

## National Center of Excellence for Welding Education and Training

**Goal:** Increase the number of Welding Technicians to workforce needs

**Study Subjects:** Emerging Welding Technicians, Employers using Welding Technologies

Activities	Tracking Data	Initial Outcomes	Intermediary Outcomes	Long Term Outcomes	Methods
(1.1) Accurate Workforce Assessment and Forecast	<ul style="list-style-type: none"> <li>• Bi-annual Report updating workforce size</li> <li>• Number of new graduates in welding technologies</li> <li>• Skill Requirements Assessment</li> <li>• Workforce Gap Analysis</li> </ul>			Increased welding technicians available to industry	Assessment surveys through direct communication with industry, workshops/ seminars/ conferences
(1.2) Improve existing Welding Technology Associate Degree programs located near the employment opportunities	<ul style="list-style-type: none"> <li>• Longitudinal analysis of Benchmark results</li> <li>• Geographical assessment existing program</li> </ul>	<ul style="list-style-type: none"> <li>• Establish Benchmark for improved curriculum</li> </ul>	<ul style="list-style-type: none"> <li>• Adopted usage of NCWET Curricula</li> </ul>	Improved results of Benchmark assessments of welding program	Survey of Benchmark results from target colleges
(1.3) Increase the Effectiveness of Recruitment of Students	<ul style="list-style-type: none"> <li>• Number of students enrolled in welding technology program</li> <li>• Number of students starting and completing welding technology programs</li> </ul>	<ul style="list-style-type: none"> <li>• Baseline enrollment and graduation demographics</li> </ul>	<ul style="list-style-type: none"> <li>• Recruitment Plan by student population demographics</li> <li>• Marketing plan</li> </ul>	Increased enrollment in welding technician programs and graduation of welding technicians	Survey of enrollment and retention, and demographics of students compared to baseline data
(1.4) Significantly increase workforce diversity	<ul style="list-style-type: none"> <li>• Numbers of underrepresented students in program</li> <li>• Number of students starting and completing welding technology programs</li> </ul>	<ul style="list-style-type: none"> <li>• Baseline enrollment and graduation demographics</li> </ul>	<ul style="list-style-type: none"> <li>• Marketing plan for underrepresented populations</li> </ul>	Increased enrollment and graduation of women, minorities, and people with disabilities	Survey of enrollment and retention, and demographics of students compared to the baseline data

## National Center of Excellence for Welding Education and Training

**Goal:** Comprehensive Reform of Welding Education

**Study Subjects:** Region Educational Partners, Secondary and Post Secondary Educators

Activities	Tracking Data	Initial Outcomes	Intermediary Outcomes	Long Term Outcomes	Methods
(2.1) Evaluation of existing Welding Curricula for currency and relevance for the creation of a state of the art Welding Curriculum	<ul style="list-style-type: none"> <li>Number of Curricula evaluated</li> <li>Metrics associated with baseline tool</li> </ul>	<ul style="list-style-type: none"> <li>Assessment Tool for evaluation of Curricula</li> <li>Gap Analysis of Existing Welding Curricula</li> </ul>	<ul style="list-style-type: none"> <li>Comparison Data Analysis</li> <li>Modified NCWET Curricula</li> </ul>	<ul style="list-style-type: none"> <li>Dissemination of NCWET Supported Curricula</li> </ul>	Survey of Colleges using NCWET Curricula
(2.2) Establish a national network of Regional Partners Institutions	<ul style="list-style-type: none"> <li>Number of Regional Partners</li> </ul>	<ul style="list-style-type: none"> <li>Regional partner network plan</li> <li>Articulation agreement</li> </ul>		<ul style="list-style-type: none"> <li>National Impact of NCWET with comprehensive regional Representation</li> </ul>	Compile number of partners
(2.3) Implement Advanced Laboratory Techniques	<ul style="list-style-type: none"> <li>Number of Participating Educational Facilities using materials</li> </ul>	<ul style="list-style-type: none"> <li>Production of a DVD detailing advanced techniques</li> </ul>		<ul style="list-style-type: none"> <li>Demonstrated increase use of Advanced Techniques</li> </ul>	Survey of users of advanced materials
(2.4) Provide for efficient and effective dissemination	<ul style="list-style-type: none"> <li>Number of Participating Educational Facilities using materials</li> </ul>	<ul style="list-style-type: none"> <li>Creation of Dissemination Methods</li> </ul>		<ul style="list-style-type: none"> <li>Curriculum Utilization</li> </ul>	Survey of users of advanced materials
(2.5) Creation of Accessible Repository for Welding Educational Materials	<ul style="list-style-type: none"> <li>Access &amp; Download Utilization Statistics for Repository</li> </ul>	<ul style="list-style-type: none"> <li>Central Repository creation</li> </ul>		<ul style="list-style-type: none"> <li>Dissemination of Educational Facilities</li> </ul>	Summary of Access Statistics
(2.6) Development of National Skills Standards for Welding	<ul style="list-style-type: none"> <li>Number of Students and Educators attaining MSSC Certification for Welding</li> </ul>		<ul style="list-style-type: none"> <li>Development of MSSC Skills Standard Certification Test</li> </ul>	<ul style="list-style-type: none"> <li>Improvement in overall Welding success within welding</li> </ul>	Employer Survey College Survey

## National Center of Excellence for Welding Education and Training

**Goal:** Enhanced Faculty Professional Development and Continuing Education

**Study Subjects:** Secondary and Post Secondary Educators; Welding Professionals

Activities	Tracking Data	Initial Outcomes	Intermediary Outcomes	Long Term Outcomes	Methods
(3.1) Development of Faculty Training and Continuing Education Courses	<ul style="list-style-type: none"> <li>Partner Rating Results</li> </ul>	<ul style="list-style-type: none"> <li>Professional Development Plan</li> </ul>	<ul style="list-style-type: none"> <li>Course Materials</li> </ul>		<ul style="list-style-type: none"> <li>Regional Partner Reviews/Ratings</li> <li>Industry Partner Faculty Surveys</li> <li>Attendee Survey</li> </ul>
(3.2) Conduct Faculty Training and Continuing Education Courses through Regional Partners	<ul style="list-style-type: none"> <li>Survey Satisfaction Results</li> <li>Course Outcomes</li> <li>Longitudinal Training Attendance Data</li> </ul>	<ul style="list-style-type: none"> <li>Best Practice Course Content Plan</li> <li>Training Requirements Document</li> </ul>	Training Programs: <ul style="list-style-type: none"> <li>Land-Based</li> <li>Internet</li> <li>IVDL (Interactive Video Distance Learning)</li> </ul>	Yearly Training Plan <ul style="list-style-type: none"> <li>Revised Curricula Content</li> <li>Best Practices</li> <li>Technology Trends</li> </ul>	<ul style="list-style-type: none"> <li>Regional Partner Faculty Surveys</li> <li>Attendee Survey</li> </ul>
(3.3) Enable technologically current faculties	<ul style="list-style-type: none"> <li>% Utilization of Externship Offerings on a yearly basis</li> <li>Survey Satisfaction Results</li> </ul>	<ul style="list-style-type: none"> <li>Identify Externship Partners</li> <li>Develop Externship Requirements</li> </ul>	<ul style="list-style-type: none"> <li>Externships</li> <li>Sustained Externship Program</li> </ul>	<ul style="list-style-type: none"> <li>Continuing certification and awareness of Contemporary Manufacturing Technology</li> </ul>	<ul style="list-style-type: none"> <li>Externship Database</li> <li>Faculty Externships Exit Survey</li> <li>Partner Externships Exit Survey</li> </ul>
(3.4) Conduct Education Symposium at AWS Show	<ul style="list-style-type: none"> <li>Survey Satisfaction Results</li> <li>Course Outcomes</li> <li>Longitudinal Training Attendance Data</li> </ul>	<ul style="list-style-type: none"> <li>Best Practice Course Content Plan</li> <li>Training Requirements Document</li> </ul>	<ul style="list-style-type: none"> <li>Pre-Conference Training Programs</li> <li>Continuing Education Courses relevant to Industry Skills Standards</li> </ul>	<ul style="list-style-type: none"> <li>National Education Conference held annually to benefit educators</li> </ul>	<ul style="list-style-type: none"> <li>Regional Partner Faculty Surveys</li> <li>Conference Attendee Survey</li> </ul>