



# TECHNICAL DEVELOPMENT



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## Welding

Skilled trades are always in demand, and welding is no exception. You can expect the training you get from welding programs at Swift Skills Academy to help your transition easily into an apprenticeship, and ultimately the workforce.

The practical welding training is aimed at all skills - from beginners, the inexperienced to highly experienced welders lacking formal qualifications.

Training is adjusted to suit various individual requirements regarding the following:

- Shielded Metal Arc
- Gas Metal Arc
- Gas Tungsten Arc
- Flux Cord Arc, etc.

Welding, brazing, gas cutting together with fabrication, demands highly competent welders which are adequately trained in the using of oxyacetylene, arc Welding, Tig Welding, Saiw, Co2 Welding, Mig Welding.

By means of welding courses, a welder will be appropriately conversant with proper interpretation, setup techniques and processes meeting all the required standards demanded by industry.

As the leader amongst welding schools in South Africa, we offer you proper training courses that specialises in all metal types. With our accredited welding training you can be guaranteed of welding jobs, knowing that you will be in possession of a highly recognized welding certification.

### Obtain specialised skills in:

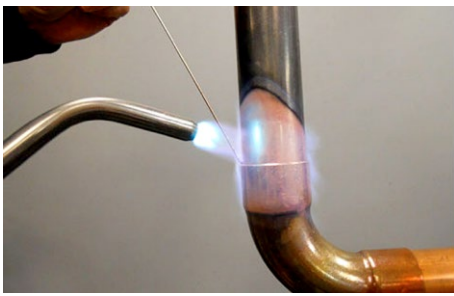
- Oxyacetylene
- Arc welding
- Metallurgy
- Tooling
- Drafting
- Pattern layout
- Characteristics of materials

**Whether you take just one welding course or earn a qualification, you'll gain knowledge of techniques to fire up your ability to work with a range of materials. Our vocational training courses together with our highly trained and qualified course facilitator, will ensure our welding courses gives you a top notch education, giving you the best chance in your future welding job.**

### Obtain a career in:

- Artistic welding such as metal sculpture, decorative ironwork and garden furniture
- Construction and manufacturing
- Distribution and sales
- Teaching in high schools, trade schools or community colleges
- Technical sales
- And even the hobby welder





## Gas Brazing

This welding courses will address students in the auto mechanics, air conditioning, diesel mechanic and auto electrician orientated type industry. However this trained skill will be used in various manufacturing processes where two materials need to be joined using gaz brazing.

Copper Brazing, Silver solder, - soldering is a method of fabricating tubing that renders the connection largely leak tight. In the process of joining tube ends, high temperature causes an annealing of tubing, which allows the localized area to become slightly softer at area of which may be fused.



## Gas Welding

This training course will deal with individuals in the automotive, engineering and manufacturing space. Our welding schools will be able to assist with this vocational training at our welding institutes in South Africa.

In this case of welding, oxy acetylene is used in the gas welding techniques of joining and repairing materials.



## Gas Cutting

This program's focus is on automotive and/or metal trades, educating the persons with the relevant skills in order to cut metals by the means of a gas torch, i.e. gas cutting. This is considered as a very high in demand skill in South Africa. The safe use of gas cylinders and cutting torch is also focussed on in this course, to ensure the safety of the specialists.

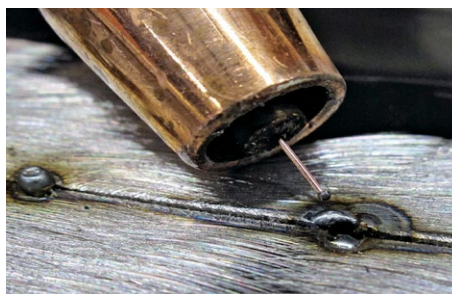


## Arc Welding

Shielded metal arc welding SMAW, is also known as manual metal arc welding.

In this course you will be exposed to the use of the following:

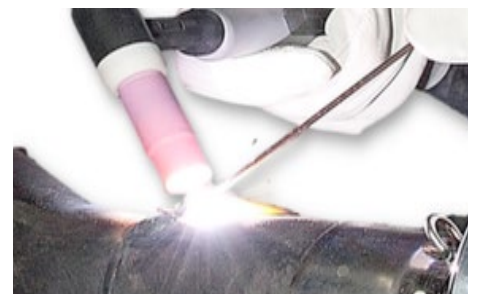
- Shielded Metal Arc Welding
- Gas Tungsten Arc Welding
- Stick Welding
- Flux Cored Welding
- Coded welded training



## Mig Welding

Gas metal arc welding GMAW is in certain cases typically known as metal inert gas MIG welding, otherwise it is often known as metal active gas (MAG) welding.

It is a welding practice through which an electric powered arc forms between a consumable wire electrode and the workpiece metals, which heats the workpiece metal(s), which causes them to melt, thereby join. MIG welding is as a general rule made use of in fabrication shops where production is high.



## Tig Welding

TIG may be used to weld titanium and copper or even two completely different metals, and is therefore excellent for very tight and tricky welds, example is s-curves, welds on curved shapes, etc.

Gas tungsten arc welding, which is shortened for short GTAW and also known as tungsten inert gas TIG welding, is an arc welding process that makes use of a non-consumable tungsten electrode to help produce the weld.

The weld spot is shielded from the atmospheric contamination by means of an inert shielding gas, which is called argon or helium, and a filler metal is then generally put to use, though various welds, this is also typically known as autogenous welds.

COURSE CODE	TRAINING DAYS	COURSE NAME
TDC 1	3	Plate fluxcore welding Level 1
TDC 2	5	Plate fluxcore welding Level 2
TDC 3	4	Pipe fluxcore welding Level 3
TDC 4	5	Plate shielded metal arc welding (SMAW/ARC/STICK) Level 1 Basic
TDC 5	5	Plate shielded metal arc welding (SMAW/ARC/STICK) Level 2 Intermediate
TDC 6	6	Pipe shielded metal arc welding (SMAW/ARC/STICK) Level 3 Advanced
TDC 7	3	Plate gas metal arc welding (GMAW/MIG) Level 1 Basic
TDC 8	5	Plate gas metal arc welding (GMAW/MIG) Level 2 Intermediate
TDC 9	5	Plate gas tungsten arc welding (GTAW/TIG) Level 1 Basic
TDC 10	5	Plate gas tungsten arc welding (GTAW/TIG) Level 2 Intermediate
TDC 11	5	Pipe gas tungsten arc welding (GTAW/TIG) Level 3 Advanced
TDC 12	3	Oxy-fuel brazing
TDC 13	4	# Gas welding Level 1
TDC 14	4	# Gas welding Level 2
TDC 15	60	# Coding -SGT, SMAW 1- 3, GTAW 1 - 3
TDC 16	3	Stainless steel plate (TIG)
TDC 17	3	Aluminium plate (TIG)
TDC 18	3	Stainless steel plate (MIG)
TDC 19	3	Aluminium plate (MIG)
TDC 20	5	Stainless steel pipe(TIG)
TDC 21	5	Aluminium pipe (TIG)
TDC 22	As per requirements	Welding trade test and RPL process
TDC 23	On request	Welding qualification test (plates)
TDC 24	On request	Welding qualification test (pipes 2 inch)
TDC 25	On request	Welding qualification test (pipes 3 inch)
TDC 26	½	Grinding competency assessment
TDC 27	4	Hand tools operator course
TDC 28	3	Engineering power tool operator course
TDC 29	3	Safe use of measuring equipment
TDC 30	20	Introduction to welding
TDC 31	On request	Assessment of welding skills
TDC 32	½	Oxy-Fuel Gas Cutting
TDC 33	10	Welding Technical Terms