THE SENSE PROGRAM

SCHOOLS
EXCELLENT THROUGH NATIONAL SKILL STANDARDS EDUCATION
Welding Industry Careers

- Welder
- Materials Engineer
- Welding Engineer
- Robotics Technician
- Welding Technician
- Business Owner
- Salesperson
- Structural Iron Worker
- Sheet Metal Worker
- Underwater Welder
- Welding Educator
- Metallurgist
- Researcher
- Welding Inspector
- Machine Operators
- Pipefitter
- Boilermaker
THE SENSE PROGRAM

The SENSE program began in the mid nineties with a grant from the United States Departments of Education and Labor to standardize welder training in the U.S.

The AWS Education Committee developed the “Guidelines for Welder Training”

SENSE established standards for the training of entry level welders.
Purpose of Perkins IV

- Accountability
- Data used for Improvement
- Articulation on a large Scale
- Clusters, Pathways, Occupations
Perkins IV

√ Incorporate and align secondary and postsecondary education

√ Include academic & CTE content in a coordinated, non-duplicated progression of courses

√ May include the opportunity for secondary students to acquire postsecondary credits

√ Lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree

√ Identify and address current or emerging occupational opportunities

√ Build on Tech Prep, career clusters, career pathways, career academies

√ Locals must offer the required courses of at least one Program of Study (and can offer more)
SENSE Benefits to Participating Schools

√ Competency-based standards
√ Provides minimum requirements for a welding program in a modular format
√ Provides teachers with instructional guidelines
√ Access to Technical Resources
   ◊ Sample Welding Procedures Specifications (WPS)
   ◊ Modularized knowledge Examinations
   ◊ Practical Exams
   ◊ Health and Safety Information
   ◊ Sample Quality Assurance Manual
   ◊ SENSE Logo
   ◊ School locator for access to downloads of new and emerging information
   ◊ SENSE On-line classroom and resources
Changes to SENSE

- Modularization of Level I Entry Welder.
  - Nine separate modules
  - Choice of implementation approach
- Revision & update of Level I Documents
  - EG2.0: 2008, QC-10: 2008 & WPS
- Revision of SENSE Level I Exams
  - Eight separate exams
- Revision of SENSE welder Certificate & Registry
  - School Locator
- Easy access to program resources, available for online download
- SENSE Accreditation approved (in beta)
- Modularization of Level II Advanced Welder (to be released in 2013)
SENSE Levels

- **Level I – Entry Welder**
  QC-10
  Specification for Qualification and Certification for Level I - Entry Welder
  Designed to support high schools, as well as Career & Technical Training Organizations.

- **Level II – Advanced Welder**
  QC-11
  Specification for Qualification and Certification for Level II - Advanced Welder
  On Completion of Level I this level is designed to support Post-Secondary, Community Colleges as well as Career & Technical Education Organizations.

- **Level III – Expert Welder**
  QC-12
  Specification for Qualification and Certification for Level III - Expert Welder
  On Completion of Levels I & II, this level is designed to support Post-Secondary four year University welding programs.
Process Flowchart

SENSE Standards & Guidelines (provided by AWS)

QA Manual

Exams (provided by AWS)

Created or Adopted by School

CURRICULEM

Syllabus

Lesson Plans

Instructional Materials
# Level I Outcomes

<table>
<thead>
<tr>
<th>Modules</th>
<th>Passing Score</th>
<th>Visual</th>
<th>Destructive</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Occupational Orientation *</td>
<td>No Test</td>
<td>No Test</td>
<td>No Test</td>
</tr>
<tr>
<td>2 – Safety and Health of Welders *</td>
<td>100%</td>
<td>No Test</td>
<td>No Test</td>
</tr>
<tr>
<td>3 – Drawing and Welding Symbol Interpretation *</td>
<td>75%</td>
<td>No Test</td>
<td>No Test</td>
</tr>
<tr>
<td>4 – Shielded Metal Arc Welding</td>
<td>75%</td>
<td>Pass /Fail</td>
<td>Pass /Fail</td>
</tr>
<tr>
<td>5 – Gas Metal Arc Welding</td>
<td>75%</td>
<td>Pass /Fail</td>
<td>No Test</td>
</tr>
<tr>
<td>6 – Flux Cored Arc Welding</td>
<td>75%</td>
<td>Pass /Fail</td>
<td>No Test</td>
</tr>
<tr>
<td>7 – Gas Tungsten Arc Welding</td>
<td>75%</td>
<td>Pass /Fail</td>
<td>No Test</td>
</tr>
<tr>
<td>8 – Thermal Cutting Process * †</td>
<td>75%</td>
<td>No Test</td>
<td>No Test</td>
</tr>
<tr>
<td>Unit 1 Manual Oxyfuel Gas Cutting (OFC) †</td>
<td>Pass /Fail</td>
<td>No Test</td>
<td></td>
</tr>
<tr>
<td>Unit 2 Mechanized Oxyfuel Gas Cutting (OFC) †</td>
<td>Optional</td>
<td>No Test</td>
<td></td>
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<tr>
<td>Unit 3 Manual Plasma Arc Cutting—PAC †</td>
<td>Pass /Fail</td>
<td>No Test</td>
<td></td>
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<tr>
<td>Unit 4 Manual Air Carbon Arc Cutting †</td>
<td>Optional</td>
<td>No Test</td>
<td></td>
</tr>
<tr>
<td>9 – Welding Inspection and Testing *</td>
<td>75%</td>
<td>Pass /Fail</td>
<td>No Test</td>
</tr>
</tbody>
</table>

* Required module for Level I Entry Welder Completion (plus one welding process module)

† Completion of Units 1 and 3 minimum.
BUILDING YOUR AWS WELDING REFERENCE LIBRARY

Choose up to 8 publications at no cost to your institution when becoming a SENSE participating organization.
SENSE Benefits to Students

√ Educational path

√ AWS SENSE Certificate

√ Sellable Skills

√ Student AWS memberships

√ Networking opportunities
Educational Institution Membership

√ Individual AWS memberships – First year is complimentary

√ Use of AWS EIM logo

√ Discounts on AWS products and services

√ Added to the EIM Membership website listing

√ Welding Journal
School Locator

http://www.aws.org/w/sense

✓ Add your school
✓ Easy to access search schools & training programs
✓ Register for SENSE here!
✓ Downloads for SENSE participating organizations
✓ Access to publishers and vendors
✓ Student certification checks
✓ Networking for educators, schools and careers
School Locator

At the touch of a button

- Update your school
- View Student progress
- Download new SENSE documentation
- View student chapters and network with the society
- Stay current on all new and revised materials
SENSE ON-LINE

www.awo.aws.org/sense

American Welding Online will provide support for AWS SENSE schools through online learning content designed to be implemented in the SENSE classrooms, as well as by offering the SENSE LEVEL 1 module exams.

In the near future, AWS will offer SENSE schools a new student and instructor registration process, student module and completion examinations, student technical skill assessment testing, and school benchmarking functionalities in a new SENSE interface. AWS will also offer instructors with complementary online content that can be utilized in their classrooms.

Over the last year, the AWS Education Services staff has had numerous discussions with SENSE schools, students, and instructors about ways to improve the quality of the AWS SENSE program and facilitate its implementation and use. The four most common suggestions were:

1. Online testing for module and completion exams
2. Online student tracking and reporting
3. Better access to information and resources
4. Modularization of SENSE Level II
**How do I log into the SENSE Online system?**

1) Open your internet browser and type in [http://sense.aws.org](http://sense.aws.org) in the address bar.

2) Select the Account Type: Administrator or Instructor/Student

3) **Administrators**: Enter in email address and password send via US Postal Service to school.

**Instructors**: Enter Member Number and password send via email.
On-line grade book

A message will appear indicating that a new class has been added. The class appears in the list below.
SENSE-Accreditation

“American needs a continuous supply of competent trades people to stay competitive in this increasingly challenging global marketplace, and to backfill the void left by a retiring generation of skilled workers. In order to develop a competent pool of skilled people we have to ensure training institutions are focused on the right performance requirements, and outcomes and that they are working with the latest technology in the industry.”
Benefits of SENSE-Accreditation for Schools

- National validation of your welding program
- Enhanced credibility by demonstrating your welding program meets national standards
- Increased potential for program funding from Perkins and other sources
- Enhanced potential for student recruitment through demonstrated program excellence
- Your program will gain National recognition from the American Welding Society
- Student transferability/advancement through the SENSE program
- Enhanced employment opportunities for graduates
Benefits of SENSE-Accreditation for Students & Employers

Benefits to Students:

> Certificate or diploma from an SENSE-accredited program provides graduates with an important credential for employment and continuing education
> Students can be assured the training they receive is based on national standards and guidelines

Benefits to Employers:

> Employers know your graduates possess the skills required for success
> Less on-the-job training means reduced cost of employment and increased competitiveness
Benefits of SENSE-Accreditation for the Welding Industry

> Program accreditation promotes respect for welding as a profession

> Improved quality of training increases professionalism within the welding industry
Contact Information

For further information on SENSE, please contact:

AWS Education Services
800-443-9353, ext. 223
ablanco@aws.org

Register on-line at
https://www.aws.org/w/e/add_school?id=odzmMw3W