAY



SKILL TRAINING AGREEMENT/ENROLLMENT FORM EFFECTIVE JANUARY 1, 2021

Please read the entire form before completing. Fill out and sign the agreement/enrollment form. **Send the agreement/enrollment form with the \$100.00 registration fee at least 30 days before your desired start date to: SEB INSTITUTE OF WELDING TECHNOLOGY, Plot 211, Kayunga Gombe B Wakiso Hoima Road, E-MAIL: sebiwt@yahoo.com**

The \$100.00 registration fee is separate and is not part of any course tuition fee.

When you are accepted, the Institute will confirm your starting date.

NOTE: If you are enrolling in a Program (38 or 23 weeks), a copy of your high school diploma, a final transcript, is required.

The Programs are listed in the Course Catalog. Tuition and information for comparable programs can be obtained from the institute

Name _____ Social Security Number _____
 First Name _____ Middle Initial _____ Last _____
 Street _____ Area Code & Telephone _____
 City _____ State _____ Zip Code _____ Country _____
 Date of Birth _____ M / F _____ Military Veteran ___ Y ___ N

School Record	Years Attended:	Graduated? ___ Y ___ N	Some prior college _____
Years Attended:	Name of JVS/Career Ctr:	GED? ___ Y ___ N	Associates Degree _____
Name of High School:		Date Completed: _____	Bachelor's Degree _____
			Master's Degree _____

International Students,

Please provide Country or Nationality _____ Country of Birth _____

Employed by: _____ Full Time/ Part Time(F/P) _____

Address _____ Area Code _____
 &Telephone _____

City _____ State _____ Zip Code _____

Type of Job: _____ Weld related /Other, Specify: _____

I wish to enroll in the Program or course(s) checked below:

Course Codes: _____

Combination Structural & Pipe Welding (Program 1)	Book fees	Tuition	Total Projected cost
38 weeks , 1330 clock hours	\$425.00	\$16,880.00	\$17,430.00

\$100 with enrollment, Payment/Term 1 - \$4,232, Payment/Term 2 - \$3,807, Payment/Term 3 - \$3,807, Payment/Term 4 - \$3,807, Payment/Term 5 - \$1,652.

Structural Welding (Program 2)	Book fees	Tuition	Total Projected cost
23 weeks, 805 clock hours	\$335.00	\$10,210.00	\$10,670.00

\$100 with enrollment, Payment/Term 1 - \$4,139, Payment/Term 2 - \$3,804, Payment/Term 3 - \$2,602.

Code	Course Unit	Weeks	Time (Hrs)	Reg fees \$	Tuition fees \$
WTB027	Welding Technology & Blueprint Reading	2	70	\$ 45.00	\$ 850.00
WTB028	Advanced Blueprint Reading	2	70	\$ 75.00	\$ 900.00
OAW001	Oxyacetylene Welding & Cutting	2	70	\$ 15.00	\$ 850.00
SMA002	Shielded Metal Arc Welding Basic	4	140	\$ 25.00	\$ 1,530.00
SMA003	Shielded Metal Arc Welding Structural Advanced	4	140	\$ 25.00	\$ 1,530.00
SMA006	Shielded Metal Arc Welding 6" Pipe 2G & 5G Uphill	4	140	\$ 15.00	\$ 1,630.00
SMA106	Shielded Metal Arc Welding 6" Pipe Uphill	2	70	\$ 15.00	\$ 920.00
SMA107	Shielded Metal Arc Welding 2" Pipe Uphill	2	70	\$ 15.00	\$ 920.00
SMA007	Shielded Metal Arc Welding Pipe Downhill	2	70	\$ 15.00	\$ 1,025.00
PLF026	Pipe Layout for Pipe fitters & Welders	2	70	\$ 35.00	\$ 1,025.00
GTA008	Gas Tungsten Arc Welding	2	70	\$ 25.00	\$ 850.00
GTA10 9	Gas Tungsten Arc Welding Stainless & Titanium	1	35	\$ 15.00	\$ 700.00
GTA108	Gas Tungsten Arc Welding 2" Pipe	2	70	\$ 15.00	\$ 920.00
GTA009	Gas Tungsten Arc/Shielded Metal Arc Welding 6" Pipe	4	140	\$ 15.00	\$ 1,630.00
GMA011	Gas Metal Arc Welding Basic	2	70	\$ 25.00	\$ 850.00
GMA016	Gas Metal Arc Welding Advanced	1	35	\$ 15.00	\$ 650.00
GMA013	Gas Metal Arc Welding Pipe	1	35	\$ 15.00	\$ 650.00
FCA015	Flux Cored Arc Welding	2	70	\$ 25.00	\$ 850.00
WEL530	Weldability of Metals, Ferrous & Nonferrous	1	35	\$ 45.00	\$ 650.00
MDS017	Manufacturing Designing by Solid works	2	70	\$ 25.00	\$950.00

NOTE: Program 1 and Program 2 (page 7 of Course Catalog) are required for participation in Student Loan Program. Only Program 1 and Program 2 are approved by ACCSC and fall within the school's accredited scope and the remainder of the training offered does not fall within the school's accredited scope.

***Registration, tuition fees, and book fees are subject to change without notice. **Equipment fees are not included in tuition cost. The equipment list in course catalog (page 16 of Course Catalog) provides cost if purchased at SEB Institute of Welding Technology.**

The SEB Institute of Welding Technology does not and will not discriminate on the basis of disability, race, color, religion, sex, national origin, or age, regarding admission or access to its programs and activities. A \$100.00 registration fee is required with each agreement/enrollment. This registration fee is non-refundable after five (5) days of signing an enrollment agreement and is required for each enrolled person. If training is interrupted for twelve months or more, a second payment of the registration fee is required

This entire form constitutes the agreement -- please be sure this agreement is signed prior to submitting.

Student Sign:.....

Parent/Guardian Sign:.....

Starting date request (See Skill Training Schedule in Course Catalog) Preferred Shift

1st choice Mo. _____ Day _____ Yr. _____ 2nd choice Mo. _____ Day _____ Yr. _____ 1st 2nd
I acknowledge that I/we have a copy of this agreement. I have enclosed my \$100.00 registration fee

I understand that if I cancel or delay my training after 5 days from the date when I signed the agreement/enrollment form, or fail to arrive on my confirmed date, the Institute will retain the \$100.00 registration fee. I agree to be bound by the provisions of this agreement/enrollment form upon acceptance by the Institute.

Intellectual Property. All PowerPoint® presentations, videos, tests and class materials are the intellectual property of SEB Institute of Welding Technology. I will not copy, photograph or visually record any intellectual property of SEB Institute of Welding Technology. I understand that books distributed in class are subject to copyright laws and I will obey those laws.

Liability release. While visiting or attending classes at SEB Institute of Welding Technology, I agree that SEB Institute of Welding Technology is to be held absolutely free from all claims for injury that may be sustained by my person while I am on their premises.

Consent to receive documents electronically. I authorize the SEB Institute of Welding Technology, to deliver all documents including payment schedules, class schedules, financial aid and tax forms to me electronically through the online student portal or email. The student portal can be accessed by the student from SEB Institute of Welding Technology's website at www.siwet.com

Authorization to release information of school records. I authorize the SEB Institute of Welding Technology, to release information about my school record. Such information may include date of birth, address, phone number, dates of attendance and graduation, continuing education units, grades, course(s), punctuality, and general comments.

Photo release: I agree that any picture or photograph supplied to and/or taken by the SEB Institute of Welding Technology shall be and remain the property of the SEB Institute of Welding Technology. The SEB Institute of Welding Technology may use these materials in its entirety or in part. The materials may be used in various forms of media, including print, video, or audio.

Signed _____ Date: _____

Parent, Guardian (if under 18) or official company representative Date:-----
Student Email address _____

How or from whom did you originally hear about SEB Institute of Welding Technology?
FOR SEB INSTITUTE OF WELDING TECHNOLOGY USE ONLY - ENROLLMENT CONFIRMATION

You have been confirmed for:

Month _____ Day _____ Year _____ Signature _____ Date _____

SIWET WELDER ENTRY LEVELS, AS PER AWS STANDARDS

COMPREHENSIVE COURSES:

1. **Welding Personnel: Level I - Entry Welder In accordance with AWS QC10:** Specification for Qualification and Certification of Level I—Entry Welder.

1.1 **Level I Entry Welder Definition.** An individual employed in this position is considered to possess a prerequisite amount of knowledge, attitude, skills and habits required to perform routine, predictable, repetitive, and procedural tasks involving motor skills, and limited theoretical knowledge while working under close supervision.

1.2 **Education. The Level I - Entry Welder training** is accomplished through secondary, post secondary, vocational-technical schools, junior colleges, universities, apprenticeship and employer-based welder training programs. Sufficient foundation skills such as reading, writing, math, science (Physics and Chemistry), communication and employability, are required to complete prerequisite welding related knowledge and skills training.

1.3. **Technical Training Period cover timelines:** 420 Hours

1.4 **Welding Personnel: Level I -Entry Welder industry Definition: as (Welder Helper)**

2. **Welding Personnel: Level II -Advanced Welder In accordance with AWS QC11:** Specification for Qualification and Certification of Level II—Advanced Welder.

2.1 **Level II- Advanced Welder Definition.** An individual employed in this position is considered to possess a prerequisite amount of knowledge, attitude, skills and habits required to perform proceduralized tasks under general supervision, and complex tasks and use of theoretical knowledge and involving motor skills under close supervision.

2.2 **Prerequisite Knowledge and Skills.** Possess the requisite Knowledge and skill levels of entry level welder as defined by AWS QC10, Specification for Qualification and Certification for Entry level Welders and Detailed in AWS EG2.0. Must have past AWS QC10 Entry Level I

2.3 **Technical Training Period cover timelines:** 420 Hours.

2.4 **Welding Personnel: Level II - Advanced Welder industry Definition: as (Tack Welder)**

3. **Welding Personnel: Level III - Expert Welder In accordance with AWS QC12:** Specification for Qualification and Certification of Level III—Expert Welder.

3.1. **Level III- Expert Welder Definition.** An individual employed in this position is considered to possess a prerequisite amount of knowledge, attitude, skills and habits required to perform autonomously, including the selection and use of appropriate techniques and Equipments complex tasks and use of theoretical knowledge and involving motor skills under minimum supervision.

3.1 **Prerequisite Knowledge and Skills.** Personnel desiring entrance into AWS Level III expert welder certification Program shall possess necessary documentation of Training, or demonstrate the ability to pass workmanship qualification, written examination and performance qualification accordance with the requirement of AWS QC10, Specification for Qualification and Certification for Entry level Welders and AWS QC II. Must have past AWS QC10 Specification for Qualification and Certification for level II - Advanced welder

3.2 **Technical Training Period cover timelines:** 420 Hours.

3.3 **Welding Personnel: Level III— Expert Welder industry Definition: as (Industrial Welder)**

PATHWAY OF WELDING CAREERS: Certified as per AWS Industrial standards

1.1. Welding Technician

Welding Technicians use their extensive knowledge of joining processes, materials, welding equipment, welding techniques, and standards to assist welding engineering personnel with the development, application, evaluation, and documentation of welding techniques, equipment, and processes used to manufacture welded products according to relevant codes. Welding technicians may also play a role in product engineering and research and development.

Responsibilities

- ❖ Set-up and operate welding and joining processes for lab tests, and perform welding experiments
- ❖ Work in cross-functional engineering teams to develop and test new products
- ❖ Conduct training programs and field service activities for clients
- ❖ Support related manufacturing requirements
- ❖ Interpret welding related requirements and troubleshoot welding problems

Education & Training

Education and training that can lead to a successful career may include:

Minimum Education

High school diploma or equivalent

Recommended Education

Certificate in welding, metals fabrication, machining, robotic welding, etc.

Preferred Education

Associate degree in welding, metals fabrication, engineering technology, etc.

Advanced Education

Bachelor's degree in welding, material science, welding engineering, etc.

Recommended Training

Welding- related work experience

Advanced Training

Apprenticeship program

Recommended Certification

AWS Certified welder

2.2. Welder Fabricator

Metal fabrication is the process of creating or building a usable product out of metal. Raw materials are bent, shaped, welded or cut to complete the final product. All of the tasks during the fabrication process, from start to finish, are completed at the hands of a welder fabricator. Many welder fabricators possess the skills, knowledge, and passion to fabricate custom cars, motorcycles, metal art, and much more!

Responsibilities

A typical welder fabricator is tasked with constructing a variety of metal objects. Metal construction often requires more than just welding. Welder fabricators could be responsible for:

- ❖ Machining fabrication materials and components
- ❖ Fitting, setting, and installing fabricated structures
- ❖ Cutting and welding with a variety of processes
- ❖ Metal forming, bending, and finishing
- ❖ Repair, design, layout, and estimation
- ❖ Overseeing shop hands or helpers
- ❖ Many other industry/trade specific responsibilities

Education & Training

There are many ways to start a career as a welder fabricator. Like every career, education and training lead to further success.

Minimum Education

High school diploma or equivalent.

Advanced Education

Associate degree in welding, metals fabrication, machining, etc.

Recommended Education

Certificate in welding, metals fabrication, machining, etc.

Recommended Training

Related work experience

Advanced Training

Apprenticeship program

Recommended Certification

AWS Certified Welder or Welding Fabricator

Essential Skills

- ❖ Math
- ❖ Problem solving
- ❖ Critical thinking
- ❖ Blueprint reading

Work Environment

Primarily in a shop with a variety of fabrication equipment. Occasional field work and travel may be required.

3.3 Welding Engineer

Welding Engineers employ their extensive knowledge of physics, engineering, metallurgy, materials, welding, and standards to design, examine, and evaluate welds as well as to plan, supervise, and document welding operations in accordance with relevant codes, contracts or drawings. The role of the Welding Engineer is critical to the integrity of the vast number of buildings, vehicles, machinery and products that require welds.

Responsibilities

- ❖ Investigate welding related issues to improve product performance and increase productivity
- ❖ Design welded parts, assemblies and structures such as buildings, pressure vessels, and pipelines
- ❖ Develop repair procedures and assess flaws to determine the fitness-for-service of structures
- ❖ Develop standards, materials, weld joint design, and welding processes
- ❖ Develop welding process procedure qualification, supplier qualification, and product testing
- ❖ Troubleshoot welding problems and provide corrective solutions
- ❖

Education & Training

Education and training that can lead to a successful career may include:

Recommended Education

Bachelor's degree in welding engineering, welding engineering technology, etc.

Advanced Education

Master's or Ph.D. in welding engineering, metallurgy, material science, etc.

Recommended Training

Related welding and fabrication work experience

Advanced Training

Apprenticeship program

Recommended Certification

AWS Certified Welding Inspector, AWS Certified Welding Engineer

Advanced Certification

P. E., P.Eng. License
Q.

Essential Skills

- ❖ Organized and detail oriented
- ❖ Highly motivated and self-directed
- ❖ Analytical thinker and problem-solver
- ❖ Excellent communication, writing, and computer skills
- ❖ Ability to create, design, and analyze blueprints and drawings

Work Environment

Many welding engineers work in a mix of environments both inside and outside of the office that may include manufacturing facilities, testing labs, and active construction sites. Frequent travel may be required.

4.4. Welding Technical Sales

Technical Sales Representatives serve a very important function in the welding industry. They are the conduit between manufacturers & distributors and their customer base. They relay information concerning new technologies that can improve the productivity, reliability, and quality of welding processes. Technical sales representatives also offer manufacturers invaluable technical support and guidance in the appropriate application of welding technologies.

Responsibilities

- ❖ Provide welding consumable and equipment solutions or recommendations to clients
- ❖ Prepare and submit bid packages including proposal and any other required documents
- ❖ Train and mentor essential personnel on welding machines, products, and welding consumables
- ❖ Troubleshoot welding related issues and apply effective solutions

Education & Training

Education and training that can lead to a successful career may include:

Minimum Education

High school diploma or equivalent

Advanced Education

Associate degree in welding, metals fabrication, engineering technology, etc.

Recommended Education

Certificate in welding, metals fabrication, business and sales, etc.

Preferred Education

Bachelor's degree in welding, material science, welding engineering, etc.

Advanced Training

Apprenticeship program

Recommended Training

Related welding or sales work experience

Recommended Certification

AWS Certified welder, AWS Certified Welding Sales Representative

Essential Skills

- ❖ Organized and detail oriented
- ❖ Highly motivated and self-directed
- ❖ Effective written and oral communication
- ❖ Capable of demonstrating the use of welding equipment and supplies
- ❖ Practice appropriate sales ethics, determine customer needs, and provide customer support

Work Environment

Many technical sales representatives work in a mix of environments both inside and outside of the office that may include manufacturing facilities, testing labs, and active construction sites. Frequent travel may be required.

5.5. Welding Research Scientist

SIWET...advancing the future careers of welding

Welding Research Scientists are professionals who specialize in the joining of metals such as steel, aluminum, iron, and copper. They often work with unique metal alloys, where the research and studies they conduct are applied to help solve problems, develop new methods, and broaden the overall application of welding. A welding research scientist generally works in a lab environment, where all necessary equipment can be utilized to properly conduct testing and research for welding applications.

Responsibilities

- ❖ Review peer research and journals involving current discoveries in the field
- ❖ Collect field and control samples of media and metals in order to perform analyses
- ❖ Identify and report on welding/joining issues
- ❖ Consult with recommendations to correct, mitigate, or improve welding processes
- ❖ Prepare and aggregate reports containing highly technical data to internal and external stakeholders

Education & Training

Education and training that can lead to a successful career may include:

Minimum Education

Master's degree in welding engineering, material science, metallurgy, etc.

Recommended Education

Doctorate degree in welding engineering, material science, metallurgy, etc.

Advanced Education

Strong publication record of peer-reviewed journal papers

Recommended Training

Experience with collaborative research among other centers/organizations

Advanced Training

Experience using laboratory welding equipment for testing and research

Essential Skills

- ❖ Organized and detail oriented
- ❖ Ability to use laboratory welding equipment for testing and research
- ❖ Ability to communicate, present, and publish research
- ❖ Flexible and able to work in a team environment
- ❖ Logical and critical thinker
- ❖ Strong analytical thinking and problem solving skills

Work Environment

Many welding research scientists work in a mix of environments that may include research facilities, testing labs, and educational institutions. Frequent travel may be required.



6.6 .Welding Educator

Welding Educators - also known as welding instructors, trainers, or teachers - educate students in the theories and practical methods of welding. Welding educators use their conceptual and practical understanding of welding and welding instruction in order to teach a wide range of welding knowledge and skills, including, but not limited to: welding techniques, positioning, fit-up, equipment set-up, welding theory, metallurgy and weldability of metals, print reading, utilizing welding codes and standards, and even inspection of welds.

Responsibilities

- ❖ Develop new curricula, course content, and methods of welding instruction
- ❖ Prepare and maintain attendance rosters, student grades, book orders, and welding shop
- ❖ Participate in task forces designed to promote welding and welding education
- ❖ Attend seminars, conferences, and courses to keep abreast of developments in the field
- ❖ Collaborate with administration, faculty, and community

Education & Training

Education and training that can lead to a successful career may include:

Minimum Education

Associate degree in welding, metals fabrication, engineering technology, etc.

Advanced Education

Certificate in welding, metals fabrication, machining, vocational education, etc.

Preferred Education

Bachelor's degree in welding, vocational education, welding engineering, etc.

Recommended Training

Related welding work experience

Advanced Training

Apprenticeship program

Recommended Certification

AWS Certified Welder, AWS Certified Welding Educator, AWS Certified Welding Inspector

Advanced Certification

State or national teaching requirement

Essential Skills

- ❖ Organized and detail oriented
- ❖ Proficient computer skills and adaptable to emerging technologies
- ❖ Highly motivated, self-directed, and strong leader
- ❖ Effective written and verbal communicator to student and industry audiences
- ❖ Knowledgeable of weld discontinuities, materials, weldability characteristics, and filler metals

Work Environment

Welding educators primarily work in the classroom and shop environment. Travel may be minimal or extensive given the nature of the work.

7.7. Welding Supervisor

Welding Supervisors combine management skills with an extensive knowledge of welding processes and welding economics to plan, staff, monitor, and safely deliver welding projects according to schedule and budget. These responsibilities place Welding Supervisors in a unique position to increase productivity and product quality in every industry that uses welding as a core process in the manufacturing of products.

Responsibilities

- ❖ Communicate job expectations and performance requirements to welders
- ❖ Serve as a liaison with designers, clients and other stakeholders to maximize efficiency, quality and customer satisfaction
- ❖ Initiate, coordinate and enforce production, safety, and quality systems, policies, and procedures
- ❖ Ensure that all welding meets the specialised requirements before inspection is initiated
- ❖ Ensure that welded material and consumables meet specifications

Education & Training

Education and training that can lead to a successful career may include:

Minimum Education

Associate degree in welding, metals fabrication, engineering technology, etc.

Education

Certificate in welding, metals fabrication, industrial management, etc.

Advanced Education

Bachelor's degree in welding, welding engineering, industrial/project management, etc.

Recommended Training

Related welding and management work experience

Advanced Training

Apprenticeship program

Recommended Certification

AWS Certified Welder, AWS Certified Welding Supervisor, AWS Certified Welding Inspector

Essential Skills

Organized and detail oriented

Leadership and teaching/mentoring

Optimize welding productivity and performance

Interpret welding symbols and technical drawings

Knowledge of welder and welding safety standards

Project management methodology

Work Environment

Many Welding supervisors work in manufacturing or shop environments, however some field or travel opportunities are available.

8.8. Shipfitter

Shipfitters fabricate and layout metal for building and repairing ships. They work for private companies as well as naval shipyards. A shipfitter can be tasked with building, maintaining, and repairing small boats such as towboats and tugboats, as well as container ships, icebreakers, and ocean liners. Military Shipfitters work on aircraft carriers, tankers, and submarines.

Responsibilities

- ❖ Understand shipyard operation and safety protocol
- ❖ Fitting, setting, and installing fabricated maritime structures
- ❖ Cutting and welding with a variety of processes
- ❖ Metal forming, bending, finishing, and rigging
- ❖ Ability to weld, repair, design, and layout plate or pipe materials
- ❖ Ability to work in shop/field environments and sometimes heights

Education & Training

Education and training that can lead to a successful career may include:

Minimum Education

High school diploma or equivalent

Recommended Education

Certificate in welding, metals fabrication, machining, etc.

Advanced Education

Associates degree in welding, metals fabrication, machining, etc.

Recommended Training

Related naval or shipyard work experience

Advanced Training

Apprenticeship program

Recommended Certification

AWS Certified Welder

Essential Skills

Highly motivated and self-directed
Flexible and able to work in a team environment or independently
Physically fit and manual dexterity
Comfortable working with heights
Mechanically inclined, able to interpret blueprints, and apply math concepts

Work Environment

Shipfitters work in naval or shipyard environments; nearly all opportunities

9.9. Industrial Pipeliner

Pipeliner, also known as Pipeline Welders, join and repair tubular products and metallic pipe components and assemblies as part of the construction of buildings, vessels, structures, and stand-alone pipelines. They use a variety of welding processes and equipment, in a wide range of industrial, commercial, and construction environments. Because pipes are routinely set up in fixed positions and situated in ways that make welding difficult, pipeline welders must be well-trained and versatile. As such, they are among the most highly skilled and sought after welders.

Responsibilities

- ❖ Primary welding for the construction, maintenance, and repair of pipeline systems and assemblies.
- ❖ Cutting, dismantling, straightening, or reshaping pipe sections and components.
- ❖ Construct pipeline supports and related structures
- ❖ Perform "hot-tapping" or the welding of "live" pipelines.
- ❖ Maintenance of welding equipment, tools, and field service vehicle

Education & Training

Education and training that can lead to a successful career may include:

Minimum Education

High school diploma or equivalent

Recommended Education

Certificate in pipe welding, metals fabrication, welding, etc.

Advanced Education

Associate degree in welding, metals fabrication, pipe welding, etc.

Recommended Training

Related pipeline work experience

Advanced Training

Apprenticeship program

Recommended Certification

AWS Certified Welder

Essential Skills

- ❖ Strong mechanical and mathematical aptitude
- ❖ Adapt to changes quickly and seamlessly
- ❖ Ability to work independently and as part of a team
- ❖ Ability to work efficiently in all types of weather conditions
- ❖ Knowledge of blueprints, welding symbols, piping components, and field welding techniques

Work Environment

As a pipeliner, you should also expect to travel extensively, as pipeline construction can take place anywhere in the world; from heavy populated cities to remote high mountain deserts. Opportunities are also available in shop environments.

10.0 Industrial Pipefitter

Pipefitters are sometimes more specifically known as steamfitters or gasfitters. They fabricate, install, maintain, assemble, and repair piping systems. These systems include cooling, hydraulic, pneumatic, and high-pressure assemblies that transport water, steam, chemicals, or fuel for commercial, industrial, or marine use. In addition to welding, pipefitters often utilize a wide range of other processes throughout the course of their work, including cutting, threading, brazing, soldering, bending, and grooving.

Responsibilities

- ❖ Welding, cutting, fabricating, installing, testing, and maintaining piping systems
- ❖ Layout, bend, or alter piping components for size and fit
- ❖ Use hand tools, and power tools for cutting, dismantling, straightening, or reshaping pipe
- ❖ Inspect piping systems to test for strength or leaks
- ❖ Analyze design plans and understand building codes
- ❖ Understand piping system operations of water, gas, and/or sewer lines

Associate degree in welding, metals fabrication, pipe welding and fitting, etc.

Recommended Training

Related work experience

Advanced Training

Apprenticeship program

Recommended Certification

AWS Certified Welder

Essential Skills

- ❖ Highly motivated and self-directed
- ❖ Flexible and able to work in a team environment
- ❖ Logical and critical thinker
- ❖ Mechanically inclined and mathematical aptitude
- ❖ Proficient in print reading and layout

Education & Training

Education and training that can lead to a successful career may include:

Minimum Education

High school diploma or equivalent

Recommended Education

Certificate in pipe welding, metals fabrication, welding and fitting, etc.

Advanced Education

Work Environment

Many pipefitters work in the field on active construction sites. Opportunities are also available in shop environments.

11.0. Underwater welder

An Underwater Welder uses many common arc welding processes to weld and cut in a wide range of aquatic environments. They must use their welding know-how and intricate knowledge of diving procedures and protocol to effectively lay down strong welds, often in tight spaces and less-than-forgiving surroundings. Hyperbaric chambers and cofferdams are used for dry welding, while wet welding is performed in open waters up to several hundred feet deep.

Responsibilities

- ❖ Safe and efficient welding underwater, in a cofferdam, or other marine environment
- ❖ Perform cutting, fitting, and rigging, to salvage sunken equipment
- ❖ Calibrate all materials and equipment for welding and diving
- ❖ Identify weld discontinuities and defects, and perform nondestructive testing.
- ❖ Survey waters of various depths for obstacles and perform underwater photography and recording

Education & Training

Education and training that can lead to a successful career may include:

Minimum Education

High school diploma or equivalent

Minimum Training

Commercial diving certification

Recommended Education

Certificate in welding, metals fabrication, machining, etc.

Advanced Education

Associate degree in welding, metals fabrication, machining, etc.

Preferred Education

Underwater welding and commercial diving program

Recommended Training

Related work experience as welder or diver's tender

Advanced Training

Apprenticeship program

Recommended Certification

AWS Certified Welder

Essential Skills

- ❖ Highly motivated and self-directed
- ❖ Prepared to adapt to a challenging work environment
- ❖ Flexible and able to work in a team environment
- ❖ Organized and detail oriented
- ❖ Focused under pressure
- ❖ Maintain physical strength and superior fitness

Work Environment

Underwater welders work in a variety of industries that are integrated within aquatic environments. Nearly all opportunities exist along the coastal regions and may require travel.



12.0. Ironworker

Ironworkers, sometimes referred to as The Cowboys of the Sky, erect and dismantle the metal framework of a wide range of structures, from bridges and antennas to skyscrapers and stadiums. Ironworkers also often erect the cranes and derricks that are used in the construction of these structures, and install and repair the catwalks, elevators, ladders, fire escapes, railings, and fences for commercial and industrial structures. The type of work that an Ironworker performs can usually be categorized into one of the following designations: reinforcing, structural, and ornamental.

Responsibilities

- ❖ Apply multiple welding techniques, metalworking concepts, and construction processes.
- ❖ Work at considerable heights safely and efficiently
- ❖ Analyze and interpret drawings, blueprints, and building codes
- ❖ Positioning and tying steel rods, bars or mesh as a support for concrete
- ❖ Erection and connecting of metal beams and columns to form structural skeleton

Education & Training

Education and training that can lead to a successful career may include:

Minimum Education

High school diploma or equivalent

Recommended Education

Certificate in welding, metals fabrication, structural welding, etc.

Advanced Education

Associate degree in welding, metals fabrication, structural welding, etc

Recommended Training

Related structural steel fabrication or steel erection work experience

Advanced Training

Apprenticeship program

Recommended Certification

AWS Certified Welder

Essential Skills

- ❖ Highly motivated and self-directed
- ❖ Flexible and able to work in a team environment
- ❖ Physically fit and manual dexterity
- ❖ Comfortable working with heights
- ❖ Mechanically inclined

Work Environment

Many ironworkers work in the field on active construction sites. Opportunities also exist in shop environments.



13.0 Boiler maker

Boilermakers fabricate, install, maintain, and repair boilers, tanks, vats, pressure vessels, and other structures. These structures generate power, provide heat, and function as storage containers for oil, industrial chemicals or other liquids. Boilermakers primarily use welding and cutting equipment, but can also utilize tools to fuse, separate, and shape metal plates, sections, and components. Boilermakers contribute to the building, repair or maintenance of structures, including blast furnaces, bridges, rocket boosters, elevators, dams, and locomotives.

Responsibilities

- ❖ Welding of small diameter tube/pipe
- ❖ Fabrication, installation, testing, and maintenance of boilers, tanks, vats, and pressure vessels
- ❖ Lay out, assembly, and tear down of scaffolding, cranes or other support structures.
- ❖ Installing auxiliary mechanisms, such as tubes, fittings, valves, and boiler instrumentation
- ❖ Conducting inspections and preparing preventative maintenance reports

Education & Training

Education and training that can lead to a successful career may include:

Minimum Education

High school diploma or equivalent

Recommended Education

Certificate in welding, metals fabrication, pipe welding, etc.

Advanced Education

Associate degree in welding, metals fabrication, pipe welding, etc.

Recommended Training

Related boiler or pipe welding work experience

Advanced Training

Apprenticeship program

Recommended Certification

AWS Certified Welder

Essential Skills

- ❖ Highly motivated and self-directed
- ❖ Flexible and able to work in a team environment
- ❖ Mechanically inclined and manual dexterity
- ❖ Able to work in harsh weather (heat, cold, snow, rain, etc.)
- ❖ Able to read blueprints, analyze design plans, and understand building codes

Work Environment

Many boilermakers work in the field on active construction sites. Often extensive travel is required, but opportunities also exist in shop environments.



14.0 .Robotic Welding Technician

Robotic Welding Technicians are responsible for the set-up, maintenance, and operation of robotic welding equipment. Robotic welding technicians are critical to the fabrication of metallic parts or assemblies through welding by the means of a robotic machine. Some operators are responsible for designing and programming the robot, maintaining and troubleshooting welding robots, and implementing robotic welding for manufacturing and production.

Responsibilities

- ❖ Apply principles of basic welding fundamentals, symbols, and blueprints
- ❖ Identify and perform correct robotic welding parameters, welding procedures, operations and programs
- ❖ Create robotic welding programs, modify existing welding programs, and conduct welding cell cycle time calculations
- ❖ Troubleshoot and perform preventative maintenance of robotic equipment and welding equipment

Education & Training

Education and training that can lead to a successful career may include:

Minimum Education

High school diploma or equivalent

Recommended Education

Certificate in robotic arc welding, metals fabrication, automated technology, advanced manufacturing, etc.

Advanced Education

Associate degree in robotic arc welding, metals fabrication, automated technology, advanced manufacturing, etc.

Recommended Training

Related work experience on robotic welding applications

Advanced Training

Apprenticeship program
Recommended Certification
AWS Certified Robotic Arc Welder

Essential Skills

- ❖ Strong analytical thinking, problem solving, and computer skills
- ❖ Knowledgeable of automation equipment, processes, and systems
- ❖ Interpret blueprints and drawings
- ❖ Adapt to technology changes quickly and seamlessly
- ❖ Able to work independently and as part of a team

Work Environment

Many robotic welding technicians work in manufacturing or shop environments, however some field or travel opportunities are available.



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