Ohio | Department of Higher Education

John R. Kasich, Governor
John Carey, Chancellor

REQUEST AND RECOMMENDATION

ONE YEAR OPTION
600- 899 Clock Hour Programs –Welding

Background:

To provide another option for adult students to apply prior learning toward a degree, Ohio legislators established what has come to be known as the One-Year-Option through Section 363.120 House Bill 59 of the 130th General Assembly. The Chancellor of the Ohio Department of Higher Education, in consultation with the Superintendent of Public Instruction and the Governor's Office of Workforce Transformation, was tasked to establish a One-Year Option credit articulation system in which graduates of Ohio's adult career-technical institutions who complete a 900-hour program of study AND obtain an industry-recognized credential approved by the Chancellor will be able to receive 30 technical semester credit hours toward a technical degree upon enrollment in a public institution of higher education. The Chancellor was also to recommend a process to award proportional semester credit hours for adult career-technical institution students who complete a program of study between 600 and 899 hours AND obtain an industry-recognized credential approved by the Chancellor. The Chancellor convened a broad group of stakeholders to develop a system of articulation for the One Year Option that was presented in a report to the legislature called, *"Getting to 30: Establishing a One Year Option Credit Articulation System for Ohio."*

In order to implement the system of articulation developed with the stakeholders as well as address accreditation requirements for degree granting institutions, the Chancellor convened Credit Affirmation Teams (CATs) to conduct a peer review of programs and certifications for affirmation for a block of 30 semester hours of technical credit. The CATs were comprised of faculty and administrators from Ohio Technical Centers (OTCs) and an equal number from public degree granting colleges and universities in Ohio. The CATs were organized by four discipline clusters: Health and Allied Health, Building and Industrial Technology, Business and Information Technology, and Services. They were charged with reviewing the certifications and, if necessary, program content, to affirm that students completing the selected program at an Ohio Technical Center and earned approved certifications had demonstrated competencies equivalent to technical credit. CATs affirmed that programs over 900 hours, articulated to a block of 30 technical credit hours. For programs between 600-899 credit hours, the review resulted in a proportional amount of credit hours being awarded. This technical credit would then be granted, as a block, upon enrollment in a degree granting institution. Additional subject matter experts were consulted when core team members did not have sufficient content knowledge of the program being reviewed.

Recommendation

As detailed in the attached template, the Building and Industrial Technology Credit Affirmation Team recommends that students will be eligible for a block of 20 semester hours of technical credit towards an *Associate of Technical Studies in Building and Industrial Technology* when:

- the student has successfully completed a 600-899 clock hour program in Welding at an Ohio Technical Center.

And currently meets requirements for one of the following pathways:

Pathway 1:
Students must currently hold **ALL** of the following credentials:

- NCCER Core
- NCCER Welding Level 1
- OSHA 10 General Industry

Pathway 2:
Students must currently hold at least **THREE** of the following credentials:

- AWS D1.1 Structural Welding Code – Steel: Flux Cored Arc Welding (MIG) Flat Position, Groove Weld (FCAW, 1G)
- AWS D1.1 Structural Welding Code – Steel: Gas Metal Arc Welding, Flat Position, Groove Weld (MIG) (GMAW, 1G)
- AWS D1.1 Structural Welding Code – Steel:, Shielded Metal Arc Welding, (Stick Welding) Flat Position, Groove Weld (SMAW, 1G)
- AWS D1.1 Structural Welding Code – Steel: Gas Tungsten Arc Welding (TIG), Flat Position, Groove Weld (GTAW, 1G)

AND students must currently hold the following credential:

- OSHA 10 General Industry

Please note these certifications must be current and valid. Student must have completed an Ohio Technical Center program within 5 years.

One-Year Option

Certification Affirmation Template

End of Comment Period: May 24, 2017 at 3:45 PM
No comments received, recommend approval

RECOMMENDATION	
The Vice Chancellor has verified that this institution has met the standards and requirements of the Ohio Department of Higher Education.	
S Davidson	5/31/17
Stephanie Davidson, Vice Chancellor of Academic Affairs	**Date**

APPROVAL	
J R Carey	6/8/17
John Carey, Chancellor	**Date**

mlc

One-Year Option

Certification Affirmation Template

The Program Affirmation Template is designed to provide a common matrix for a peer review process acceptable to the Higher Learning Commission to soundly affirm awarding technical credit for Ohio Technical Center graduates who are eligible for the One Year Option. The template should be completed for every program/subject and signed by the co-chairs of each of the four-cluster program areas for every Industry-recognized credential and program reviewed.

Please note: All Ohio Technical Centers must be accredited by one of the following: Council on Occupational Education (COE) and/or Accrediting Commission of Career Schools and Colleges (ACCSC).

Program Name:	**Cluster**
Welding Technology/ Welder **CIP Code**: 48.0508	☐ Business & Information Technologies ☐ Health/Allied Health ☑ Industrial Trades ☐ Service Industries & Agriculture

CIP CODE DEFINITION

A program that prepares individuals to apply technical knowledge and skills to join or cut metal surfaces. Includes instruction in arc welding, resistance welding, brazing and soldering, cutting, high-energy beam welding and cutting, solid state welding, ferrous and non-ferrous materials, oxidation-reduction reactions, welding metallurgy, welding processes and heat treating, structural design, safety, and applicable codes and standards.

STEP ONE: CREDENTIAL REVIEW: PATHWAY 1

	Details/Explanation	**Comments**
Primary Industry Credential (if there are competing certifications complete page multiple times)	**Name:** The National Center for Construction Education and Research (NCCER) Certifications **Type:** ☐ License ☐ Registry ☑ Certification	**Certifications:** • NCCER Core • NCCER Welding Level 1
Program requirements by credentialing body.	The program must be a NCCER Accredited Training Sponsor (ATS) and a NCCER Accredited Assessment Center. "Entities that have been approved by NCCER as having the resources to effectively conduct a quality training program that utilizes NCCER curriculum are designated as an ATS. Entities that have been approved by NCCER as having the resources to effectively conduct a quality assessment program that utilizes the National Craft Assessment and Certification Program (NCACP) assessments and performance verifications are designated as an	**About the Exams:** NCCER offers a complete series of entry- and journey-level written assessments as part of its National Craft Assessment and Certification Program (NCACP). These assessments evaluate the knowledge of an individual in a specific craft area and provide a prescription for upgrade training when needed. All assessments are based upon the NCCER Curriculum and have been developed in conjunction

	NCCER Accredited Assessment Center. NCCER's accreditation process assures that students and craft professionals receive quality training based on uniform standards and criteria. Training Sponsors and Assessment Centers are subject to audit on a three year cycle." For more information, please see: http://www.nccer.org/assessments-performance-verifications?mID=616	with Subject Matter Experts from the industry and Prov™, NCCER's test development partner. Module assessments consist of knowledge verification via the successful completion of a written assessment. In addition to the knowledge verification, some modules also require successful completion of a practical performance in the laboratory setting. **Renewal:** NCCER does not have a renewal option. **Exam Integrity:** NCCER, through their testing partner Prov, administers training module exams through a secure web-based platform, the Testing Management System. Module tests are created, launched, scored and electronically stored. Instructors and proctors are certified to NCCER requirements.
Hour Requirements (includes any instructional, lab/practice hours, or internship hours).	NCCER Core required instructional hours: 72.5 NCCER Welding 1 required instructional hours: 305 All competencies must be covered. Remaining hours may vary per program based on local advisory business/industry committees	378 clock hours of instruction to complete NCCER Curriculum requirements.
Competencies demonstrated by credential attainment.	NCCER Core Competencies: • Module 00101-09: Basic Safety • Module 00102-09: Introduction to Construction Math • Module 00103-09: Introduction to Hand Tools • Module 00104-09: Introduction to Power Tools • Module 00105-09: Introduction to Construction Drawings • Module 00106-09: Basic Rigging (Elective) • Module 00107-09: Basic Communication Skills • Module 00108-09: Basic Employability Skills • Module 00109-09: Introduction to Materials Handing NCCER Welding Level 1 Competencies: • Module 29101-09: Welding Safety • Module 29102-09: Oxyfuel Cutting	Each equipment specific module typically contains operation, controls, maintenance, and safety guidelines. NCCER Core http://www.nccer.org/uploads/fileLibrary/Core_2009_courseplanning816201351231PM63.pdf NCCER Welding Level 1 http://www.nccer.org/uploads/fileLibrary/Welding_L1_2009_courseplanning.pdf NCCER Welding Level 2

	• Module 29103-09: Plasma Arc Cutting • Module 29104-09: Air Carbon Arc Cutting and Gouging • Module 29105-09: Base Metal Preparation • Module 29106-09: Weld Quality • Module 29107-09: SMAW-Equipment and Setup • Module 29108-09: Shielded Metal Arc Electrodes • Module 29109-09: SMAW-Beads and Fillet Welds • Module 29110-09: Joint Fit-Up and Alignment • Module 29111-09: SMAW-Groove Welds and Backing • Module 29112-09: SMAW-Open V Groove Welds	http://www.nccer.org/uploads/fileLibrary/Welding_L2_2009_courseplanning.pdf
Rationale:	The Trades and Industry Credit Affirmation Team (CAT) utilized the following process to complete the assessment regarding the number of semester hours that would be awarded at the college level as block credit based on industry credential(s) plus 600 – 899 clock hours earned at an Ohio Technical Center (OTC). • Research the competencies tested by the industry credential(s). The Trades and Industry credit affirmation team (CAT) reviewed information about the industry credential(s) to determine the competencies signaled by earning the credential(s). • Complete a nationwide internet search to review how other accredited colleges and universities are applying credit to NCCER Welding Certifications as a point of comparison. Pima Community College awards approximately 41.7 college credits toward an Associated of Applied Science degree in Business and Industry Technology to students of NCCER's accredited sponsors who successfully complete NCCER Core, Welding Level 1 and Welding Level 2 standardized craft training modules and the Pima-approved challenge exam for those modules. • Review the value of local program advisory committee recommendations to meet the local industry needs. The Team concurred that there was value in having lab/practical, internships and/or externships as part of the program to meet local industry/business needs. • Review OSHA 10-Hour Hazard Recognition Training for the General Industry. OSHA 10 includes content essential to general-related work such as fall protection, personal protective equipment, fire prevention and safety, OSHA inspection procedures and more. The Trades and Industry CAT confirms: • The certifications exams are valid, reliable and peer-reviewed on a regular basis to ensure the content accurately measures intended competencies. • The competencies measured by the NCCER Core, NCCER Welding Level 1, and OSHA 10 are developed by industry and reflect industry standards. The Trades and Industry CAT also considered competencies signaled by lab and practical learning experiences. As part of	

	the program offered by OTCs, student will participate in lab/practical experience as recommended by the local program advisory committee to meet local business and industry needs. The lab/practical experiences will reinforce the instructional competencies through hands-on learning. Upon successful completion of the 600-899 hour program and attainment of the following certifications: • NCCER Core • NCCER Welding Level 1 • OSHA 10 General Industry A student shall be awarded 20 technical semester hours with the concentration in the field of welding be applied towards completion of an Association of Technical Studies at a public degree granting college or university.

-OR-

Program Name: Welding Technology/Welder **CIP Code:** 48.0508	**Cluster** ☐ Business & Information Technologies ☐ Health/Allied Health ☑ Industrial Trades ☐ Service Industries & Agriculture	
STEP ONE: CREDENTIAL REVIEW: PATHWAY 2		
	Details/Explanation	**Comments**
Primary Industry Credential (if there are competing certifications complete page multiple times)	**Name:** American Welding Society (AWS) certifications **Type:** ☐ License ☐ Registry ☑ Certification	**Students must complete at least 3 of the following AWS certifications:** • AWS D1.1 Structural Welding Code – Steel: Flux Cored Arc Welding (MIG) Flat Position, Groove Weld (FCAW, 1G) • AWS D1.1 Structural Welding Code – Steel: Gas Metal Arc Welding, Flat Position, Groove Weld (MIG) (GMAW, 1G) • AWS D1.1 Structural Welding Code – Steel:, Shielded Metal Arc Welding, (Stick Welding) Flat Position, Groove Weld (SMAW, 1G) • AWS D1.1 Structural Welding Code – Steel: Gas Tungsten Arc Welding (TIG), Flat Position, Groove Weld (GTAW, 1G)

One-Year Option

Certification Affirmation Template

Program requirements by credentialing body.	All standards (codes, specifications, recommended practices, methods, classifications, and guides) of the American Welding Society (AWS) have been developed in accordance with the rules of the American National Standards Institute (ANSI). Curriculum consists of written examination and visual inspection of performance qualification tasks.	**About the Exams:** The AWS Accredited Test Facility (ATF) program requires that a facility implements a quality assurance program that meets the requirements established in the AWS QC4-89, Standard for the Accreditation of Testing Facilities. The requirements include that the facility has a Quality Manual that controls the activities related to the testing of welders in the facility according to AWS QC7, Standard for AWS Certified Welders. QC-10:2006 – Specification for Qualification and Certification of Level 1- Entry Welder https://app.aws.org/education/sense/qc10_r0808.pdf **Renewal:** Exams need to be renewed every 6 months. **Exam Integrity:** The facility must also have a Certified Welding Instructor (CWI) on staff or contracted to perform the welder qualification tests: This individual cannot be the same person who has trained the applicant.
Hour Requirements (includes any instructional, lab/practice hours, or internship hours).	Locally developed curriculum to meet the needs of local industry needs.	
Competencies demonstrated by credential attainment.	The Basics of Welding Certifications and Test Positions Welding certifications are procedures that a welder must follow to produce a sound weld according to the guidelines that are specified. The certification is a hands-on welding test that is always supervised by an individual that has been trained and approved by the organization that wrote the procedures and certifies the welder. These tests or certifications only qualify the welder for a single	AWS Structural Welding Code – Steel http://www.menawelding.org/wp-content/uploads/2013/01/AWS_DI.1-2004.pdf Standards for Certified Welders http://www.aws.org/certification/CW/QC7-93.pdf

process and position. There is not a single welding certification that certifies a welder for all process, metals or positions.

Welding Codes
There are hundreds of different welding codes. The various codes specify the many different types of work and what organization is overseeing the welding procedures. Most of these codes certify the welder for a specified length or period of time. In most cases, the welder must have a logbook signed to show that they have welded with the process and in that position every six months. This is imperative as welders needs to stay up to date, to weld consistently.

Welding Certification Processes
The four most common types of welding processes used for certifying welders are:

- SMAW / Shielded Metal Arc Welding (Stick Welding)
- GMAW / Gas Metal Arc Welding (MIG Welding)
- FCAW / Flux Cored Arc Welding (MIG Welding)
- GTAW / Gas Tungsten Arc Welding (TIG Welding)

Welding Certification Positions
Welding certifications come in many position depending on the type of structure that will be welded. In most cases, it is broken down between structural and pipe welding. Structural positions are for welding plate and are typically the easiest to pass. Pipe positions are good for welding plate and pipe depending on what the code allows. Pipe certifications are typically much more difficult because it is an ever-changing position and never a simple straight line.

Structural positions have a coding system that identifies the position and joint type. The coding system is as follows:

1 stands for the flat position
2 stands for the horizontal position
3 stands for the vertical position

Certified Welder Application Form
http://www.aws.org/certification/docs/CW_Application_v4.pdf

Guide to interpreting the codes on a welding card
http://www.aws.org/certification/CW/cw_codes_062012.pdf

AWS - Endorsement Supplements Criteria
http://www.aws.org/w/a/certification/endorsement/criteria.html

Accredited Test Facilities Information
http://www.aws.org/certification/FacilityAccreditation

QC-10:2006 – Specification for Qualification and Certification of Level 1- Entry Welder
https://app.aws.org/education/sense/qc10_r0808.pdf

	4 stands for the overhead position F stands for a filler weld joint G stands for a groove weld joint The way this system works is the position is first stated with a number, then right next to it the letter specifies the type of weld joint used. 1F is a flat weld done using a fillet joint. 2F is a horizontal weld done using a fillet joint. 3F is a vertical weld done using a fillet joint. 4F is an overhead weld done using a fillet joint. 1G is a flat weld done using a groove joint. 2G is a horizontal weld done using a groove joint. 3G is a vertical weld done using a groove joint. 4G is a vertical weld done using a groove joint. When it comes to structural certifications in particular, groove welds (Gs) will also qualify the welder for fillet welds (Fs). However, fillet welds do not qualify the welder for groove welds. Reference: http://www.metalwebnews.com/howto/welding/welder-certification.pdf	
Rationale:	The Trades and Industry Credit Affirmation Team (CAT) utilized the following process to complete the assessment regarding the number of semester hours that would be awarded at the college level as block credit based on industry credential(s) plus 600 – 899 clock hours earned at an Ohio Technical Center (OTC). • Research the competencies tested by the industry credential. The Trades and Industry credit affirmation team (CAT) reviewed information about the industry credential(s) to determine the competencies signaled by earning the credential(s). • Complete a nationwide internet search to review how other accredited colleges and universities are applying credit to AWS certifications as a point of comparison. The team could not find any reference to AWS certifications. • Review the value of local program advisory committee recommendations to meet the local industry needs. The Team concurred that there was value in having lab/practical, internships and/or externships as part of the program to meet local industry/business needs.	

	• Review OSHA 10-Hour Hazard Recognition Training for the General Industry. OSHA 10 includes content essential to general-related work such as fall protection, personal protective equipment, fire prevention and safety, OSHA inspection procedures and more. The Trades and Industry CAT confirms: • The certifications exams are valid, reliable and peer-reviewed on a regular basis to ensure the content accurately measures intended competencies. • The competencies measured by AWS and OSHA are developed by industry and reflect industry standards. The Trades and Industry CAT also considered competencies signaled by lab and practical learning experiences. As part of the program offered by OTCs, students will participate in lab/practical experiences. The lab/practical experiences will reinforce the instructional competencies through hands-on learning. Upon successful completion of the 600 – 899 hour program in the field of welding at an Ohio Technical Center and attainment of the three of the four following AWS certifications and the OSHA 10 certification: • AWS D1.1 Structural Welding Code – Steel: Flux Cored Arc Welding (MIG) Flat Position, Groove Weld (FCAW, 1G) • AWS D1.1 Structural Welding Code – Steel: Gas Metal Arc Welding, Flat Position, Groove Weld (MIG) (GMAW, 1G) • AWS D1.1 Structural Welding Code – Steel:, Shielded Metal Arc Welding, (Stick Welding) Flat Position, Groove Weld (SMAW, 1G) • AWS D1.1 Structural Welding Code – Steel: Gas Tungsten Arc Welding (TIG), Flat Position, Groove Weld (GTAW, 1G) • OSHA 10-General Industry A student shall be awarded 20 technical semester hours towards completion of an Association of Technical Studies at a public degree granting college or university.

ONLY IF NECESSARY TO AFFIRM 20 CREDITS----STEP TWO: PROGRAM-RELATED COMPETENCIES OBTAINED OUTSIDE OF PRIMARY CREDENTIAL		
	Details/Explanation	**Comments**
Additional related complementary credential(s) or badge(s) (e.g. OSHA 10, CPR).	OSHA 10 – General Industry	

One-Year Option

Certification Affirmation Template

Competencies demonstrated by additional credential attainment.	Mandatory - 7 hours of training • Introduction to OSHA • Walking and Working Surfaces, including fall protection • Exit Routes, Emergency Action Plans, Fire Prevention Plans, and Fire Protection • Electrical • Personal Protective Equipment • Hazard Communication Elective - 2 hours of Training Must present at least two hours of training on the following topics. At least two topics must be presented. The minimum length of any topic is one-half hour. • Hazardous Materials • Materials Handling • Machine Guarding • Introduction to Industrial Hygiene • Bloodborne Pathogens • Ergonomics • Safety and Health Program • Fall Protection Optional - 1 hour of Training. Teach other general industry hazards or policies and/or expand on the mandatory or elective topics. The minimum length of any topic is one-half hour.	Must be taught by a Certified OSHA Outreach Trainer. https://www.osha.gov/dte/outreach/program_requirements.pdf OSHA safety training compliance standards are for the jobsite and individual receive a wallet card and certificate. OSHA 10 can only be taught by an OSHA Outreach Trainer in good standing, who has been approved by OSHA standards and has completed OSHA Train-the Train course work.
Description of additional program elements beyond primary credential.		
Program related competencies/learning outcomes outside of credential(s). Include how competencies are		

demonstrated.

Related Programs as of Fall 2015:

Ohio Technical Center	Program Name	Clock Hours
Alliance City School District	Welding Technologies	648
Ashland County-West Holmes Joint Vocational School District	Welding Technology	600
Auburn Career Center	Welding	620
Buckeye Career Center	Welding	600
Buckeye Hills Career Center	Welding	600
Butler Technology & Career Development Schools	Industrial Welding	624
Collins Career Technical Center	Welding	600
Eastland-Fairfield Career Technical Center	Welding	680
EHOVE Career Center	Welding Technician	850
Grant Career Center	Welding	746
Knox County Career Center	Welding Certification	685
Madison Adult Career Center	Welding Technology	630
Maplewood Career Center	Welding	610
Mid-East Career and Technology Centers	Welding	720
Penta Career Center	Welder/Welder Technologist	735
Pioneer Career & Technology Center	Welding Technology	600
Polaris Career Center	Welding	600
Portage Lakes Career Center	Welding	600
Scioto County Career Technical Center	Welding	600
The Washington County Career Center	Welding	720
The Washington County Career Center	Pipe Welding	720
Tri-Rivers Career Center	Welding, Fabrication and Allied Processes	650
Warren County Career Center	Welding Technician	600
Wayne County Schools Career Center Adult and Community Education	Welding Technology	745

Committee Members and Subject Matter Experts:

Name	Role	Institution
Barbara Wagner	Co-Chair	Upper Valley Career Center
Kelly Zelesnik	Co-Chair	Lorain County Community College
Jon Buttelwerth	Member	Cincinnati State Technical and Community College

One-Year Option

Certification Affirmation Template

	Carrie Fife	Member	Pickaway Ross Career & Technology Center
	Carl Hilgarth	Member	Shawnee State University
	Jeffrey Jones	Member	Ashland County West Holmes Career Center
	Larraine Kapka	Member	Sinclair Community College
	Mike Sizemore	Member	Miami Valley Career Technical Center
	Greg Timberlake	Member	North Central State College

Other Parameters of Competency.		
OTHER COMMENTS.	Material covered is adequate to allow 20 hours of credit to be granted.	
AFFIRMED NUMBER OF TECHNICAL BLOCK CREDITS	20 semester hours	**LENGTH OF TIME CREDENTIAL CAN BE USED FOR ONE-YEAR OPTION:** Must have completed a 600- 899 clock hour Welding program at an Ohio Technical Center and meet requirements for one of the pathways as indicated on the cover sheet. All certifications must be current and valid. Must have completed the Ohio Technical Center program within 5 years.

Co-chair signatures:

Dr. Barbara G. A. Wagner, Adult Division Director
Upper Valley Career Center – Ohio Technical Center

Kelly A. Zelesnik, Dean of Engineering Technologies
Lorain County Community College

Date: 5/5/17