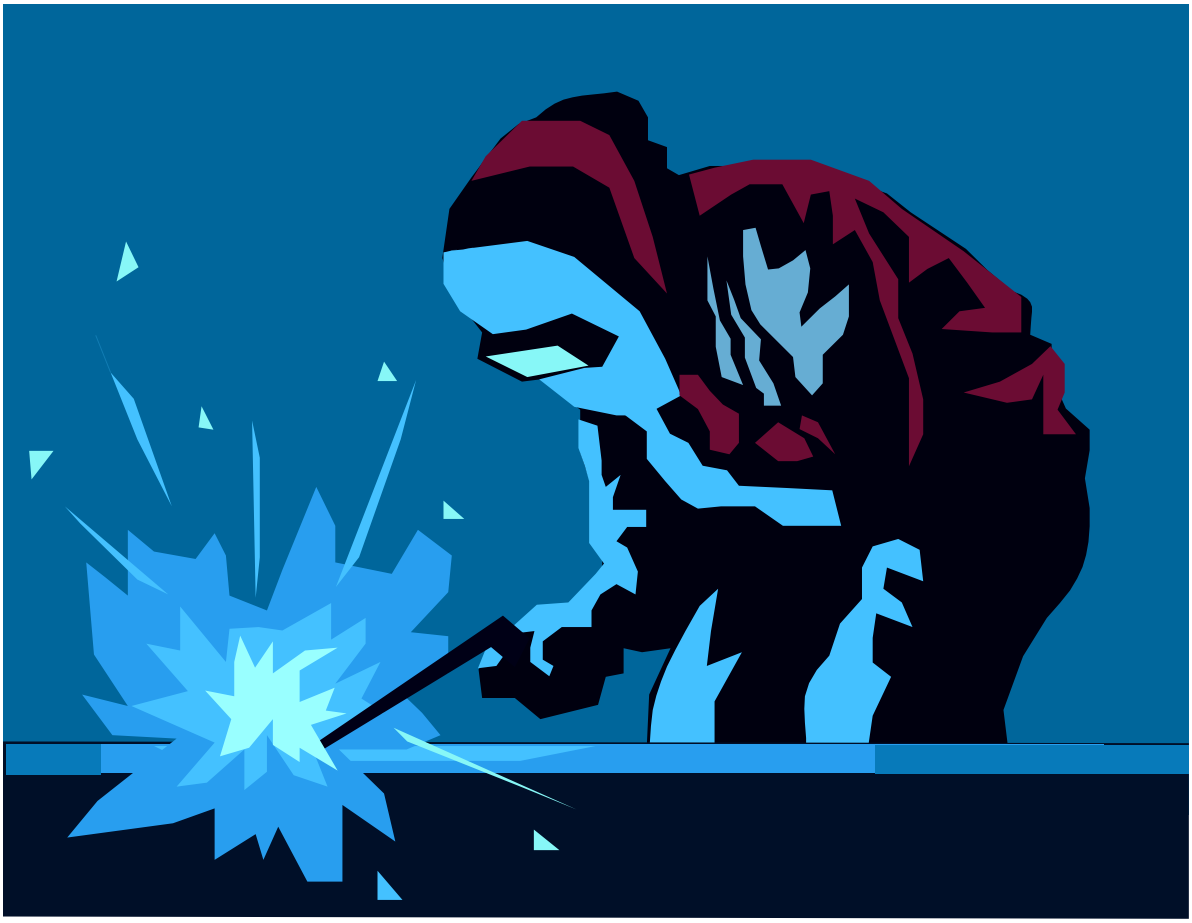

# SOUTHEAST WELDING ACADEMY, LLC

## 2020 - 2021

**Version 7**

**Email:** sewa@southeastweldingacademy.org • **Website:** southeastweldingacademy.org

**Is Approved to operate in the District of Columbia By**

**Higher Education Licensure Commission (HELC)**

## ACADEMY STAFF

**Owner/Administrator -** Delmus Nelson

**Director** – Londrea Dudley

**Admission Coordinator** – Vincent Nedd-Ludd

**Welding Instructor** – Robert Woods

**Welding Instructor** – David Delao

**Classroom Instructor** – Gary Hawkins

**Classroom Instructor** – Renee Sims

**Director of Finance** – Gettis Clair

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## A MESSAGE FROM THE FOUNDER

At Southeast Welding Academy, we believe in partnering with community and faith - based organizations, educational institutions, the government sector, and private industry to better leverage employment and economic growth opportunities for District of Columbia residents.

We understand and believe that education and training can open the doors of opportunity and raise feelings of self-worth and pride.

Our experienced instructors are dedicated to the success of our students. Our team is invested in the development of our students' comprehensive and practical work skills necessary to become a successful certified welder.

We also believe that community investment and aggressive creation of employment opportunities are key to any endeavor in revitalizing people and our city -- one person, one neighborhood at a time.

Southeast Welding Academy is a shared vision to make it happen.

Best Regards,

*Delmus Nelson*

Delmus Nelson

Founder and Administrator

## MISSION STATEMENT

Southeast Welding Academy Mission Statement

The mission of Southeast Welding Academy is to offer a quality education to produce "World Class Welders." We pledge to collaborative with partners within the Washington Metropolitan Area to enhancement our students educational experience while they work towards sustainability to ultimately become reliable employees and business owners that are able to achieve expanded levels of performance.

## OBJECTIVES

To provide training to students that is both simplified and concentrated to teach the fundamentals of welding.

To reach students actual job practices that can be used in the industry today.

To provide a supply of competent welders for the continuous growing profession.

To partner with the community to assure they are made aware of the opportunities for education and welding.

## PHILOSOPHY

We are dedicated to the principle that vocational education should be directed to the needs of the individual as well as the community at-large.

# SCHOOL CALENDAR

**Class Schedule**

| Start Date | End Date | Start Date | End Date | Start Date | End Date |
|---|---|---|---|---|---|
| December 31 | MARCH 2 | MAY 7 | JULY 6 | SEPTEMBER 10 | NOVEMBER 8 |
| JANUARY 14 | MARCH 16 | MAY 21 | JULY 20 | SEPTEMBER 24 | NOVEMBER 26 |
| JANUARY 28 | MARCH 30 | JUNE 4 | AUGUST 3 | OCTOBER 8 | DECEMBER 7 |
| FEBUARY 11 | APRIL 13 | JUNE 18 | AUGUST 17 | OCTOBER 22 | DECEMBER 21 |
| FEBUARY 25 | APRIL 27 | JULY 2 | AUGUST 31 | NOVEMBER 5 | JANUARY 4 |
| MARCH 12 | MAY 11 | JULY 16 | SEPTEMBER 14 | NOVEMBER 19 | JANUARY 18 |
| MARCH 26 | MAY 25 | JULY 30 | SEPTEMBER 28 | DECEMBER 3 | FEBRUARY 1 |
| APRIL 9 | JUNE 8 | AUGUST 13 | OCTOBER 12 | DECEMBER 17 | FEBRUARY 15 |
| APRIL 23 | JUNE 22 | AUGUST 27 | OCTOBER 26 | DECEMBER 31 | MARCH 1 |

**Holiday Schedule**

New Year's Day

Martin Luther King Holiday Observance

Presidents Day

Memorial Day

Independence Day

Labor Day

Veteran's Day

Thanksgiving Day

Christmas Day

**Hours of Operation**

Full-time students - Monday through Friday from 8:00 a.m. to 4:00 p.m.

Part-time students - Tuesday and Thursday evenings from 4:00 p.m. to 8:00 p.m.

Lunch break is a 60-minute period to be scheduled by the Instructor for full time students only.

**Inclement Weather & Cancellation**

Southeast Welding Academy follows D.C. Public Schools closing schedules.

The administrator will make the decision for late openings or early closings due to inclement weather. An announcement will be left on the academy's recorded voice mail for decisions concerning inclement weather.

**Enrollment and Admission Process**

Southeast Welding Academy considers applicants for admission regardless of race, color, religion, national origin, sex, age, marital status, personal appearance, sexual orientation, family responsibilities, political affiliation, physical handicap, and source of income.

Potential students interested in enrolling in Southeast Welding Academy must contact the admissions office by phone or email.

**Hours of Operation:** 9:30 am. to 3:30 pm., Monday through Friday

**Phone:** 202-610-9858

**Email:** sewa@southeastweldingacademy.org

Prospective students may pick up an application for admission, print an application from the website, or request an application to be mailed or faxed.

All students are required to attend orientation at the beginning of the course. We will discuss all Southeast Welding Academy policies, requirements, and expectations.

**Entrance requirements**

- Non-refundable enrollment fee of $100
- For prospective students without a high school diploma or G.E.D., a competency assessment examination (CASAS) will be scheduled following submission of the application.
- Applicant is required to pass the competency examination with at least a score of 231 (Eight grade level).
- The academy may refuse to admit students who falsify information on the admission application.
- The academy will not consider learning credits from previous welding education.

**Job Placement**

Southeast Welding Academy is committed to assisting students to acquire the knowledge and skills that are needed to transition to a career where they can achieve economic self-sufficiency. The admission's office will post all job announcements in a central place in the academy.

Prior to completion of the program, students will meet with the instructor to develop a career placement plan. The plan will include tentative completion date, possible areas for employment and contact information for potential places for employment. Resume building and interviewing skills will be discussed with the students prior to completion of the program. The academy will host job events to introduce students to potential employers.

The admissions office will follow-up with all graduates of the program to help determine the success of the career placement plan. Data on job placement and reporting will be conducted monthly by the admission coordinator.

The Southeast Welding Academy does not guarantee employment, but we will work with our graduates up to 90 days after completion of program, with job placement assistance.

The director will report job placement data to Education Licensure Commission during the renewal process or as required.

**Facilities and Support**

Southeast Welding Academy consists of an administrative office, classroom, practicum lab area and a study/library area for students.

The classroom is conducive to learning and allows the student the opportunity to learn comfortably. The practicum/lab area offers state of the art equipment and supplies, geared to the industry and technology of welding.

The study area/library is open during academy hours and is stocked with newspapers, trade journals, periodicals, books, and audio-visual materials that will assist the student in assessing a quality education.

**ADA Compliance**

The academy will make reasonable accommodations for students with verified disabilities per the American with Disabilities Act. The student should contact the admissions office at least four weeks prior to the start of the training to discuss with accommodations may be needed. The director will serve as the ADA Coordinator.

**Fire and Safety**

Safety is paramount to the welding profession. Southeast Welding Academy is committed to evaluating hazards on a continuous basis. The academy provides related safety equipment and personal protection equipment (PPE) that must be worn during welding operations. Academy students are responsible for following all policies, procedures, and guidelines as they relate to safety. Hot work permits are used to ensure all necessary precautions are taken prior to the start of any welding activity. The academy's safety practices comply with OSHA and NFPA standards. Periodically during the training, the academy will conduct fire drills and safety checks. Students who violate safety practices are subject to dismissal from the program.

**Fire Emergency Evacuation Plan**

The facility has a fire alarm system that will be utilized to notify the occupants of a fire emergency. The fire alarm contains manual hand pulls and smoke detectors to initiate an alarm. When the alarm sounds a 3-pulse audible sound accompanied by strobe lights will notify occupants of an alarm. Since this facility contains multiple floors, the fire alarm will sound on the floor of the emergency and the floors immediately above and below. After hearing the alarm, administrative staff will assist students and staff to leave the building by the nearest and safest route. After assembly, a roll call will be done for students and staff. In any case the administrative staff will ensure that fire service is called in the event of an outbreak of fire or any other hazard.

**Smoking Policy**

Smoking is not permitted on the grounds of Southeast Welding Academy. Students discovered smoking or on the grounds of the Academy are subject to dismissal from the program.

**Academic and Training Expectation**

Southeast Welding Academy is dedicated to the success of each student and is designed to prepare graduates for successful entry into the job markets. This academic and vocational goal requires a true partnership, with commitments from enrolled students.

## Attendance/Tardiness

100% attendance is expected of all students; however, emergencies may arise in which the student may be absent. Therefore, the following hours are allocated for absenteeism during the training:

| | |
|---|---|
| Basic Welding/Welding I | 8 hours |
| Welding II | 8 hours |
| Basic Shielded Metal Arc | 8 hours |
| Basic Pipe Welding | 8 hours |
| Oxy fuel Cutting | 8 hours |
| Advanced Pipe Welding | 12 hours |
| Advanced Shielded Metal | 12 hours |

Students are required to attend 100% of the Safety Training. No absenteeism is allowed.

- Students are allowed three occurrences of lateness/absences.
- Abuse of or lack of attendance and lateness may result in dismissal from the program.
- Absent students are responsible for the missed training information and materials during absence from class.

**Grading System**

The academy uses written quizzes, examinations, and class participation as elements in the grading process.

**The grading scale is as follows:**

| | |
|---|---|
| A | 90-100 |
| B | 80-89 |
| C | 79-70 |
| D | Below 70 |

**Skills assessment scoring:**

| | |
|---|---|
| P | Pass |
| F | Fail |

**Final Grades are assessed as follows:**

| | |
|---|---|
| Exams and Quizzes | 25% |
| Class Participation | 10% |
| Attendance | 15% |
| Skills Assessment | 50% |

Southeast Welding Academy accepts 75% as passing. Students scoring lower than 75% on a written quiz or exam will be required to meet with the director on a weekly basis to establish and commit to a personalized learning plan.

Students scoring less than 75% on the final examination will be allowed to complete the competency assessment portion of the examination or program.

Students scoring an “F” - Fail - on competency assessments will not be allowed to continue with the examination assessment/program. The student will be considered for future training programs following discussion and interview with the Administrator.

Students experiencing any academic difficulties should immediately contact their instructor to establish a remediation plan. The remediation plan may include additional reference materials, lab hours and instructional/study time to gear the student towards success.

**Certificate of Completion**

Students will be awarded a Certificate of Completion at the successful completion of the training course. Consideration of candidacy requires the following:

- Complete the course according to attendance requirements
- Conduct deportment in a professional and safe manner while in the classroom and practicum/lab
- Score at least 75% on the final examination
- Score a "P" (pass) on the skills assessment
- Payment of all outstanding tuition and fees

**Welding Certification**

Students mastering the welding course and all assignments have the opportunity to earn a national welding certification. The benefits of becoming a certified welder are abundant:

- Successful companies usually hire certified welders.
- Certified welders often receive both national and international recognition because of demonstrated expertise.
- Certified welders are listed in the American Welding Society database, allowing potential employers to search welders based on skills and abilities.
- Certified welders receive the most up-to-date industry information.

**American Welding Society $550**

**American Society of Mechanical Engineers $685**

Students are responsible for the cost of the certification examination

It is important to prepare for the certification examination, as there are no refunds.

**Electronic Devices**

Use of electronic devices is allowed at the discretion of the instructor, however any electronic devices that impede hearing or sight are not allowed in the classroom or practicum/lab area. Cell phone use in the classroom is allowed at the discretion of the instructor, cell phone use is prohibited in the practicum/lab area.

**Students Grievances**

Southeast Welding Academy is committed to resolving student issues and concerns. Students may initiate the grievance process for grades, attendance, and performance.

**Following is the process:**

Students should forward a letter to the instructor within 5 business days of the occurrence.

The instructor will meet with the student within 3 business days of the receipt of the letter.

Following discussion of the concern, the instructor will render a decision in writing to the student by the next business day.

If the student is dissatisfied with the instructor's decision, the student should forward a letter to the administrator within two business days of receiving the instructor's decision.

The administrator will meet the student within 2 business days to discuss the concern.

The administrator will render a decision within 2 business days of the meeting.

The administrator's decision is considered final.

After exhausting the Institutions grievance process the student may file a complaint with the Higher Education Licensure Commission.

**Random Drug Testing**

Any student suspected of being under the influence of any illegal substances, alcohol, or abusing prescription medications, will be subject to a random drug test. Failure to submit to drug testing will result in immediate dismissal from Southeast Welding Academy.

**Expectations**

The Academy provides training and education with integrity and expects students to be morally sound, professional, and honest. Students are expected to behave in a mature and ethical manner, respecting classmates, instructors, and staff. All Students can dress in casual attire; all male students must wear belts and no under garments should be exposed.

**Dismissal from Program**

Students are subject to dismissal from the Southeast Welding Academy if they fail to meet acceptable standards of performance in examinations or coursework or if they do not comply with regulations stated in entrance requirements.

Students are subject to dismissal for the following, but not limited to:

- Academic failure
- Excessive absences
- Theft
- Academic dishonesty
- Excessive horseplay
- Noncompliance of safety measures
- Harassment of any type
- Threatening behaviors towards students, instructors, and staff
- Abuse of alcohol, prescription medication or illegal substances

Students dismissed from the program for any of the above reasons may not re-apply for two (2) years.

**Withdrawal from the Program**

Students who are in academic **"Good Standing"** may withdraw from the program and be considered for re-admission.

**Good Standing: No attendance, academic or tuition concerns or issues**

Students considering withdrawal should contact their instructors for guidance. If the student wishes to continue with the withdrawal from the program, the student should forward a letter to the administrator. The administrator or director will meet with the student to discuss future training options. A copy of the student's withdrawal letter and plan for potential future training will be recorded in the student's file.

**Refund Policy**

**Southeast Welding Academy's refund policy is as follows:**

A full refund will be given to the student if the withdrawal occurs within 72 hours of signing an enrollment contract unless the student has entered training. This period shall commence from the date of signing but shall not include or end on any Saturday or Sunday or legal holiday.

A prorated refund will be given to the students in the welding course if less than 60% of the course has been completed.

No refunds will be given to students that are sent to the Southeast Welding Academy through any District of Columbia agency. Refunds will be sent to the District of Columbia agency within thirty (30) days.

Registration fees, Administrative fees, Books, Lab fees and Equipment fees are nonrefundable

**Transcripts**

Students may receive transcripts upon written request. The fee for transcripts is $10.00, included in the transcript:

- Program and curriculum content
- Date of attendance and Grades

**Tuition**

Tuition is due by the first week of class. Tuition payment may be made with cash, check, money order or major credit card made payable to Southeast Welding Academy. The tuition rate of $3600 and the basic course fees of $1400 is included in the $5000 tuition rate, which includes registration fee, administrative fees, books, lab fees and equipment fees.

*****Basic Course Fees of $1400.00 is included in the $5000.00 tuition rate*****

Tuition plans are available for students via a promissory note. Students who wish to make a payment plan should contact the Admissions Office. Any holder of the promissory note is subject to the terms and conditions of the contract which gives rise to the debt evidenced.

**SEWA 2020 - 2021 Tuition Rates**

| | |
|---|---|
| **Basic Shielded Metal Arc** | **$5000** |
| **Basic Pipe Welding** | **$5000** |
| **Oxy fuel Cutting** | **$5000** |
| **Advanced Pipe Welding** | **$5000** |
| **Advanced Shielded Metal** | **$5000** |

**Combination Welding Course:**

**Basic Shielded Metal Arc, Basic Pipe Welding, Oxy fuel Cutting, Advanced Pipe**

**4 Courses: $10000**

*Prerequisite courses are included in the tuition.

**Tuition rates and fees may be increased or modified without personal notification to students or applicants.**

**Student Code of Conduct**

Southeast Welding Academy has an established Student Code of Conduct, the tenets of which apply equally to all students and their conduct, whether academic or administrative. By taking a course at Southeast Welding Academy, all students are expected to be familiar with this document and agree to comply with these policies.

**Students of Southeast Welding Academy agree:**

- that all answers to application or registration information questions are true and accurate.
- to keep their passwords and other account access information for Southeast Welding Academy and its partners confidential.
- that they are responsible for completing and submitting all graded assessments personally and will not permit another student, a family member, or other person to act on his or her behalf in the completion of graded work.
- to report known violations of this code of conduct as soon as possible to Student Advisors.
- to provide documentation to verify identity, answer questions designed to verify identity, and participate in biometric verification when requested by Southeast Welding Academy staff or 3rd parties prior to, during, and/or after examinations, assignment submissions, logins, during phone calls or any other interaction with Southeast Welding Academy's staff, partners, or web-presence.
- to undergo proctoring during examinations as required by Southeast Welding Academy, whether applied to all students or in student-specific circumstances.
- that information, incidents, and data collected (including electronic device data) from student interactions with the Southeast Welding Academy's web-presence may result in invalidation of course completion or denial of requested transcripts for courses where all activity cannot be verified to have been completed by the student enrolled.
- to avoid actions that create a hostile or threatening environment for others.

## Academic Honesty and Integrity

Honesty and integrity are highly valued at Southeast Welding Academy. This details the Southeast Welding Academy Academic's Honesty Policy as it pertains to examinations, proctoring, written papers and essays and general course interactions.

Academic integrity violations include all forms of academic dishonesty, including, but not limited to:

- Cheating - Giving or receiving unauthorized assistance, attempting to give or receive such assistance, or using unauthorized materials in connection with the performance of any academic work. This includes providing your login to another individual to access content and complete work on your behalf.
- Plagiarism - Use of another person's work or ideas without proper acknowledgment of the source.
- Fabrication - Falsification or invention of any information, citation, data, images, or documentation.
- Collusion - Helping or allowing another student to commit any act of academic dishonesty.

Plagiarism, cheating, or other types of academic integrity and policy violations may constitute in immediate failure of the assignment in question. Deliberate or sustained violations will result in automatic failure of the course and could result in a student being removed from all current enrollments and services without refund. Southeast Welding Academy reserves the right to audit all student work for potential cheating and require additional proctoring/monitoring of students whose accounts have been flagged for suspicious behavior.

**Place Based, Blended and Distance Learning**

Lesson Plans will be developed or modified to meet the course specific needs in alignment with the District of Columbia's guidelines for Post-Secondary Educational providers regarding distance learning. The instructor will be using virtual learning practices and software to provide students with various methods and techniques of distance and blended learning, in addition to learning multiple welding practices. The instructor will develop asynchronous lessons and activities. Instructors are also required to make weekly contact, via phone calls, face to face, social media, and email to provide students instructional support, feedback, and monitoring.

Due to the barriers that many of our participants face economically, educationally and socially our program will be comprised of distance and blended learning technical support provision to ensure that we will provide our students with equipment, access to WIFI, and technical support regarding instruction and usage.

# Program Course Outline Description

## Course Objectives

**Program:** **Welding Technology**

Welding Technology provides an emphasis on basic welding/welding I and welding II laboratory principles and operating procedures. Topics include: industrial safety and health practices, hand tool and power machine use, measurement, laboratory operating procedures, welding power sources, welding career potentials, and introduction to welding codes and standards. Welding Technology offers two prerequisite modules which are included in your tuition.

**Instructors:** Rosa Hodge, Delmus Nelson, Jon Dennis and Robert Woods

**Text Book:** Welding Principles and Applications, Hobart Textbook, Lincoln Safety Video,

and Basic Arc Welding Instructions for the Beginner, Math for Welders, 5th Edition

**Learning Activities:** Lecture, discussion, demonstration, competency assessment, quizzes, examination, return demonstration, technical research paper, senior project

**Class Size:** Number of students in each class 10 Maximum number of students in each class 10

| **Modules:** | | |
|---|---|---|
| | Prerequisite: Basic Welding/Welding I | 120 hours |
| | Prerequisite: Welding II | 120 hours |

All students must complete the prerequisite modules which consists of 240 hours of related training. The scope of the program is intended to prepare students for advanced study in welding technology and welding-related careers. Upon successful completion of the course, students will receive a Certificate of Completion. Certification testing is done after the completion of the course. Students are given a practical exam that tests their ability to make quality welds.

**Total Course Hours Required for Completion: 360**

| **Courses:** | | |
|---|---|---|
| | Basic Shielded Metal Arc Welding | 120 hours |
| | Basic Pipe Welding | 120 hours |
| | Oxy-Fuel Cutting | 120 Hours |
| | Advanced Pipe Welding | 120 hours |
| | Advanced Shielded Metal Arc Welding | 120 hours |

**Certification Exams:** Successful preparation is essential as we are unable to allow re-takes or refunds on failed certification examinations

**Cost of Certification Exam:** AWS $550 ASME $685

## Prerequisite Module I: Basic Welding/Welding I

**Basic Welding/Welding I - Unit A**

1. Describe the History of Welding
2. Describe how each welding process works
3. Define:
    a. Welding
    b. Forge Welding
    c. Resistance Welding
    d. Fusion Welding
4. Describe the duties and responsibilities of a welder in various welding positions
5. Define occupational opportunities in welding

**Teaching modalities**: Lecture, discussion and demonstration

**Method of evaluation**: Quizzes

**Basic Welding/Welding I - Unit B**

1. Describe the types of protection worn during welding
2. Describe the methods to protect: eyes, ears, skins, respiratory system
3. Identify and differentiate between general work clothing and protective clothing
4. Describe the proper method of handling storing and setting up cylinders
5. Describe the appropriate and safe way to ventilate the welding area
6. Identify measures to avoid electrical shock
7. Identify measures of fire protection in welding
8. Identify and describe the fumes and gases that may be associated with Arc Welding
9. Define the importance and methods to protect the work area
10. Identify safety measures in the use of hand and power tools

**Teaching modalities**: Lecture, discussion and demonstration

**Method of evaluation**: Quizzes, return demonstration

**Basic Welding/Welding I - Unit C**

1. Define the use of flame cutting in welding
2. Identify cutting torches
3. Identify cutting tips
4. Define hand cutting
5. Identify the appropriate methods in selecting correct tip and setting pressure
6. Identify the use of plate cutting
7. Describe the methods that improve cutting
8. Define distortion in the welding practice
9. Demonstrate how to properly set up and use an oxy-fuel gas cutting torch

   **Teaching modalities**: Lecture, discussion and demonstration

   **Method of evaluation**: Quizzes, return demonstration

**Basic Welding/Welding I - Unit D**

1. Define Plasma
2. Define Arc Plasma
3. Describe a Plasma Torch
4. Describe the use of power and gas cables
5. Identify the power requirements for cables
6. Define the importance of heat input
7. Describe the applications associated with Plasma Arc cutting
8. Identify methods for machine cutting
9. Describe methods for manual cutting
10. Identify how the workings of a Plasma Cut
11. Identify the advantages of using a Plasma Cut Torch
12. Identify the disadvantages of using a Plasma Cut Torch
13. Identify the safety measures in Plasma Arc cutting

    **Teaching modalities**: Lecture, discussion and demonstration

    **Method of evaluation**: Quizzes, return demonstration

**Basic Welding/Welding I - Unit E**

1. Define the types of welding power and sources
2. Explain the use of open circuit voltage
3. Explain the use of operating voltage
4. Identify welding machines according to their type
5. Identify the differences in welding with each type of current
6. Demonstrate the use and settings of welding current
7. Describe the proper maintenance of welding equipment
8. Define the use of rectifiers
9. Define duty cycle
10. Demonstrate the appropriate use of welding cables
11. Demonstrate the appropriate use of electrode cables
12. Demonstrate the appropriate use of work clamps
13. Demonstrate the safe set up of an Arc Welding Station

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation**: Quizzes, return demonstration

**Basic Welding/Welding I - Unit F**

1. Define the effect of current settings on Shielding Metal Arc Welding
2. Define the appropriate electrode size and heat
3. Demonstrate appropriate and safe electrode manipulation
4. Describe the effect of electrode angle on a weld
5. Demonstrate the ability to set the welding amperage correctly
6. Define arc length
7. Identify the effect of changing arc length on a wave pattern
8. Demonstrate the ability to control undercut, overlap, porosity and slag inclusion when welding

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Examination and Skills Assessment for Basic Welding Research Project**

## Prerequisite Module II: Welding II

**Welding II - Unit A**

1. Demonstrate the ability to use a fire extinguisher
2. Demonstrate the safe use of hand power tools
3. Successfully complete the safe test
4. Perform First Aid procedures

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Welding II - Unit B**

1. Read and interpret lines, views, dimensions and notes on multi-view or pictorial drawings
2. Read and interpret the basic welding symbols and supplementary symbols on drawing or sketches
3. Identify the basic types of weld joints
4. Measure with a ruler within 1/6" accuracy when laying out a job from a drawing or sketch

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Welding II - Unit C**

1. Identify selected metals by appearance, color and weight
2. Identify metal shapes used for welding
3. Conduct test on selected metal: Magnet, Spark, Chisel
4. Laying out a job from a drawing or sketch

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Welding II - Unit D**

1. Set up and adjust oxyacetylene station
2. Light and adjust flame
3. Close station
4. Lay out and cut: straight lines, angles, circles, patterns, beams and channel iron
5. Lay out and cut pipe
6. Lay out and cut square and round solid rock

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Welding II - Unit E**

1. Set up and adjust shielded metal arc welder
2. Strike and maintain an arc
3. Weld straight bead patterns
4. Weld weave bead patterns
5. Construct a fillet weld, 3/16 equal legs, single pass in flat position
6. Construct a fillet weld ¼ equal legs, three passes in the horizontal position
7. Construct a fillet weld ½ equal legs, three passes in the horizontal position
8. Construct a fillet weld, single pass in the vertical up and down positions
9. Construct a V-groove weld, multiple pass in the vertical position
10. Construct a groove weld, multiple pass in the flat position
11. Construct a groove weld, multiple pass in the horizontal position
12. Construct a groove weld, multiple pass in the vertical position
13. Construct a grove weld, multiple pass in the overhead position
14. Construct a groove weld on pipe in the flat axis position
15. Construct a groove weld on pipe in the vertical position

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Welding II - Unit F**

1. Construct a bead weld, flat position with filler materials
2. Construct a 1/8" fillet weld, lap or tee joint, horizontal position
3. Construct an outside corner joint, flat position
4. Construct an outside corner joint, horizontal position
5. Construct an outside corner joint, single pass on mild steel overhead pass

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Welding II - Unit G**

1. Construct a multiple pass T-joint fillet weld in the horizontal position
2. Construct a lap-joint weld in the vertical down position
3. Construct a corner joint fillet weld in the vertical position for break test
4. Construct a T-joint fillet weld in the overhead position with short arc for break test
5. Construct a T-joint fillet weld in the horizontal position with short arc
6. Construct a single V-groove butt joint in the flat position with short arc

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Examination and Skills Assessment for Welding II**

## Courses

**Basic Shielded Metal Arc Welding** **120 Hours**

1. Describe safety procedures for SMAW welding
2. Strike and control the arc
3. Adjust welding machine to proper setting
4. Round beads on flat plate
5. Run lap joints flat using 6013DCRP
6. Run beads on flat plat
7. Run "T" joint horizontal using E6010
8. Run lap and "T" joint horizontal positions using 2/32'E7018 DCRP
9. Describe quality and distortion control techniques
10. Run horizontal square groove weld on ¼' plate using 1/8" E6010 for root weld and 3/32' E7018 for cover
11. Describe numbering system for selecting electrodes, select proper electrode
12. Run vertical up square groove weld on ¼' plate using 1/8" E6010 for root weld and 3/32' #7018 for cover
13. Run overhead square groove weld on ¼' plate using 1/8" E6010 for root weld and 3/32' #7018 for cover
14. Run V-grove on 3/8" plate in vertical up and overhead position using 1/8' E6010 electrodes for toot pass, and 1/8" or 3/32' E7018 electrodes for fill and cover passes

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Examination and Skills Assessment for Basic Shielded Metal Arc Welding**

**Basic Pipe Welding** **120 Hours**

1. Describe safety procedures for basic pipe welding
2. Properly set up for basic pipe welding
3. Demonstrate flat or 1G procedures
4. Demonstrate horizontal or 2G procedures
5. Demonstrate overhead or 4G and 1G procedures
6. Demonstrate welding penetration: 6010, 6011, 6013, 7018, 70124
7. Demonstrate the use of stick welding
8. Identify components of FCAW/Flux core arc welding
9. Identify components of TIC/Tungsten welding

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Examination and Skills Assessment for Basic Pipe Welding**

## Courses

**Oxy-Fuel Cutting** **120 Hours**

1. Describe safety procedures for oxy-fuel cutting
2. Properly set up oxy-fuel cutting and heating equipment
3. Make a 90-degree line cut
4. Make a 45-degree bevel cut
5. Describe safety procedures for cutting
6. Properly set up cutting equipment
7. Make a 90-degree straight line cut (mild steel)
8. Make a 90-degree straight line cut (aluminum)

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Examination and Skills Assessment for Oxy-Fuel Cutting**

**Advanced Shielded Metal Arc Welding** **120 Hours**

1. Describe safety procedures for Advanced Shielded Metal Arc Welding
2. Describe the travel speed for Advanced Shielded Metal Arc Welding
3. Describe the Arc length for Advanced Shielded Metal Arc Welding
4. Describe the welding current for Advance Shielded Metal Arc Welding
5. Demonstrate the application of stringer beads and weaves and fillet welds in the overhead position
6. Demonstrate overhead lap and Tee fillet welds (single and multi-pass)
7. Demonstrate multi-pass fillets in overhead position
8. Demonstrate groove joints in overhead position without backing
9. Demonstrate methods of welding: Pipe, Advanced Pipe, MIG, TIG, Oxy-Fuel Cutting

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Examination and Skills Assessment for Advanced Shielded Metal Arc Welding**

## Courses

**Advanced Pipe Welding** **120 Hours**

1. Describe safety procedures for Advanced Pipe Welding
2. Describe the procedures used to cut pipe at a specified angle by hand and by machine for Carbon Steel Pipe
3. Describe the procedures used to perform a filler pass
4. Describe the procedure used to perform a cover pass
5. Demonstrate the procedures used to cup a pipe at the specified angle by hand and machine for stainless steel
6. Describe the procedures used to tack-up the pipe
7. Describe the procedure used to purge the oxygen from the pipe using argon
8. Describe the procedures used to perform a weld out of the pipe in the 6G position

**Teaching modalities:** Lecture, discussion and demonstration

**Method of evaluation:** Quizzes return demonstration

**Examination and Skills Assessment for Advanced Pipe Welding**