

Goal #1 – Increase the number of welding technicians to meet workforce needs.

Objective	Activities	Responsible party	Timeline
Objective 1.1 – To accurately assess and forecast the workforce needs of the welding industry. Total Cost: \$375,284 (8%)	1.1.1. Establish a National Skills Panel comprised of eight to ten senior industry representatives (from different industries), the AWS representative, WELD-ED staff, and other national partners to gather “forward” industry workforce needs data for welders, welding technicians, and welding engineers	K. Smith, R. Visdos, WELD-ED staff	Months 6-8
	1.1.2. Use the National Skills Panel members to gather national data from their particular industry that reflect short-term (up to 2 years), mid-term (2-4 years) and long-term (4+ years) workforce needs and trends that are impacting needs.	K. Smith and K. Zelesnik staff the Panel, AWS Co-PI	Months 10-16
	1.1.3. Analyze the data and use the information to forecast industry workforce needs and related trends to drive Center curriculum and program development as well as other appropriate industry-wide responses.	R. Visdos, K. Smith, K. Zelesnik, , National Partner representatives	Months 18-21
	1.1.4. Prepare and disseminate briefing documents based on the analyzed data for joint distribution through WELD-ED and AWS to educator members, WEMCO, key industry groups and others.	R. Visdos, K. Smith, K. Zelesnik, AWS Co-PI	Months 22-24
	1.1.5. Conduct two days of Skills Panel Development and Coordination Training with Community College and University Partner representatives at the 2007 AWS Conference.	Sea-King WDC staff and R. Visdos	Month 5
	1.1.6. Establish local/regional Skills Panel in each community college/ university partner community comprised of various senior industry representatives (from different industries), the AWS chapter president, partner staff, and other key industry partners to gather local/regional “forward” industry workforce needs data for welders, welding technicians, and welding engineers.	Community college and university partner staff and the AWS section chairman	Months 6-8

	1.1.7. Use the local/regional Skills Panel members to gather local/regional data from their particular industry that reflect short-term (up to 2 years), mid-term (2-4 years) and long-term (4+ years) workforce needs and trends that are impacting needs.	Community college and university partner staff and the AWS section chairman	Months 9-14 Repeats in: Months 19-26 Months 31-38
	1.1.8. Analyze the local/regional data and use that information to forecast industry workforce needs and related trends to drive local/regional partner curriculum and program development as well as other appropriate industry-wide responses.	Community college and university partner staff and the AWS section chairman. Support from WELD-ED staff and R. Visdos	Months 15-16 Repeats in: Months 27-28 Months 39-40
	1.1.9. Prepare and disseminate local/regional briefing documents based on the analyzed data for joint distribution through the community college or university partner, WELD-ED and AWS to educator members, key industry groups and others.	Community college or university partner staff, AWS section chairman and Co-PI, WELD-ED staff, and R. Visdos	Month 17 Repeats in: Months 29 and 41
	1.1.10. Prepare and disseminate a national report on “The State of Welding Education” based on the data collected by the national and regional Skills Panels and the analysis that was performed on that data.	WELD-ED staff, R. Visdos, AWS Co-PI and Vol (ECR); LCCC Graphics Designer	Months 17-18 Repeats in: Months 29-30 Months 41-42
Objective 1.2. - To improve existing welding technology associate degree programs in areas where there is a need for welders, welding technicians, and welding engineers. Total Cost: \$339,787 (7%)	1.2.1. Develop a survey, evaluation instrument, criteria, and matrix to gather data on all community college and university welding, welding technician and welding engineering programs (including curriculum) that exist in the U.S. This will be a joint WELD-ED and AWS activity.	K. Smith, K. Zelesnik, AWS staff, D. Dickinson, and education partners.	Months 1-4

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	1.2.2 Disseminate request for curriculum to be evaluated and possibly included as part of the Center (AWS Show, mailer to AWS membership, ACTE, other educator focused groups)	K. Smith and WELD-ED staff	Months 4-48
	1.2.3. The information that is collected from the survey will be reviewed by a team consisting of partner college staff, national partner representatives and others prior to posting the program at the WELD-ED web site through the curriculum data base.	D. Dickinson, University and community college partner staff, national partner representatives and WELD-ED staff	Months 6-48
	1.2.4. After the information is reviewed and the quality of the program is determined, the information regarding that program will be posted on the WELD-ED web site with hyperlinks	WELD-ED staff	Months 6-48
	1.2.5. WELD-ED will develop and implement a national data base to house the collected program information as well as to catalog and cross-reference programs by the type of industry served, equipment used in training, degree and non-degree programs, etc.	LCCC Web Master and WELD-ED staff	Months 6-15
	1.2.6. WELD-ED will work with its university and college partners to identify which programs (including Career Pathways) they currently operate that should be marketed nationally through the Center (in addition to being listed in the data base).	K. Smith, K. Zelesnik, , Jim Key, community college and university partners, AWS Staff	Months 5 – 9
	1.2.7. WELD-ED will work with AWS and national welding equipment manufacturers to identify welding, welding technician and welding engineering curricula (and Career Pathways) that should be marketed nationally through the Center.	K. Smith, , K. Zelesnik, AWS Co-PI, CAB	Months 6 – 15(primary) and on-going to month 48

	1.2.8. WELD-ED will develop and implement a national targeted marketing plan to promote the acquisition of appropriate curricula that is being offered through the Center and its partners, especially in areas where there is a documented need for welders, welding technicians and welding engineers.	WELD-ED staff, all community college and university partners, LCCC Web Master and Graphic Designer, and AWS Vol (ECR)	Months 6 – 12
	1.2.9. WELD-ED will develop and implement a pricing strategy for offering identified curriculum to partners and non-partner educational entities.	K. Smith, K. Zelesnik, , with input from AWS Co-PI, college and university partners	Months 6 – 12
	1.2.10. Establish state-of-the-art facilities for welding at Partner Schools consistent with their industry driven curriculum needs. College Partners shall leverage their position with WELD-ED and industry suppliers to identify and obtain equipment by donation or consignment.	College and Partners Industry Partners, AWS	Months 12-24
1.3. To increase the effectiveness of student recruiting and retention in welding, welding technician and welding engineering programs. Total Cost: \$174,278 (3%)	1.3.1. Investigate existing targeted marketing efforts of various organizations and institutions (i.e. ASEE, SWE, SBE, etc.)	K. Smith, K. Zelesnik, S. Fain, and AWS Co-PI	Months 1- 5
	1.3.2. Develop and implement a targeted recruiting strategy that will be implemented on a national level as well as through college and university partners at the local/regional level. The strategy will also be linked to the NAM “Dream It! Do It! Campaign nationally and locally (MAGNET in the Cleveland area) and other existing organizations and Associations as appropriate. The primary focus of the Dream It! Do! Program locally is to improve the image of the manufacturing industry and improve the recruitment to manufacturing based careers.	K. Smith, S. Fain, WELD-ED staff, community college and university partners, LCCC Graphic Designer, NAM reps., AWS Co-PI, local AWS Section Chairmen	Months 6-12

	1.3.3. Link the recruiting strategy to the best practices identified by the ATE Centers through the Evaluation Center at Western Michigan University and the “Recruiting Toolkit” offered on the NSF-AACC “Pathways to Technology” web site.	WELD-ED staff, ATE Center staff, Evaluation Center staff at WMU and appropriate representatives from NSF and AACC	Months 6-12
	1.3.4. WELD-ED will conduct workshops and career fairs, as appropriate, at community college and university partner campuses, industry sites, and other appropriate venues/ locations in an effort to increase student enrollment including targeted populations, high school students, unemployed or underemployed individuals.	K. Smith, S. Fain, WELD-ED staff, community college and university partners, AWS staff and industry partners (as appropriate)	Months 9 – 48
	1.3.5. WELD-ED will work with the industry partners to develop and implement a strategy to promote retention in programs despite the urgency of employer hiring needs. This strategy will promote the concept of “learning while earning” as well as internships and co-ops.	K. Smith, K. Zelesnik, WELD-ED staff, AWS staff and industry partners.	Months 12 – 48
	1.3.6. WELD-ED staff will work with AWS in developing a quantitative and qualitative evaluation strategy to measure the effectiveness of both the recruitment and retention strategies.	K. Smith, K. Zelesnik, LCCC PSI	Months 12 – 18
1.4. To significantly increase workforce diversity through the targeted recruitment and retention of women, minorities and people with disabilities. Total Cost: \$354,585 (7%)	1.4.1. WELD-ED staff will work with ATE Center directors from throughout the U.S. to identify best practices and strategies that have been used to increase recruitment of women, minorities and people with disabilities into programs.	K. Smith, K. Zelesnik, and ATE Center directors	Months 1- 9

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	1.4.2. WELD-ED staff will integrate the identified best practices and strategies into the recruitment strategy (1.3.1.) and the retention strategy (1.3.4.) and it will be shared with partners and implemented accordingly.	K. Smith, K. Zelesnik, S. Fain, and R. Visdos	Months 3 – 12
	1.4.3. WELD-ED will work with AWS to identify and hold meetings with national organizations and key local organizations that promote employment of women in non-traditional occupations, the hiring of minorities, and employment of persons with disabilities in non-traditional occupational areas such as welding, welding technicians and welding engineers to discuss recruitment and retention strategies.	K. Smith, K. Zelesnik, and AWS Co-PI	Months 3 – 12
	1.4.4. WELD-ED will develop targeted marketing brochures and other collateral materials that will depict women, minorities and people with disabilities to be used in recruiting the targeted populations.	K. Zelesnik, S. Fain, LCCC marketing staff, and LCCC Graphic Designer	Months 6 – 12
	1.4.5. WELD-ED will promote enrollment of targeted individuals as well as high school students, unemployed and underemployed individuals through participation (booths and presentations) at national/regional conferences, job fairs that impact the targeted populations, and through events sponsored by organizations that support those targeted populations	WELD-ED staff, S. Fain and representatives from all partners	Months 9 – 48
	1.4.6. WELD-ED staff will work with AWS in developing a quantitative and qualitative evaluation strategy to measure the effectiveness of both the targeted recruitment and retention strategies.	K. Smith, K. Zelesnik, LCCC PSI staff	Months 12 – 18

Goal #2 – Make significant gains towards the comprehensive reform of welding education.

Objective	Activities	Responsible party	Timeline
<p>Objective 2.1. – To provide educators with a contemporary welding curriculum, including upgraded STEM and other core courses that are cataloged and available for dissemination. Total Cost: \$239,759 (5%)</p>	<p>2.1.1. – The information that is gathered through the Skills Panels activities (Objective 1.1) and the curriculum data collection activities (1.2) will be analyzed to determine best practices, best curricula that should be disseminated by the Center.</p>	<p>K. Smith, R. Visdos, the AWS Education Committee, C. Albright (OSU), D. Dickinson, and industry representatives</p>	<p>Months 13 -48</p>
	<p>2.1.2. – The information in 2.1.1 will also be used to perform a gap analysis between existing curricula and current/projected employer needs.</p>	<p>K. Smith, R. Visdos, community college and university partner reps., AWS Education Committee, the CAB and NVC</p>	<p>Months 12 - 48</p>
	<p>2.1.3. – New courses or course components will be developed to address the identified skills gaps. Included in the curriculum will be specific manufacturing process associated with welding, including advanced techniques, general education requirements including mathematics, science, computer use, safety, and communication skills. ABET learning outcomes and assessments will be developed and provided to participating colleges to enable them to seek certification.</p>	<p>Community college and university partners, and the AWS Education Committee</p>	<p>Months 15 - 48</p>
	<p>2.1.4. – Beta test new curriculum/educational materials for the classroom and labs in the LCCC Welding Program and at community college and university partner institutions as appropriate.</p>	<p>LCCC welding faculty, community college and university partner welding faculty</p>	<p>Months 25 - 48</p>

	2.1.5. – Use the annual reports from the Skills Panel initiatives (1.1.9, 1.1.10, 2.1.1. and 2.1.2.) to develop forecasts of regional and national emerging curriculum needs	K. Smith, R. Visdos, AWS Education Committee, industry reps., and welding equipment reps.	Months 24 - 48
	2.1.6. WELD-ED staff will work with AWS in developing a quantitative and qualitative evaluation strategy to measure the effectiveness of the curriculum evaluation process, new course/component development and trend forecasting.	K. Smith, LCCC PSI staff and AWS Co-PI	Months 12 – 18
Objective 2.2. – Establish a national network of community college and university partner institutions. Total Cost: \$247,238 (5%)	2.2.1. – WELD-ED will develop and negotiate partnership agreements with its five initial partner institutions that outline roles, responsibilities, intellectual property ownership, and financial remuneration.	K. Smith, LCCC legal counsel, community college and university partner representatives, AWS Co-PI	Months 1 - 3 (and beyond for future partners)
	2.2.2. – WELD-ED will develop a strategy for the controlled growth of the national network through the addition of approximately four new partners every other year, as well as a criteria for selection of those institutions.	K. Smith, and R. Visdos	Months 1-6
	2.2.3. – WELD-ED will work with its institutional partners, AWS, industry partners and welding equipment partners to identify potential new partner institutions to be added to the network.	K. Smith, AWS staff, community college and university partners, industry partners, and welding equipment partners.	Month 12 – 48
	2.2.4. – WELD-ED will hold an annual meeting of its community college and university partners at the annual AWS Conference.	K. Smith, J. Key, community college and university partners, and the AWS staff	Months 5, 17, 29, and 41

	2.2.5 At the annual AWS Show, WELD-ED will share with the education committee and the entire AWS membership the annual efforts made in helping to improve the education of welding educators and technicians	K. Smith, J. Key, WELD-ED staff	Months 5, 17, 29, and 41
	2.2.6. - WELD-ED staff will develop a quantitative and qualitative evaluation strategy to measure the effectiveness of the partnership as well as the effectiveness of the national network.	K. Smith, and LCCC PSI staff	Months 1-6
Objective 2.3. – To implement advanced laboratory equipment and techniques at the LCCC WELD-ED Center as well as with partner institutions based on current capability and industry needs. Total Cost: \$487,944 (10%)	2.3.1. – WELD-ED will develop a plan for upgrading the LCCC Welding Lab to become a state-of-the-art facility to be used for educational purposes as well as showcasing new technology, methods and techniques in welding.	K. Smith, , K. Zelesnik, R. Visdos, C. Albright (OSU), D. Dickinson, and industry reps.	Months 1-12
	2.3.2. – WELD-ED will enter into partnerships with key welding equipment manufacturers to establish a state-of-the-art welding lab environment at for the Center at LCCC.	K. Smith, K. Zelesnik, J. Key, LCCC welding faculty, and representatives from Miller, Hobart, Esab, and Lincoln Electric.	Months 3 and beyond (on-going)
	2.3.3. – The new WELD-ED welding facilities at LCCC become operational.	K. Smith, representatives from Hobart, Miller, Esab and Lincoln Electric	Month 13

	2.3.4. – WELD-ED staff will work with community college and university partner staff to identify lab upgrade needs at each partner location.	K. Smith, C. Albright (OSU) and representatives from each community college and university partner	Months 5-16
	2.3.5. – WELD-ED staff and partner staff will develop/ negotiate partnerships with the four major welding equipment companies, and consumable manufacturers, to leverage state-of-the-art lab equipment for each of the partner institutions.	K. Smith, J. Key representatives from each community college and university partner and representatives from Hobart, Miller, Esab and Lincoln Electric	Months 5-48
	2.3.6. – New partner lab facilities become operational.	Community college and university partners	Months 24-48 (as appropriate)
	2.3.7. WELD-ED staff will develop a quantitative and qualitative evaluation strategy to measure the effectiveness of the partnership strategies as well as their educational impact.	K. Smith, K. Zelesnik, LCCC PSI staff and AWS staff	Months 6-12
Objective 2.4. – To provide efficient and effective dissemination of educational materials to educational partners and institutions in their region/locality. Total Cost: \$272,924 (5%)	2.4.1. – WELD-ED will survey its community college and university partners to identify each partner’s instructional technology infrastructure and potential for e-learning.	K. Zelesnik, J. Key, community college and university partners.	Months 1-3

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	2.4.2. – WELD-ED will develop and implement a strategy for the effective and timely dissemination of educational materials (curriculum and lab modules) to its community college and university partners.	K. Smith, K. Zelesnik, LCCC Web Master, LCCC Graphic Designer, and community college and university partners	Months 3-6
	2.4.3. – WELD-ED will work with the community college and university partners to identify new technology infrastructure that can enhance instructional delivery at each site (as well recommended funding sources to expand that instructional technology infrastructure).	K. Zelesnik, R. Visdos and community college and university partners.	Months 6 – 48
	2.4.4. – WELD-ED staff will work with each community college and university partner to develop a local/regional dissemination and marketing plan that each institution can use in effectively providing training and professional development training throughout their area.	K. Zelesnik, LCCC Web Master, LCCC Graphic Designer, community college and university partner staff, and AWS section chairmen	Months 6-12
	2.4.5. – Beta testing of the instructional technology infrastructure dissemination system at LCCC and all community college and university partners	K. Zelesnik, LCCC welding faculty and all community college and university partners	Months 6-12
	2.4.6. – Beta testing of the instructional technology infrastructure dissemination system to be used by the community college and university partners in their locale or region.	Community college and university partners with support from K. Zelesnik.	Months 10-12
	2.4.7. WELD-ED staff will develop a quantitative and qualitative evaluation strategy to measure the effectiveness of the technology dissemination infrastructure at LCCC as well as at the community college and university partner locations.	K. Smith, K. Zelesnik, and LCCC PSI staff.	Months 12 – 15

<p>Objective 2.5 – To create a central repository for welding educational materials. Total Cost: \$279,022 (6%)</p>	<p>2.5.1. – WELD-ED will use the database that was developed through 1.2.5. to implement the national data base (central repository) to house collected program information (1.2.1, 1.2.2. and 1.2.3) as well as to catalog and cross-reference programs by the type of industry served, equipment used in training, degree and non-degree programs, etc.</p>	<p>WELD-ED staff, J. Key, and LCCC Web Master</p>	<p>Months 6-18</p>
	<p>2.5.2. – WELD-ED will continuously improve the quality of the central repository database through on-going customer surveys to gauge their satisfaction with the system and its usability.</p>	<p>WELD-ED staff</p>	<p>Months 10 – 48</p>
	<p>2.5.3. – WELD-ED staff will develop and implement a protocol for the periodic updating (annually) of information within the central repository to ensure that it is current and of value to the end user.</p>	<p>WELD-ED staff</p>	<p>Months 10-12</p>
	<p>2.5.4. - WELD-ED staff will develop a quantitative and qualitative evaluation strategy to measure the effectiveness and usability of the central repository data base as well as customer satisfaction.</p>	<p>K. Smith, and LCCC PSI staff.</p>	<p>Months 10 – 48</p>
<p>Objective 2.6 – To infuse national skills standards into curriculum and professional development. Total Cost: \$222,403 (4%)</p>	<p>2.6.1. – WELD-ED staff will work with AWS and other appropriate organizations (including educational partners) in developing a strategy to effectively infuse national skills standards into new curriculum that is developed as well as to add curriculum modules to existing curriculum whenever possible.</p>	<p>K. Smith, C. Albright (OSU), D. Dickinson, the AWS Co-PI, community college and university partner representatives, and representatives from organizations working towards national skills standards in welding, welding technician and welding engineering areas.</p>	<p>Months 12 - 18</p>

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	2.6.2. – WELD-ED will enter into partnership agreements with AWS and organizations such as NACFAM, NAM and others that are concerned with the infusion of national skills standards in welding, welding technician and welding engineering areas in future curriculum.	K. Smith, the AWS Executive Director, NACFAM, NAM and other organizations.	Months 12-48
	2.6.3. – WELD-ED staff will work with AWS, NACFAM, NAM and others in identifying national skills standards that should be infused into future and current welding, welding technician and welding engineering curriculum.	K. Smith, C. Albright (OSU), D. Dickinson, the AWS staff and Education Committee, NACFAM, NAM and other organizations.	Months 16 – 48
	2.6.4. – WELD-ED will work with its community college and university partners as well as AWS, NACFAM, NAM and others to develop new curriculum that includes the national skills standards whenever possible, as well as in developing add-on instructional modules that can be infuse the skills standards into existing curriculum.	K. Smith, C. Albright (OSU), D. Dickinson, LCCC welding faculty, community college and university partner faculty, the AWS Co-PI, NACFAM and NAM representatives	Months 22 – 48
	2.6.5. – WELD-ED will work with AWS, NACFAM and NAM to develop certifications that are tied to the new curriculum and add-on modules based on the infused skills standards.	K. Smith, C. Albright (OSU), D. Dickinson, LCCC welding faculty, community college and university partner faculty, the AWS Co-PI, NACFAM and NAM representatives	Months 22 - 48
	2.6.6. – WELD-ED will beta test the new curriculum and add-on modules at the WELD-ED LCCC welding facility.	K. Smith and LCCC welding faculty	Months 22-24

	2.6.7. – WELD-ED will provide instruction and certification of professional instructors and faculty to the skills standards to enable them to deliver the new curriculum and add-on modules.	K. Smith, C. Albright (OSU), D. Dickinson, LCCC welding faculty, community college and university faculty members.	Months 24 - 48
	2.6.8. - WELD-ED staff will develop a quantitative and qualitative evaluation strategy to measure the effectiveness of infusing the national skills standards into the curriculum and add-on modules especially in terms of passage of national skills standards certification examinations.	K. Smith and LCCC PSI staff.	Months 24 - 26

Goal #3 – Enhanced faculty professional development and continuing education

Objective	Activities	Responsible party	Timeline
3.1. – To develop faculty professional development courses and materials for dissemination to educational partner organizations. Total Cost: \$404,155 (8%)	3.1.1. - Research seminars and workshops that exist (or are currently offered) that are designed for the continuous education/professional development of welding educators.	J. Key, C. Albright (OSU), D. Dickinson, WELD-ED staff, educational partners, AWS Co-PI	Months 1-48
	3.1.2. – WELD-ED will develop course materials and demonstrations that will be done in person at the Center as well as broadcast to the community college and university partner sites.	K. Smith, C. Albright (OSU), D. Dickinson, LCCC welding faculty, and community college and university partner faculty	Months 6 - 48

	3.1.3. – WELD-ED staff will work with OEM’s on the development, beta testing and implementation of a series of train-the-trainer workshops that targets training faculty to industry specified certification levels and standards that will be delivered at all community college and university partner sites including LCCC during the summer months.	K. Smith, community college and university partners and OEM personnel / instructional staff	Months 4-12 for development Implemented annually during the summer months (12-14, 24-26, 36-38, and beyond)
	3.1.4. – WELD-ED staff will work with community college and university partner representatives in devising a professional development plan template that can be used by faculty and instructional staff who are interested in developing an overall professional development plan including participating in the workshops in 3.1.3.	K. Smith, community college and university partner representatives, and the AWS Co-PI	Months 9-12
	3.1.5. – WELD-ED staff will work with OEM representatives and community college and university partner representatives to continuously improve the summer workshop offerings based upon evaluative criteria that will be developed through 3.1.5.	K. Smith, OEM representatives and instructors, and community college and university partner representatives.	Months 14 - 48
	3.1.6. - WELD-ED staff will develop a quantitative and qualitative evaluation strategy to measure the effectiveness of the summer workshop series as well as customer satisfaction.	K. Smith and LCCC PSI staff.	Months 11-12
3.2. – To conduct faculty training and continuing education through the educational partners. Total Cost: \$318,846 (6%)	3.2.1. – WELD-ED will work with the community college and university partners to develop and deliver continuing education course offerings (delivered using a variety of instructional modalities) that are based on the needs that were identified through the national and local/ regional skills panels as well as the curriculum gap analyses that were performed under objectives 1.1. and 1.2.	K. Zelesnik, D. Dickinson, LCCC welding faculty, community college and university partner faculty and the AWS Co-PI	Month 12 - 48

	3.2.2. – WELD-ED will beta test all of the new continuing education workshops and course offerings using faculty and students from the LCCC welding technician program.	K. Zelesnik and LCCC welding faculty	Months 12 - 48
	3.2.3. – WELD-ED staff will work with community college and university partner faculty to use the professional development template that was developed under 3.1.4., to determine the professional development needs of each participating faculty member or instructor as well as to track progress towards those goals.	K. Smith, K. Zelesnik and community college and university partner representatives and faculty	Months 12 - 48
	3.2.4. - WELD-ED staff will develop a quantitative and qualitative evaluation strategy to measure the effectiveness of the continuing education workshops and course offerings as well as customer satisfaction.	K. Smith, K. Zelesnik, and LCCC PSI staff.	Months 11-12
3.3. – To provide professional development opportunities including externships for technologically proficient staff. Total Cost: \$318,310 (6%)	3.3.1. – WELD-ED will work with its community college and university partners and industry partners to identify and develop externship opportunities for faculty who have completed the summer workshop series and are seeking an industry specific work experience to further enhance their professional development.	K. Smith, S. Fain, community college and university partner representatives, the AWS Co-PI, industry representatives and welding equipment vendor representatives	Months 5 - 48
	3.3.2. – WELD-ED will work with its community college and university partners, industry representatives and welding equipment vendor representatives to organize and deliver demonstrations on the latest state-of –the-art welding technology at LCCC and the community college and university partner sites or at industry sites for non-portable equipment.	K. Smith, the AWS Co-PI, community college and university partner representatives, and welding equipment vendor representatives or instructors.	Months 6 - 48
	3.3.3. - WELD-ED staff will develop a quantitative and qualitative evaluation strategy to measure the effectiveness of the externships and welding equipment demonstrations as well as customer satisfaction for those participating in these activities.	K. Smith, K. Zelesnik, and LCCC PSI staff.	Months 6-8 for demonstrations. Months 10-12 for the externships

<p>3.4. – To utilize the AWS Welding Show as part of a long-range plan for professional development activities. Total Cost: \$322,880 (6%)</p>	<p>3.4.1. – WELD-ED will plan and conduct an annual national education conference in conjunction with the annual AWS Conference/Show.</p>	<p>K. Smith, Jim Key, C. Albright (OSU), and the AWS Co-PI</p>	<p>Months 1-48</p>
	<p>3.4.2. – WELD-ED will work with the community college and university partners, the industry partners and welding equipment vendors to develop a track of educational workshops that will be offered at each annual conference.</p>	<p>K. Smith, Jim Key, the AWS Co-PI, community college and university partner representatives, industry representatives and welding equipment vendors, as appropriate.</p>	<p>Months 1-48</p>
	<p>3.4.3. – WELD-ED staff will work with the partners in 3.4.2. to deliver the track of workshops at each annual conference.</p>	<p>K. Smith, Jim Key, the AWS Co-PI, community college and university partner representatives, industry representatives and welding equipment vendors, as appropriate.</p>	<p>Months 5, 17, 29, and 41</p>
	<p>3.4.4. – WELD-ED will develop workshop evaluation forms that will be completed by attendees at each workshop as a means of determining the effectiveness of the workshop and presenters</p>	<p>K. Smith and the AWS Co-PI</p>	<p>Month 4</p>
	<p>3.4.5. – WELD-ED staff will evaluate the responses from the workshop evaluation forms to determine the overall success of the workshops as well as the relevance of the workshops to the attendees.</p>	<p>K. Smith and the AWS Co-PI</p>	<p>Month 5, 17, 29 and 41.</p>

Goal #4 – Ensure the effective and efficient management of the WELD-ED Center and operations. Establish Effective Reporting and Evaluation of Program Objectives

Objective	Activities	Responsible party	Timeline
4.1. – To effectively and efficiently manage and continuously improve the WELD-ED Center and its operations. Total Cost: \$345,390 (7%)	4.1.1. – WELD-ED management staff will provide monthly internal project reports to LCCC senior management.	K. Smith, and K. Zelesnik	Months 1-48
	4.1.2. – WELD-ED management staff will complete all required NSF annual reports using the “Fastlane” system	K. Smith	Months 11-13 Months 23-25 Months 35-37 Months 47-49
	4.1.3. – WELD-ED management staff will work with the internal and external evaluators in devising the annual evaluation plans for the project using the NSF Evaluation Guidebook.	K. Smith, PSI staff and Dick Hinkley	Months 9-12
	4.1.4. – PSI will coordinate the completion of an Evaluation Plan	PSI, Program Evaluator PI- K. Smith	Month 3
	4.1.5 - WELD-ED will contract with the Public Services Institute at LCCC to conduct the internal evaluation of the project on an annual basis using the NSF Evaluation Guidebook. The internal report will be shared with NSF annually.	K. Smith, and PSI staff.	Months 13-15 Months 25-27 Months 37-39 Months 49-51
	4.1.6. – WELD-ED will contract with Richard Hinckley to conduct an annual external evaluation of the project using the NSF Evaluation Guidebook. The external report will be shared with NSF annually.	Richard Hinckley	Months 13-15 Months 25-27 Months 37-39 Months 49-51
	4.1.7. – A National Visiting Committee will be convened to provide guidance to the project. The Committee will meet annually.	National Visiting Committee Members (to be selected)	Months 13, 25, 37 and 49

	4.1.8. - An Advisory Committee will be convened to oversee the progress of the National Center and to make recommendations to the PI, Co-PIs and WELD-ED management team. The Advisory Committee will be convened annually at the AWS Trade Show.	Advisory Committee members	Months 5, 17, 29 and 41
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Goal #5 – Ensure the sustainability of WELD-ED and its operations beyond the NSF Grant Period.

Objective	Activities	Responsible party	Timeline
5.1. – To ensure that WELD-ED is sustained at minimum at the NSF funding level once NSF funding has been exhausted. Total Cost: \$297,067 (6%)	5.1.1. – To develop and implement a sustainability plan that will include the development of saleable products and services, external funding support beyond NSF, and a resource development strategies that will be used in seeking corporate and charitable foundation support.	K. Smith, , Karen Wells, Marcia Ballinger, R. Visdos, J. Key, the AWS President, the AWS Education Coordinator, industry partners and welding equipment vendors.	Months 6-12 for plan development Months 13 and beyond (on-going) for plan implementation
	5.1.2. – Explore all potential opportunities for developing saleable products and services that will support future WELD-ED operations	K. Smith, J. Key, community college and university partners, all national partners, industry partners and welding equipment vendors	Months 6 - 48
	5.1.3. – Explore all potential corporate and charitable foundation funding opportunities and develop and submit proposals when appropriate.	K. Smith, AWS President, J. Key, Marcia Ballinger and R. Visdos	Months 6 - 48
	5.1.4. – Explore corporate partnership opportunities that will create a future income stream for WELD-ED once the partnerships are developed and implemented.	K. Smith, AWS President, Marcia Ballinger and R. Visdos	Months 6 - 48

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	5.1.5. – Evaluate the effectiveness of the WELD-ED sustainability campaign.	K. Smith, Marcia Ballinger, Karen Wells, PSI staff and Dick Hinkley	Months 18 - 48 with annual reports by PSI and Dick Hinkley
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