

2022

TRAINING COURSE CATALOG

**WELDING CONCEPTS
TRAINING Inc**

D E T R O I T



Welding facts for job seekers.

What is Welding

Welding is the most economical method of joining metals. The process is used on many types of metal including carbon steel, stainless steel, and aluminum.

Welders are in demand

There will be such a demand for welding jobs that the American Welding Society (AWS) estimates that by 2023, there will be a shortage of more than 375,000 welders to fill those slots.

A diverse range of disciplines

Our students have accepted jobs in many different industries including construction, oil, petrochemical, automotive and manufacturing roles.

Welders earn competitive salaries

In 2020, the median pay for welders, cutters, solderers, and brazers was **\$48,865**, or about \$23 an hour. For comparison, the annual median salary for all blue collar workers in the United States was \$32,910 per year.

According to estimates, the median pay for welders will increase by 16% to \$56,647 in the next five years.*

Start your welding career in less than a year

Our foundation programs can be completed in a few months when taken as a full or part-time course. A comprehensive welding course, which will enable you to begin a career in a wide range of welding jobs in a variety of disciplines, can be completed in less than a calendar year!

TRAINING COURSE CATALOG



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Office: 1825 21st Street, Detroit, MI 48216
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Web: www.wct-detroit.com

Our mission is to equip each student with the marketable skills needed to secure and advance in a welding career by providing expert instruction

This curriculum is designed to meet the industrial demands for welders and is continuously updated to meet specific needs as the trade and its professionals continue to evolve.

We offer training in the following three areas:

Welding Skills Training

Developed to teach actual welding techniques and manipulative skills in all major welding processes. Students new to welding, and those with some previous experience, will achieve a solid understanding of welding processes and the careers available to them.

Technical Training

Designed to teach the theory of welding and related subjects through short courses for technical and management personnel. This creates a better understanding and relationship among workers and managers.

Customized Field Training

Created to solve specific performance issues at your company location. Our instructors will be available to address the issues any individual technician may be experiencing and assist in correcting the problem, empowering them to excel in their role. This is beneficial both to the employer and the welder.

Shop facilities:

Lab Equipment:

The lab is equipped with eight multi-process inverter welding machines capable of producing weld in four of the primary welding processes, including:

- SMAW (Arc/stick)
- GMAW (Mig)
- Flux core (gas-less Mig)
- GTAW (Tig)

Our training center is located at **1825 21st Street, Detroit, Michigan 48216**. For student comfort, our training lab includes a ventilation system to exhaust smoke and fumes and is equipped with heat and air conditioning. However, WCT courses are specially designed to bring the program to the customer's location.



Richard Selonke

Instructor

As an instructor and our Director of Operations, Richard is a Detroit native who brings years of welding and fabrication experience to his role.

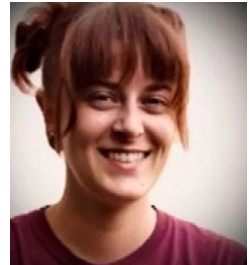
He has a wealth of experience that he brings to the program. Learning to weld on the job in the early 1990's, and then earning welding credentials in the United Kingdom, his experience is broad. Over the past several years he has worked all over England plying his trade in construction and marine welding. With projects ranging from the London Cruise Terminal restoration on the River Thames,

to offshore platforms in the North Sea, he can offer insight into many potential welding opportunities, as well as solutions to some challenging situations in which welders may find themselves.

Lily Melekian

Instructor

After completion of our training program under the guidance of the founder, Don Martin, Lily displayed an artisan talent for welding, and was recruited in to join the team. She brings a positivity and encouragement to students, and is a fine example of what can be achieved if students are focused and determined to succeed.



Assistant Instructors

In order to maintain a high student-to-teacher ratio, we draw on carefully chosen individuals to assist in the coaching and instruction of welding techniques. Widely experienced in a cross section of industries, they bring a broad spectrum of talents from artisan welding to wheel manufacturing.



Our purpose-built training center was developed to ensure we are offering a comprehensive training environment.

GMAW - Entry to Gas Metal Arc Welding

Part Time: 8 weeks / Full Time: 4 weeks

160 Clock hours

CREDENTIAL EARNED: Qualification in GMAW Fundamentals

Course Objective:

To produce quality single and multiple pass fillet welds on carbon steel plate in all positions and to produce quality groove welds on carbon steel plate in the vertical positions using short circuit transfer advancing up to spray transfer on 1/2-inch carbon steel in the horizontal position. Quality is determined through visual inspection and guided bend testing according to AWS requirements.

Course Content:

Our mig welding course will provide the student with a thorough understanding of welding safety, gas metal arc welding equipment setup and adjustments, metal transfer, and shielding gases. It also develops the skill necessary to make quality gas metal arc welds in all positions on mild steel of 1/16, 3/8 and 1/2-inch plate, using short circuit transfer. This course illustrates problems associated with welding situations and provides corrective information and covers training for the AWS test requirements on 3/8 inch mild steel plate in the horizontal and vertical positions.

Testing:

To pass this course, the student is required to pass a visual inspection and a guided bend test in the vertical position, using 3/8 inch mild steel plate open root.

Upon completion of this course, the student should be able to perform production and maintenance welding on mild steel including high volume fabrication, automotive assembly and repair, structural welding related to buildings and code welding-production on light, medium and heavy assemblies.



SMAW - Entry to Shielded Metal Arc Welding

Part Time: 8 weeks / Full Time: 4 weeks

160 Clock hours

CREDENTIAL EARNED: Qualification in SMAW Fundamentals

Course Objective:

To be able to produce quality single/multipass fillet and square groove welds in all positions using E-6010 and E-7018 electrodes.

Course Content:

This course provides the student with a thorough technical understanding of shielded metal arc welding (also known as stick or arc welding), welding safety, arc welding power sources, electrode classifications and selection. It also provides training to develop the skills necessary to make quality shielded metal arc welds in all positions on mild steel from 1/4 inch to 1/2 inch plate, single and multiple pass, using mild steel, and low hydrogen electrodes, with DC welding current.

Testing:

To pass this course, the student is required to take a written test on welding and safety. The student also must pass the following skill tests: visual and break tests on fillet welds in the horizontal and vertical positions with (E-7018) electrodes in the horizontal and vertical positions using (E-6010) electrodes.

Upon completion of this course, the student should be able to perform production welding, millwright and general maintenance welding.



SMAW/GMAW combination welding course

Part Time: 12 weeks / Full Time: 5 weeks

200 Clock hours

CREDENTIAL EARNED: Qualification in SMAW and GMAW Fundamentals

Course Objective:

To be able to produce quality single / multi-pass fillet and square groove welds ins all positions and joint designs, using both SMAW and GMAW welding processes.

Course Objective:

This course provides the student with a thorough understanding of arc welding, welding safety, arc welding power sources, electrode, wire classifications and selection. It also provides training to develop the skill necessary to make quality Shielded Metal and Gas Metal Arc Welds in all position on mild steel from 16 gauge to 1/2 -inch plate, single and multipass, using mild steel plate with DC welding current.

WELDING
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Comprehensive career preparation.

Continued

200 Clock hours

Testing:

To pass this course, the student is required to take a written test on welding safety. The student must also pass the following skills test, visual and break test in the horizontal and vertical positions. WCT will offer guided bend test on 3/8-inch bevel plate, based on student skill level.

Upon completion of this course, the student should be able to perform production welding, millwright and general maintenance welding in both manufacturing and production.



Intro to Welding - Express short course

Part time: 2 weeks / Full time: 1 week

40 Clock hours

CREDENTIAL EARNED: Qualification in SMAW and GMAW Fundamentals

Course Objective:

For anyone with an interest in welding or those who are considering any of the many career paths as a welder.

Course Options:

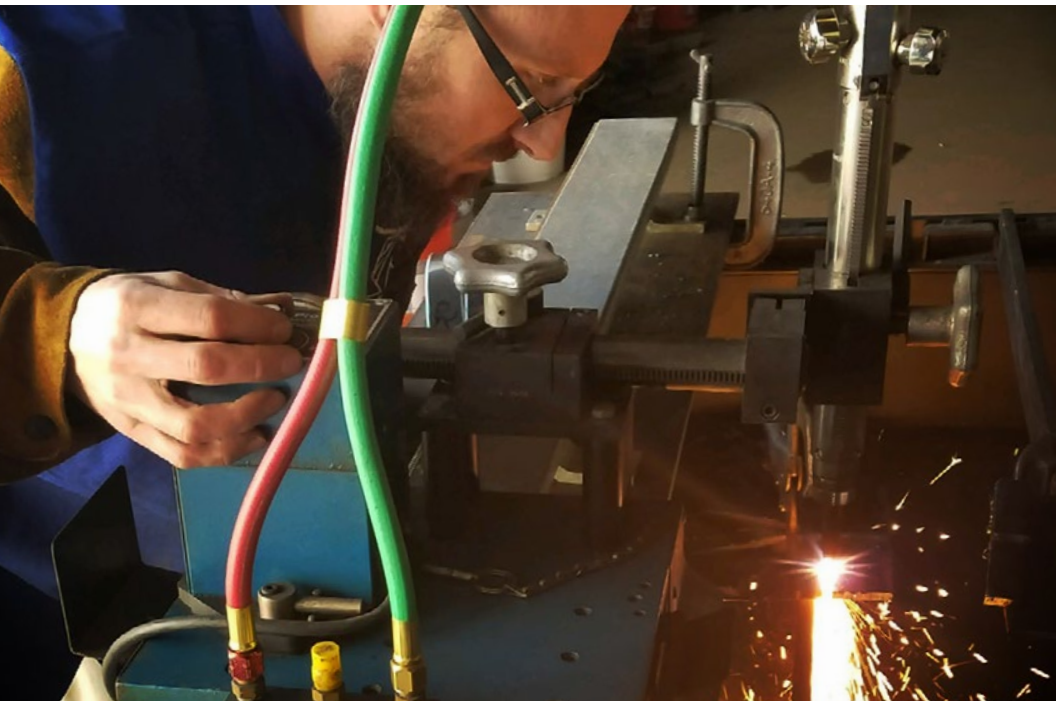
Shielded Metal Arc Welding (SMAW/Stick)
<ul style="list-style-type: none">• Welding Safety and PPE• Welder Setup and Operation• Electrode types and selection• Joint design and welding positions• Practice on 1/4-inch carbon steel

Gas Metal Arc Welding (GMAW/Mig)
<ul style="list-style-type: none">• Welder Setup and Operation• Wire type and diameter selection• Shielding gas types and uses• Practice on 1/16-inch sheetmetal and 3/16-inch carbon steel

Testing:

To pass this course, the student is required to take a written test on welding safety. The student must also pass a visual inspection of weld quality.

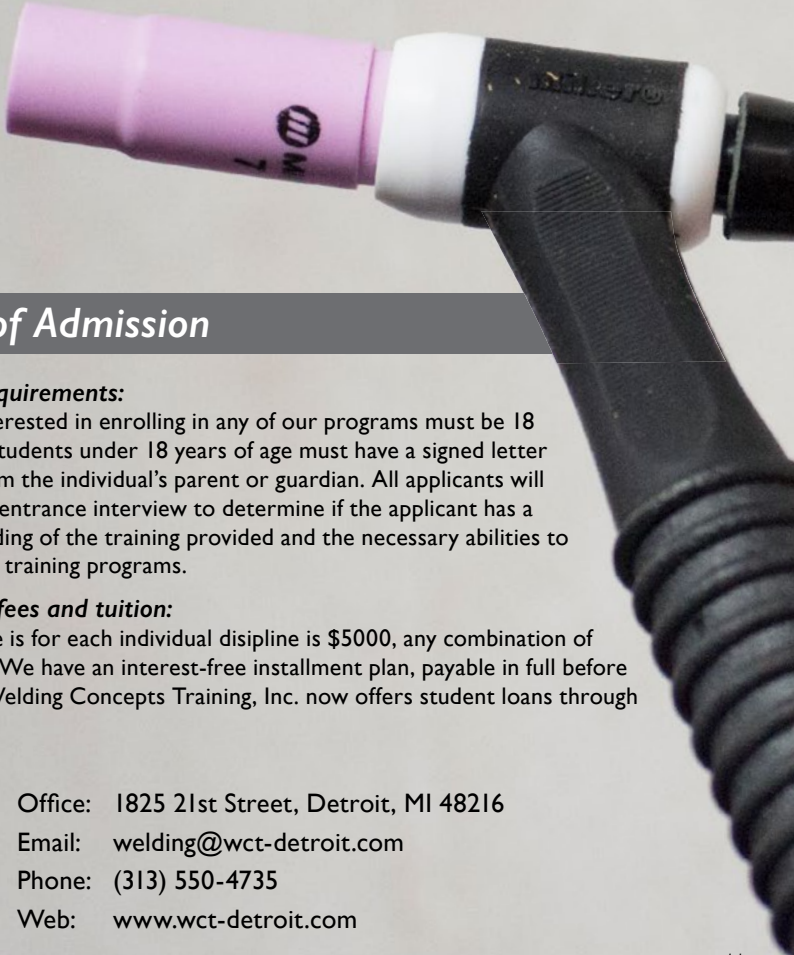
Upon completion of the course, student will be able to perform the industrial requirements of OxyFuel cutting, both manual & machine flame cutting essential for maintenance cutting.



Training Methods

Our training is skills-based, continually updated to reflect the best and most current industrial practices, and uses specific performance objectives for each phase of training. A basic overview of our methods include:

- **Lecture/Discussion** with audio-visual aids to introduce key concepts.
- **Demonstration** which models appropriate techniques and safety practices.
- **Supervised individual practice** with one-to-one instructor coaching.
- **Systematic, practical and written testing** to insure that students have mastered key concepts and skills.
- **Course material** includes video-based training programs, workbooks and tests on the major welding processes.
- **Practice material** is all new material, we do not use scrap metal for welding practice and testing.



Terms of Admission

Admission requirements:

Individuals interested in enrolling in any of our programs must be 18 years of age. Students under 18 years of age must have a signed letter of consent from the individual's parent or guardian. All applicants will be granted an entrance interview to determine if the applicant has a full understanding of the training provided and the necessary abilities to succeed in the training programs.

Registration fees and tuition:

The tuition fee is for each individual discipline is \$5000, any combination of two is \$6500. We have an interest-free installment plan, payable in full before completion. Welding Concepts Training, Inc. now offers student loans through Meritize.



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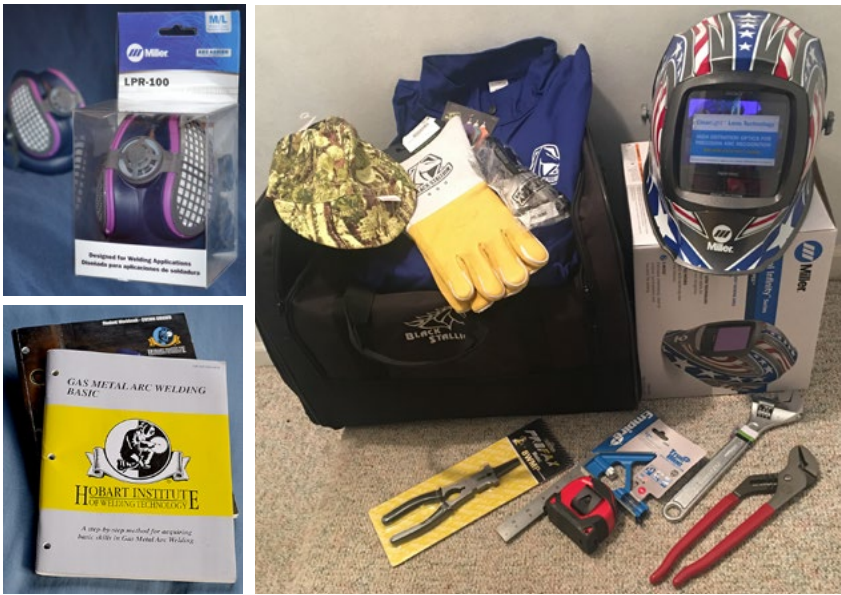
On-site Training

Upon consultation with a Welding Concepts Training, Inc. Training Specialist, WCT will develop a comprehensive training program addressing your company's specific needs. We are also available to provide one-day training designed to address any specific needs of your existing welders. Contact an Admissions Representative for scheduling and costs.

** To ensure quality and comprehensive training development, please make your request a minimum of 30 days prior to your desired inception date of the curriculum. Costs quotations are available upon request.*

Materials provided

Student gear bags include a welding-quality respirator with replaceable filters, among their tools and PPE.



Accreditations and endorsements

In association with



Preferred equipment and suppliers



In addition to our training center in Detroit, Welding Concepts Training, Inc conducts welding and technical training programs on-site for companies, contractors and various associations.

Our programs include courses on:

- › *Safety concepts and procedures*
- › *Oxy-fuel Cutting - Manual and machine*
- › *Plasma-arc Cutting - Manual and machine*
- › *SMAW (Stick) - Shielded Metal Arc Welding*
- › *GMAW (Mig) - Gas Metal Arc Welding*
- › *GTAW (Tig) - Gas Tungsten Arc Welding*
- › *Welder Certification Test Preparation and Testing*



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As recommended by:

- *Makers Environment Fund*
- *Gingras Global*
- *Michigan Works! Association*
- *Detroit at Work*