

## FACT SHEET

The **American Welding Society (AWS) SENSE Welding Level 1** programme is designed for persons aspiring to become certified welders. This qualification focuses on the practical skills and underpinning knowledge required to work in fabrication and welding and is therefore an excellent starting point for anyone seeking a career as a welder.

Assessment is undertaken through a combination of practical assignments and written examinations to verify that each learner has attained a broad range of welding related competencies. Learners are required to successfully complete a series of written exams to gain the certificates. These written exams cover a wide breadth of welding theory, ranging from welding safety, welding process fundamentals and even welding inspection. Additionally, Learners are required to also complete practical welding assessments relating to the four (4) welding processes for SMAW, MAW, GMAW, GTAW and FCAW.

### What is SENSE?

SENSE – *Schools Excelling through National Skills Education* - is a set of specifications and guidelines meant to assist schools in training welders. The program guidelines were originally published in 1995 and 1996 through grants received from the U.S. Department of Education and Department of Labor. Based on a survey of the welding industry, the SENSE guidelines define two levels of knowledge and skills required in the welding workplace. Individuals trained in Training Organizations aligned to the SENSE guidelines may implement SENSE Level I: Entry Welder and/or SENSE Level II: Advanced Welder.

The SENSE specifications and guidelines were created and continue to be maintained by a committee of expert volunteers from all corners of the welding industry. These industry representatives work hard to ensure that a trainee completing a program built on the SENSE specifications and guidelines will have the skills to be both hireable and productive within the welding industry.

Trainees that complete a SENSE-compliant training program are eligible to receive an AWS SENSE certificate and wallet card. The SENSE program includes four different certificates that a trainee can earn, one for each welding process offered (SMAW, GMAW, GTAW, and FCAW).

### Duration

This qualification can be completed in **One Year**. There are two (2) intakes per year in May and September.

### Pre-requisites

There are no pre-requisites for this programme. However, basic knowledge in Mathematics will be an asset.

### Mode of Study

Classes for this programme will be on evenings and Saturdays and will be offered at **SBCS GLI Champs Fleurs Campus**.

**Programme Structure:**

<b>Semester 1</b> <b>(September 2023 – February 2024)</b>	<b>Semester 2</b> <b>(March 2024 – August 2024)</b>
1. Introduction to Safety and Health of Welders 2. Drawing and Welding Symbol Interpretation 3. Thermal Cutting Processes 1 & 2 4. Shielded Metal Arc Welding 1 & 2	5. Gas Metal Arc Welding 6. Flux Core Arc Welding 7. Gas Tungsten Arc Welding 8. Welding Inspection and Testing Principles

**Assessments**

This qualification will be assessed by a combination of written examinations and practical assessments.

**Fee Schedule**

Fees for this programme are as follows:

<b>FEE</b>	<b>AMOUNT</b>	<b>NOTE</b>
SBCS Registration Fee	TT\$500	Payable upon registration
AWS Sense Registration Fee	US\$20 (one-time payment)	Payable by: <b>October 31<sup>st</sup> 2023</b>
Tuition Fee	TT\$15,000	(Payment Plan available)
Examination Fee	US\$350	Payable by: <b>March 31<sup>st</sup> 2024</b>

**NOTE:**

All SBCS Fees in US dollars must be paid via bank draft payable to “SBCS Global Learning Institute Limited”. Please include your name on the bank draft in the B/O (by order of) section

### UNIT OUTLINE

UNITS			
	Unit	Competencies	Assessment
1	<b>Introduction to Safety and Health of Welders</b>	<ol style="list-style-type: none"> <li>Understand the function of a welder in industry including knowledge of shop operations</li> <li>Demonstrate proper safe operation practices in the work area, as described in ANSI Z 49.2 Section 4, Protection of personnel and the general area &amp; ANSI Z 49, Part 1 General Aspects and applicable OSHA regulations.</li> </ol>	Instructor observation of safe operational practices  Sense Module 2 Test (ANSI Z 49.1)
2	<b>Drawing and Welding Symbol Interpretation</b>	<ol style="list-style-type: none"> <li>Evaluate welding drawings or sketches</li> <li>Interpret welding symbol information</li> <li>Perform conversion between US and SI units</li> <li>Produce a multi-view sketch</li> </ol>	Written test score 75% minimum
3	<b>Thermal Cutting Processes 1 &amp; 2</b>	<p><b><u>Oxy-fuel cutting</u></b></p> <ol style="list-style-type: none"> <li>Evaluate cutting equipment, accessories and consumables to ensure proper safety and operations</li> <li>Produce manual Oxyfuel cuts on carbon steel</li> <li>Produce mechanized Oxyfuel cuts on carbon steel</li> <li>Perform scarfing and gouging operations to remove base and weld metal on carbon steel</li> <li>Evaluate cuts to ensure AWS D.1.1 standards are met</li> </ol> <p><b><u>Plasma Arc cutting</u></b></p> <ol style="list-style-type: none"> <li>Produce manual plasma arc cuts on carbon steel</li> <li>Perform scarfing and gouging operations to remove base and weld metal on carbon steel</li> <li>Evaluate cuts to ensure AWS D.1.1 standards are met</li> </ol>	Written Test Score 75% minimum  Visual Inspection Passed
4	<b>Shielded Metal Arc Welding 1 &amp; 2</b>	<ol style="list-style-type: none"> <li>Evaluate SMAW equipment, accessories and consumables to ensure proper safety and operations</li> <li>Produce fillet welds in flat, horizontal, vertical and overhead positions on carbon steel</li> <li>Produce groove welds in flat, horizontal, vertical and overhead positions on carbon steel</li> <li>Evaluate welds to ensure AWS D.1.1 standards are met</li> </ol>	Written Test Score 75% minimum  Visual Inspection Passed  Destructive Test Passed
5	<b>Gas Metal Arc Welding</b>	<ol style="list-style-type: none"> <li>Evaluate GMAW equipment, accessories and consumables to ensure proper safety and operations</li> </ol>	Written Test Score 75% minimum

		<ol style="list-style-type: none"> <li>2. Produce fillet welds in all positions on carbon steel</li> <li>3. Produce groove welds in all positions on carbon steel</li> <li>4. Evaluate welds to ensure AWS D.1.1 standards are met</li> </ol>	Visual Inspection Passed
6	<b>Flux Core Arc Welding</b>	<p><b><u>Self-Shielded</u></b></p> <ol style="list-style-type: none"> <li>1. Evaluate FCAW-Self Shielded equipment, accessories and consumables to ensure proper safety and operations</li> <li>2. Produce fillet welds in all positions on carbon steel</li> <li>3. Produce groove welds in all positions on carbon steel</li> <li>4. Evaluate welds to ensure AWS D.1.1 standards are met</li> </ol> <p><b><u>Gas-Shielded</u></b></p> <ol style="list-style-type: none"> <li>1. Evaluate FCAW-Gas Shielded equipment, accessories and consumables to ensure proper safety and operations</li> <li>2. Produce fillet welds in all positions on carbon steel</li> <li>3. Produce groove welds in all positions on carbon steel</li> <li>4. Evaluate welds to ensure AWS D.1.1 standards are met</li> </ol>	<p>Written Test Score 75% minimum</p> <p>Visual Inspection Passed</p>
7	<b>Gas Tungsten Arc Welding</b>	<ol style="list-style-type: none"> <li>1. Evaluate GTAW equipment, accessories and consumables to ensure proper safety and operations</li> <li>2. Produce fillet welds in all positions on carbon steel, Aluminum and Stainless Steel</li> <li>3. Produce groove welds in all positions on carbon steel, Aluminum and Stainless Steel</li> <li>4. Evaluate welds to ensure AWS D.1.1 standards are met</li> </ol>	<p>Written Test Score 75% minimum</p> <p>Visual Inspection Passed</p>
8	<b>Welding Inspection and Testing Principles</b>	<ol style="list-style-type: none"> <li>1. Evaluate cut surfaces and edges of prepared base metal parts</li> <li>2. Evaluate tacks, root passes, intermediate layers and completed welds</li> </ol>	<p>Written Test Score 75% minimum</p> <p>Passed the visual inspection of a written test</p>

### **Contact Information**

Further information can be found on the SBCS website:

<http://www.sbcs.edu.tt/academic-centre/centre-for-information-technology-and-engineering/>

Course administrators can also be contacted directly:

<b>Campus</b>	<b>Telephone: 663-SBCS (7227)</b>	<b>Email</b>
Champs Fleurs	Extensions: 1098/1095/1093	<a href="mailto:CITE-Eng@sbcs.edu.tt">CITE-Eng@sbcs.edu.tt</a>

### Refunds and Payment Plans Policy

1. Requests for refunds on certificate, diploma, degree and professional Programmes must be made within one (1) month of the start of classes. In each instance, no refunds will be granted thereafter.
2. Refunds on certificate, diploma, degree and professional Programmes are subject to an administrative charge of 25% of the tuition cost/module(s)/course fee OR \$500 per module/course, whichever is greater. Registration fees and course materials purchased are non-refundable.
3. Students in receipt of exemptions after registering for a course qualify for a refund subject to conditions (1) and (2)
4. When accessing a payment plan a 15% Penalty Fee will be applicable to instalments not paid on the agreed due date unless prior approval to defer is received from the Finance Department.
5. It is understood that should you fail to meet your payment obligations, SBCS reserves the right to deny you access to face to face or on-line classes; to restrict your access to on-line resources and to withhold certificates and awards until payment is made in full.

### Payment Plan & Schedule

AWS SENSE Welding Level 1		
Payment Plan		
Payment Schedule:	Total Tuition = \$15,000	
Fee	Due Date	Amount
Registration fee	<i>Payable upon registration</i>	\$500
Tuition Installment	<i>Payable upon registration</i>	\$2,250
<b>AWS SENSE Registration fee</b> <i>(payable by bank draft in US\$ only)</i>	<b>31-October-23</b>	<b>US\$20</b>
<b>Exam Fees</b> <i>(payable by bank draft in US\$ only)</i>	<b>31-March-24</b>	<b>US\$350</b>
Tuition Installment	28-Oct-23	\$2,125
Tuition Installment	28-Nov-23	\$2,125
Tuition Installment	28-Dec-23	\$2,125
Tuition Installment	28-Jan-23	\$2,125
Tuition Installment	28-Feb-23	\$2,125
Tuition Installment	28-Mar-23	\$2,125