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Dear Prospective Student:

Thank you for your inquiry regarding our **Welding, Fabrication and Allied Processes** program. We have enclosed the following information to assist you in learning more about the program and to allow you to begin the application process.

In this packet you should receive:

- Welders Job Outlook and Nature of Work Sheet
- Class Schedule
- Program Timeline and Cost sheet
- Welding Program Application
- Transcript request form
  - To apply for the program, you must return the student application form with the non-refundable application fee: \$95, and have an official high school transcript or GED sent.

We do have a limited number of spots available so we encourage you to apply early. If you have any questions about the information enclosed, please contact me at 740-389-8588 or call the Adult Education Receptionist at 740-389-4682 Ext 5500.

Thank you for your interest in Tri-Rivers Center for Adult Education. We look forward to assisting you with your training needs. Tri-Rivers your future, your choice!

Sincerely,

Levi Retterer

**Lead Instructor**

**Welding, Fabrication and Allied Processes Program**

***Tri-Rivers Center for Adult Education***

[lretterer@tririvers.com](mailto:lretterer@tririvers.com)

# WELDERS AND FABRICATORS

## **Nature of the Work**

Welders and Fabricators specialize in work pertaining to the field of construction, steel erection, factory production and maintenance. Welders and Fabricators inspect parts that are in need of repair or interpret blue prints and obtain the needed materials and equipment to complete the assigned task. Using hand and power tools such as saws, punches, shears, welding machines, and torches as well as measuring and layout equipment such as tape measures, squares and scribes, welders create and assemble the items needed to complete a project.

Welders and Fabricators are also called to perform related tasks at times such as grinding and finishing parts, or fitting and tacking parts for later operation. Welders often work closely with machinists and engineers to ensure that the finished item will be to the specifications set forth at the beginning of the job.

Employees in small establishments, where they are often the only welder, may be expected to be a well-rounded individual in many aspects of welding. In larger establishments, their duties may be limited to several processes and work one particular product or task.

## **Working Conditions**

Welders and Fabricators often carry out several different tasks in a single day, at any number of locations. They may work inside of a single building or in several different buildings. They may have to stand for long periods, lift heavy objects, and work in uncomfortably hot or cold environments, in awkward and cramped positions, or on ladders. They are subject to electrical shock, burns, falls, cuts, and bruises. Most welders work a 40-hour week. Some work evening, night or weekend shifts.

Those employed in small establishments often operate with only limited supervision. Those working in larger establishments frequently are under the direct supervision of an experienced worker.

## **Employment**

Employment of welders, cutters, solderers, and brazers is projected to grow 4 percent from 2014 to 2014. Skilled welders with up-to-date training should have good job opportunities.

## **Job Outlook**

Job openings should be plentiful. Welding and Fabrication is a large occupation with significant turnover, and many job openings should result from the need to replace workers who transfer to other occupations or stop working for other reasons.

Studies show that there are more than 500,000 welders employed in the U.S. And the need for these skilled workers is only getting stronger as virtually all construction and manufacturing companies require some form of welding, from the production of assemblies to maintenance and repair. Skilled welders are in short supply and the situation is only getting worse. According to AWS and other industry research, the average age of a welder is in the mid-fifties, with many approaching 60 years old. It is estimated that more than half of the industry's highly trained workforce is nearing retirement, creating a potential shortage of more than 200,000 skilled welders.

## **Earnings**

Nationally, the median wages (2015) for welders in was \$18.35 per hour or \$38,150 per year. In 2010 entry-level positions averaged \$24,490 per year, or \$11.78 per hour, while the top 10 percent of welders earned \$55,240, or \$26.56 per hour. Some Welders and Fabricators are members of unions, including the United Steel Workers Union and the United Automobile Workers.

## 51-4121.06 - Welders, Cutters, and Welder Fitters

Use hand-welding or flame-cutting equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.

**Sample of reported job titles:** Aluminum Welder, Fabrication Welder, Fabricator, Fitter/Welder, Maintenance Welder, Mig Welder, Sub Arc Operator, Welder, Welder-Fitter, Welder/Fabricator

Additional Information About this Job Classification is Available Online at:

<http://www.onetonline.org/link/summary/51-4121.06>

### Wages & Employment Trends

Median wages data collected from **Welders, Cutters, Solderers, and Brazers**.  
Employment data collected from **Welders, Cutters, Solderers, and Brazers**.  
Industry data collected from **Welders, Cutters, Solderers, and Brazers**.

**Median wages (2015)** \$18.34 hourly, \$38,150 annual

**State wages**



**Employment (2014)** 398,000 employees

**Projected growth (2014-2024)** ■■■ Slower than average (2% to 4%)

**Projected job openings (2014-2024)** 128,500

**State trends**



**Top industries (2014)** [Manufacturing](#)  
[Construction](#)

Source: Bureau of Labor Statistics [2015 wage data](#) and [2014-2024 employment projections](#). "Projected growth" represents the estimated change in total employment over the projections period (2014-2024). "Projected job openings" represent openings due to growth and replacement.

*In 2016 Welders, Cutters, and Welder Fitters were been selected as a Bright Outlook Occupation:*

**51-4121.06 - [Welders, Cutters, and Welder Fitters](#)**



Bright Outlook occupations are expected to grow rapidly in the next several years, will have large numbers of job openings, or are new and emerging occupations. [More details...](#)

[View all Bright Outlook occupations](#)

This occupation, [Welders, Cutters, and Welder Fitters](#), is projected to have large numbers of **job openings**.

## Tri-Rivers Center for Adult Education

### 2016-2017 Welding, Fabrication and Allied Processes Program

CLASS		Dates			
Course#	ORIENTATION	Friday, September 9, 2016	Hours	Cost	
WLDMW100A	Math for Welders	09/12/16 - 09/19/16	39		Quarter 1
WLDLS100A	Lab Safety	09/20/16 - 09/21/16	13		
WLD0F100A	Oxy Fuel Cutting	09/22/16 - 09/23/16	13		
WLDWP100A	Weld Print Reading	09/26/16 - 9/29/16	26		
WLD0H100A	OSHA 10 Safety Certification	09/30/16 - 10/03/16	13		
WLDSS100A	Employability - Soft Skills	10/04/16 - 10/05/16	13		
WLD5M100A	SMAW- Shielded Metal Arc Welding Q1	10/06/16 - 10/14/16	45.5		
	Quarter Hours		162.5	\$ 2,575.00	
WLD5M100B	SMAW- Shielded Metal Arc Welding Q2	10/17/16 - 10/25/16	45.5		Quarter 2
WLD5C100A	FCAW - Flux Cored Arc Welding	10/26/16 - 11/14/16	91		
WLD5F100A	Structural Fabrication	11/15/16 - 11/16/16	13		
WLD5A100A	Carbon Arc Cutting and Gouging	11/17/16 - 11/18/16	13		
	Quarter Hours		162.5	\$ 2,575.00	
WLD5M100A	GMAW - Gas Metal Arc Welding - MIG	11/21/16 - 12/13/16	91		Quarter 3
WLD5T100A	GTAW - Gas Tungsten Arc Welding - TIG Q3	12/14/16 - 01/11/17	71.5		
	Quarter Hours		162.5	\$ 2,575.00	
WLD5T100B	GTAW - Gas Tungsten Arc Welding - TIG Q4	01/12/17 - 01/17/17	19.5		Quarter 4
WLD5W200A	Intro to Pipe Welding	01/18/17 - 02/02/17	78		
WLD5R200A	Intro to Lincoln / FANUC Robotic Welding	02/03/17 - 02/15/17	52		
WLD5J100A	Employability - Job Search Techniques	02/16/17 - 02/17/17	13		
	Quarter Hours		162.5	\$ 2,575.00	
	Graduation	February 22 2017			
	Total Program Hours		650		
	Application Fee			\$ 95.00	
	Tuition			\$ 10,300.00	
	Total Tuition & Fees			<u>\$ 10,395.00</u>	
	Classes Meet 8:30 am - 3:30 pm M-F				
Quarter 1	09/12/16 - 10/14/16				
Quarter 2	10/17/16 - 10/25/16				
Quarter 3	11/21/16 - 01/11/17				
Quarter 4	01/12/17 - 02/17/17				

Tuition includes required textbooks and individual class supplies.

**Schedule is subject to change - please check with school for latest information.**

## WELDING, FABRICATION AND ALLIED PROCESSES - COURSE DESCRIPTIONS

Class	Hours	Description
Math for Welders	39	Reviews basic mathematics skills and provides practical exercises useful in the welding field. Topics include working with whole numbers, common fractions, decimal fractions, measurement, percentages and the metric system. Topics are presented in a step-by-step approach. Activities include drills and exercises focused on solutions to welding-related problems.
Lab Safety	13	Reviews the safety precautions that must be taken to insure the safe operation of welding and fabrication equipment as well as general industry safety.
Oxy Fuel Cutting	13	Learn how to safely operate oxy fuel gas cutting equipment.
Weld Print Reading	26	Provides instruction on interpreting and using the type of engineering drawings and prints found in the welding trade.
OSHA 10 Safety Certification	13	Covers the Occupational Health and Safety Administration's OSHA 10-hour general industrial safety training course. Covers recognition, avoidance abatement and prevention of safety and health hazards in workplaces in general industry.
Employability – Soft Skills	13	Covers the Ohio Means Jobs and Ohio Job and Family Services' curriculum for 21st Century Skills for Job Readiness and Soft Skill Training for Career Technology Jobs.
SMAW – Shielded Metal Arc Welding	91	Gain an understanding of arc welding, welding safety, arc welding power sources, electrode classifications and electrode selection. Class focuses on developing the necessary skills to make shielded metal arc welds in all positions from 3/16" to 1" plate.
FCAW – Flux Cored Arc Welding	91	Gain an understanding of flux cored arc welding, welding safety, flux cored arc welding power sources, types of shielding gases used in flux core arc welding, electrode classifications and electrode selection. Class focuses on developing the necessary skills to produce quality fillet and groove welds on carbon steel. Students will weld on carbon steels using small and large diameter flux-cored electrodes, with and without shielding gas, in flat and horizontal positions on fillet and groove welds.
Structural Fabrication	13	Learn basic welding related fabrication skills. Course covers the safe use of hand and power tools. Topics covered include layout, sawing, shearing, punching and fabrication.
Carbon Arc Cutting and Gouging	13	Allow students to learn how to safely use the carbon arc method to cut and gouge structural steel material.
GMAW – Gas Metal Arc Welding	91	Students will gain an understanding of gas metal arc welding, welding safety, gas metal arc welding power sources, types of shielding gases used in gas metal arc welding, electrode classifications and electrode selection. Class focuses on developing the necessary skills to produce quality gas metal arc welds on carbon steel. Students will weld on carbon steels on up to 3/8" plate, single and multiple passes.
GTAW – Gas Gas Tungsten Arc Welding	91	Students will gain an understanding of gas tungsten arc welding, welding safety, gas tungsten arc welding power sources, types of shielding gases used in gas tungsten arc welding, electrode classifications and electrode selection. Class focuses on developing the necessary skills to produce quality gas tungsten arc welds on carbon steel. Students will weld on carbon steels on up to 1/8" steel, stainless and aluminum.
Intro to Pipe Welding	78	Allow students to develop skills necessary to complete entry level pipe welding. Students will begin by practicing open root groove welds on plate using the shielded metal arc welding and gas tungsten arc welding processes. Students will practice open root pipe welding in the 1G position on schedule 80 pipe using the stick and tig process to deposit the root weld.
Intro to Lincoln / FANUC Robotic Welding	52	Designed to introduce students to Lincoln Electric Robotic Welding with FANUC Arcmate Robot. Prior to beginning this class students must complete the FANUC foundational training module.
Employability – Job Search Techniques	13	Prepares students for resume submission, interviewing and follow up. Class is designed to teach job search strategies to prepare applicants for a successful job search.



## 2016-2017 Welding, Fabrication, and Allied Processes

650 Hours / 22 Weeks

Levi Retterer, Lead Instructor: 740-389-8588

### Beginning & Ending Dates

September 12, 2016 – February 17, 2017 Daily M-F 8:30 am – 3:30 pm

Program Orientation is held on Friday September 9, 2016 at 5:00 pm.

### Quarter Dates – Payments are due (or approved Financial Aid Plan in place)

September 16, 2016	\$ 2,575
October 17, 2016	\$ 2,575
November 21, 2016	\$ 2,575
January 12, 2017	\$ 2,575

### Program Cost

\$ 95	Application Fee
\$ 10,300	Tuition (Includes texts, workbooks, supplies, and selected welding certification tests.)
<u>\$10,395</u>	<b>Total Tuition &amp; fees</b> (pricing is subject to change – please contact the school for latest information)

Unless a double payment has inadvertently been made, no refund will be issued to a student without the student first submitting a request in writing to the director explaining the extenuating circumstances and proof wherever possible. Any refunds that are ultimately issued may take two weeks to process.

### Assessments Required for Admission

Successful Completion of WorkKeys® Reading for Information Assessment – Level 3

### Pre-requisites & Enrollment

In order to help ensure successful completion of the course and entry level employment, students must meet these requirements and fulfill all enrollment procedures before being admitted to class. Complete and return the **application form** with the \$95.00 non-refundable fee and **high school transcript or GED**. This is in addition to the tuition amount. A student is considered “**registered**” when the fee has been paid and the form has been completed and turned in.

Upon registration a student needs to schedule to complete the WorkKeys® Reading for Information Assessment and must score at a Level 3 or better, please note WorkKeys® Applied Math and Locating Information Assessments will also be taken during the program after corresponding classes have been completed.

Tuition for a particular quarter is due on or before the first day of the quarter or the student will **not receive texts and supplies or be permitted to attend class**, until payment is made in full.

**Please note: Participants are expected to be able to stand for long periods of time, be able to lift up to 50 pounds, and have correctable vision.**



List any certificates or licenses you hold:

<u>Certificates/licenses</u>	<u>Expiration Date</u>	<u>Certificates/licenses</u>	<u>Expiration Date</u>
_____	_____	_____	_____
_____	_____	_____	_____

List present or last employer first. Include volunteer work.

Dates From/To	Company	Address, City, State	Job Title	Supervisor's Name

Military Experience:

Indicate whether you **have** or **have not** been found guilty of, entered a plea of guilty to, or entered a plea of no contest to the following:

**YES      NO**

YES	NO	
		Any misdemeanor resulting from or related to the use of drugs or alcohol.
		Obtaining or attempting to obtain money or anything of value by intentional misrepresentation or material deception.
		Selling, giving away, or administering drugs for other than legal and legitimate therapeutic purposes.
		A violation of any municipal, state, county or federal narcotics law.
		Any felony or any crime involving gross immorality or moral turpitude.
		An act committed in another jurisdiction (i.e.: state, foreign country, etc.) that would constitute a felony or a crime or moral turpitude in Ohio.

**Faculty Use of Records Consent Form:** I consent to the release of the contents of my school records to any staff member of Tri-Rivers Career Center. To the best of my knowledge the information contained herein is true and complete. I understand that falsification of information on this application is grounds for dismissal from the program.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**NOTE:** A \$95.00 ***non-refundable application and testing fee is required upon submitting the application form. The application will not be considered nor will an applicant be permitted to test, until the fee is paid in full.***

