

# Artisanship

## *The path to greatness*

*SABC celebrating Decade of the Artisan*

*Edzai C. Zvobwo  
Samantha Nyikadzino  
Thembeke Xipu*

*Published by SABC Education*

SABC  
EDUCATION 

# SABC Celebrates a Decade of the Artisan

*Artisanship, path to greatness*



Figure 1: Danie Swart,  
Head of SABC Education

SABC Education fully embraces and adopts the Decade of the Artisan programme which was launched by the Department of Higher Education and Training (DHET) in January 2014.

The programme is a strategic vehicle for poverty alleviation through agrarian unemployment reduction as prescribed in the National Development Plan.

Expansion of sustainable job opportunities for South African school leavers and the current unemployed citizens is at the fore-front of government's priorities, thus the Decade of the Artisan programme is pivotal to the attainment of government's goals.

The aim of the programme is capacity building through imparting artisan skills to South African citizens so that everyone can contribute to the prosperity of the country in a meaningful way.

Danie Swart, Head of SABC Education says, "The Decade of the Artisan programme is a conduit to the perennial skills shortage which has led the country to utilise an imported workforce thus denying citizens an opportunity to participate in the formal economy".

To SABC Education, "Artisanship is definitely the bridge between the formal education system and the workplace as artisans will not only have amassed theoretical knowledge but practical workplace experience", emphasised Danie.

SABC Education as the public broadcaster is playing a pivotal role in disseminating information and supporting potential candidates for artisanship training through television, radio, print and online media.

This book "Artisanship, path to greatness" is one of the many programmes being implemented to demystify and educate learners and unemployed school-leavers how they can pave a way for themselves to guaranteed employment and/or entrepreneurial opportunities.

As Dr Blade Nzimande, The Honourable Minister of Higher Education and Training accurately put it, "It is cool to be an artisan", SABC Education is on a mission to increase the attractiveness of artisanship and fully expose the opportunities and benefits of being a fully qualified artisan.

To attract artisanship, SABC Education is using programmes such as Ispani, Khetha radio learner's support programme, Making Moves, 48 Hours and other platforms to stir the artisan flagship in South Africa.



## About the Authors

**Edzai C Zvobwo** is a high achieving mathematics teacher, motivational speaker, business analyst/IT project manager, game mathematician and artisan broker who voluntarily practice.

Edzai is a firm believer of the theory that Africa can be liberated if her people are mathematically literate and apply the problem solving thinking methodology to find solutions to social, political and economic problems that have long hounded the “Mother-Continent”. Good problem solvers and artisan skills will eradicate poverty in Africa. To become a good problem solver, one needs to be mathematically and artisan trained to achieve a future in South Africa.

He possesses a BSc Honours in Applied Mathematics, Diploma in Business Analysis and Certificate in Data Analysis. Has a good understanding of the Software Development Life Cycle and the value of keeping projects on time and within budget per requirements. Has a great appreciation of methodologies of succeeding in the studying and applying mathematics in real world situations i.e. Simulation, forecasting, quantitative decision-making, optimisation, mathematical modelling, project management, random number generators etc.

He has a passion for mathematics; this is evidenced by his motivational works across schools in South Africa. He has participated in intervention programmes in the townships through workshops and camps assisting struggling learners. Edzai has done a lot of work with SABC and their outreach programmes. *The Mathematical Genius In You* publication was sponsored by SABC Education and distributed to rural schools where a dire need for mathematical excellence is required. *The Mathematical Genius In You* booklet is also downloadable for free from website, [www.sabc.co.za/education](http://www.sabc.co.za/education). His dream is to demystify mathematics and ensure that learners and artisan practitioners become good problem solvers.

**Samantha Nyikadzino** completed her degree in Electrical Engineering at the Cape Peninsula University of Technology specialising in light current. Currently she is working in the electronics industry in Cape Town. Samantha believes that engineering is for everyone whether male or female, all you have to do is believe and work towards your goal. Nothing is impossible if you put your mind to it.

**Thembeke Xipu** is the Managing Director of BrainGain Training and Consultancy. She is an educationist, an experienced content developer, researcher in the education field. Making a difference and up skilling comes to her naturally.

# Acknowledgments

This project has been made possible as a result of teamwork. There are too many people to mention.

## Main Contributors:

A special thanks to SABC TV Content General Manager, Ms. Pontsho Makhetha for creating space and availability of budget to engage and articulate what SABC Education is doing with regard to artisan as a career in South Africa.

1. Mr. Danie Swart, Head of SABC Education - preface
2. Mrs. Lesley Fahey, Publicity Manager: SABC Education
3. Mr. Fani Matsebane, Commissioning Editor: SABC Education
4. Ms. Tshilidzi Davhana, Commissioning Editor: SABC Education
5. Mr. Hanyani Sono, Assistant Commissioning Editor: SABC Education
6. Ms. Surekha Singh, Commissioning Editor: SABC Education
6. Ms Sane Zondi, Assistant Commissioning Editor: SABC Education
7. Mr. Eric Muragana, Digital Media Manager: SABC Education
8. Patricia Mareya, Administrator: MathsGenius

## Book Cover

The book cover was designed by Okuhle Mciteka a Grade 12 learner at Midrand High School. She designed the cover as part of the GirlChild Rise Up in STEM competition hosted by MathsGenius Leadership Institute (MGLI) where learners had to discuss girl child empowerment through pursuing STEM (science, technology, engineering and mathematics) subjects and careers. In designing the cover Okuhle mentioned that the artwork is an exposition of the general stereotype that females, mainly young females can't do these "power" subjects like maths; science; biology, to name a few. She decided to use this concept just to show people how equal male and female are, hence the equal sign. The fire/warm colours are a representation of Africans; the warmth we bring and generally Africans use fire and it's one of the sources of life. The gears are just to incorporate the idea of science, technology and its applications especially in artisanship.

## **Preface**

The booklet will guide you through the following:

### **Why Artisanship?**

The book will tell you the great perks that come with being an artisan. This is worth reading as it will get you thinking on why it is a great decision to apply your skills and passion in contributing to South Africa's future through artisanship.

### **Steps to becoming a qualified artisan**

These are the steps as set out by the Department of Higher Education in a bid to guide you on the route to becoming a qualified artisan.

### **Popular artisanship programmes**

This is a basic overview of some of the popular artisanships in South Africa. This is not a full list and readers are encouraged to get further information from the relevant institutions.

### **Tips on how to study**

As a pre-requisite to being an artisan, there is a lot of study that takes place and it is be-fitting to include study skills in this booklet.

### **Girl Artisans rock!**

Acknowledging the gender biases as a result of societal norms, it is necessary that girls be encouraged to take up artisanship and soar like their male counterparts.

### **What stops girls from pursuing artisanship?**

A list of the dominant beliefs that have stopped girls from pursuing science, maths and engineering careers are listed and the authors' solutions listed thereafter.

### **Scarce Skills**

To give an overview of the fields that are in demand in South Africa so that readers can explore these areas.

### **List of Further Education and Training (FET) Colleges in South Africa**

Contact details of FET Colleges so that readers can get more information on specific desired courses.

### **Glossary**

### **Reference**

# Table of Contents

Why artisanship? .....	7
Steps to Becoming a Qualified Artisan .....	9
Popular Artisanship Programs .....	15
How to study effectively .....	39
Tips on How to Study.....	39
Girl Artisans Rock! .....	41
Self-Confidence .....	43
What stops girls from pursuing artisanship? .....	43
Lack of Women Scientists to act as role models.....	44
Geeks cannot find love – be blonde for your boyfriend .....	45
Girls can’t think logical - they are emotional beings.....	46
Curriculum not girl friendly .....	46
The most important thing in a girl’s life is to be ready for marriage .....	47
My Solutions .....	48
Scarce Skills.....	49
List of Colleges in SA.....	49
Glossary.....	49
References .....	49

# Why artisanship?

Do you believe that you have natural talent of creating things with your hands?

Do you find too much theory without practical application boring?

Do you want to own a manufacturing company one day?

Do you want to fast-track your route to employment?

Do you want to acquire hands-on skills?

Did your matric results not qualify you for a Bachelor's entry into university?

If you answered YES to one or more of the questions above, then this booklet is the right one for you. The booklet aims to show you that it is cool to be artisan. It is a faster alternative route to acquiring skills and getting employment. The Minister of Higher Education, Mr. Blade Nzimande correctly put it when he said "Being an artisan is cool". As SABC Education, we fully agree with him because as an artisan you create tangible products that are used to make people's life better, how cool is that?

If you are considering going the artisanship route, then have a look at some of the advantages listed below.

Artisanship:

- Gives you the opportunity to express your talent through creation of products and goods with your hands.
- Combines theory and practical giving you experience, which is the best teacher as the old adage says.
- Provides you with a stepping stone for launching entrepreneurial endeavours. You can use your skills to start your own manufacturing company.
- Provides you with a lucrative alternative to university education as a launch-pad to your career.

According to the article on Skills portal site, [www.skillsportal.co.za](http://www.skillsportal.co.za) on the 14th of February 2014, Deputy Minister of Basic Education, Mr Enver Surty announced that "For every three learners that passed Grade 12 in 2013, one qualified to study for a bachelor's degree, one qualified for entrance to a university of technology and one qualified to study at an FET college", at the launch of the Decade of the Artisan

campaign at the Ekurhuleni East Technical and Vocational Education and Training (TVET) college in Kwa Thema, near Springs in Gauteng.

This is exciting news as the government has invested a lot of money to give you a chance to flourish as an artisan. Fasten your seat-belt as you go through this informative booklet that could lead you to artisan success.

This booklet will give you an overview of the different artisanship training programmes that are being offered across South Africa.

*"It's not what you achieve, it's what you overcome. That's what defines your career."*

- Carlton Fisk

Recognise that within you, you have a special gift. Something that has to be unleashed for others to see, appreciate and enjoy.



# Steps to Becoming a Qualified Artisan

Now that you know the benefits of artisanship, the next step is to know how to realise your dream. This section will guide you on the steps you need to take in order to become the artisan that you want to be. The Department of Higher Education and Training through the National Artisan Moderation Body has come up with seven simple and practical steps to becoming a fully qualified artisan.

**The 7-steps are:**

**Step 1: Career Management**

**Step 2: Fundamental and Vocational Theory**

**Step 3: Learner Programme Registration and Funding**

**Step 4: Occupational Knowledge and Practical Training**

**Step 5: Workplace Training**

**Step 6: Trade Testing**

**Step 7: Trade Quality Assurance and Certification**

Now let us look into these steps in detail so that you will know exactly what to do in order to become a qualified artisan.

## **Step 1: Career Management**

### **(Know everything about your intended career)**

Grade 9 is a pivotal year in determining your career as this is the time you make subject choices. In order to make a good subject choice you must know what career path you want to take.

Before thinking about how you are going to be an artisan, the first and foremost thing is know what you want to do based on your abilities, interests or community need. Whatever the reason the reason you want to pursue artisanship, the most important thing to know is what you want to do.

There are so many artisanship programmes on offer in South Africa and at times it is difficult to make a choice, thus it is a great idea to consult:

1. Your guidance and counselling (Life Orientation or Career Guidance) teacher
2. The Department of Labour Centres near you
3. The National Youth Development Agency

4. Further Education and Training Centres (FET)
5. The Department of Higher Education website or offices.
6. Training officers from the public and private sectors.
7. Knowledgeable community leaders
8. The SAQA Career Help website or call centre.
9. The Careers Unlimited Book for learners.
10. Vocational psychologists.
11. Aptitude test providers.

If airtime or data is a problem you can request a call-back from the SAQA NQF and Career Advice Services call centre by simply sending a **“Please Call Me”** to **072 204 5056**. The qualified and competent SAQA consultants will guide and give you all the information you need in order to make the best decision on what you want to do. Don’t hesitate; go for gold, as this will be the first step on your journey to becoming a fully qualified artisan.

When consulting with any of the above mentioned methods you should make it a point to ask the following questions:

- Where is the course offered?
- Which course fits in with your abilities, interests and values?
- How much does it cost?
- Is there financial aid?
- How long does it take to complete?
- What has been achieved by those who did this course?
- What are the pre-requisites for this course?
- Do I need special skills to be the best in this trade?
- Can I combine it with another qualification to make me versatile?

Ask as many questions as you can until you fully understand what you are choosing and how it will impact your career for life.

Now you know what to do and where to study let’s look at the financial part as this is very important.

The government and civic society of South Africa are working tirelessly to eradicate unemployment and have invested and are still investing a lot of money and resources to ensure that you get the best training and become the best artisan you can be.

Below are some of the funding options available to you so as to achieve your dream.

## Financial Information

### 1. Bursaries

According to [www.investopedia.com](http://www.investopedia.com) it is a type of financial award provided to certain students to assist with education costs. It is provided to students based on financial need and/or academic performance.

### 2. Scholarships

Scholarships are usually awarded based on merit or values and purposes of the donor or funder of the award. There is also a high level of competition for these scholarships. This type of funding may come from various companies, embassies and foundations. Some companies will require you to work for them after graduating for a certain period of time.

### 3. Incentives

Tertiary Institutions offer this kind of funding to attract learners particularly those who excel academically or in sport.

### 4. Loans

Apply for a student loan at a bank. A parent or family member is required to enter into the loan on the student's behalf. Interest on bank loans must be paid back once the person has started with his studies.

### 5. National Student Financial Aid Scheme (NSFAS)

Government has established a National Students Financial Aid scheme (NSFAS) to assist students. This financial scheme is for deserving students who need financial assistance to pay for their studies at public universities and FET Colleges in South Africa. You can only apply for funding from NSFAS once you are a registered student at any public institution of higher learning.

Another option is to get into a learnership and skills programme, where you don't necessarily have to pay fees but are paid to be trained whilst adding value to the company as explained below.

## Learnerships and Skills Programme

A learnership is a structured learning programme, which includes practical work experience and classroom based learning at a college or a training centre and workplace training. To participate in a learnership there must be an employer willing to be able to provide you with the relevant experience.

The idea is that learners in the learnership learn the skills for a trade by doing work under the guidance of the experienced and qualified person. In order to become qualified you are assessed against occupational standards that have been agreed in

advance by industry stakeholders. This leads to a qualification registered on the National Qualifications Framework (NQF).

If you are unemployed then you can only participate in a learnership if there is an employer that is prepared to provide the required work experience.

### **Who can you apply for the learnership?**

Anyone can apply for a learnership whether you are a school leaver, college graduate, unemployed or currently employed.

### **How long does it take?**

The length of the learnership will differ according to the programme but normally not less than a year to be meaningful.

### **How much will it cost?**

There is no charge for you to go on a learnership. If selected for a learnership programme then the employer will give you a stipend or learner allowance. The amount will have to be agreed upon by you and the employer.

### **What do you get at the end of the learnership?**

If you complete a learnership you will have qualification that is recognized by SAQA and employers. You will receive a certificate as proof of qualification which will describe the skills you have acquired.

### **How do you apply for a learnership if you are unemployed?**

You will have to register with the Department of Labour, where they will advise you accordingly.

## **Step 2 - Fundamental and Vocational Theory**

Vocational education is a very important part of artisan qualification. This is an education that prepares people for a specific trade, craft and careers at various levels from trade, craft, technician or a professional position.

This is the preparatory theoretical knowledge of a trade that serves as the building blocks of your chosen artisanship. As an example, you have to know the K-53 road rules and pass your learner's licence before going for a road test which in this case is the practical trade test.

## **Step 3 - Learner Programme Registration and Funding**

The next step to becoming a qualified artisan is to find a workplace, training college or approved employer that will enter into a learning programme agreement and contract with you. In the last section of the booklet you can find a list of all the FET Colleges for reference.

The learning programme agreement and contract will be an agreement among the employer, the learner and an accredited training provider. A relevant SETA facilitates and registers the agreement and contract for the duration of the artisan learning programme.

As discussed in the Career Management section earlier, the funding will be dependent on the contract offered. It is your duty to ensure that you get the best deal that will not have negative effects on your current and future financial wellness.

#### **Step 4 - Occupational Knowledge and Practical Training**

Occupational knowledge and practical learning should be specific to the artisan trade and may be offered by various training providers. The availability of the specific training depends on what the provider is accredited for. The training offered is very specific to the chosen trade and may include things like fault finding, manufacturing, repair, servicing, mathematics, sciences and drawing where needed.

Combining occupational knowledge and practical training means that you will get real-work experience whilst learning. That is one of the many advantages of artisanship. By the time you graduate, you are already experienced unlike someone coming from a university.

#### **Step 5 - Workplace Training**

For workplace learning, you will need a mentor, workplace, work site and a subject matter expert.

**Mentor:** is a person who is qualified in your trade, who will work with you to assist and guide you to successfully complete the structured work experience component.

**Work place:** is a fixed location where you apply both skills and knowledge in an integrated manner to produce, maintain or deliver a service or product for an organisation.

**Work site:** Is a movable or temporary location where you apply both skills and knowledge to produce maintain or deliver service or product.

**Subject Matter Expert:** is someone who has successfully passed a trade test in the specific trade/ or has completed his or her apprenticeship.

The workplace learning process is known as the "on the job" learning process that allows you to gradually re-learn what you learnt in the practical learning process but applied in a real workplace.



### **Step 6 - Trade Testing and Recognition of Prior Learning**

Once you have successfully completed the occupational knowledge, practical and workplace learning, the Skills Development Act requires you to take an external Trade Test before you can be certified as a qualified artisan, irrespective of the route or pathway of learning you used.

### **Step 7 – Quality Assurance and Certification**

Through all the steps quality is checked and is an on-going process. It is therefore not an isolated activity focusing on the final external summative assessments or trade testing only, but is implemented right from the qualification development, learner selection, accreditation and delivery processes.

# Popular Artisanship Programs

So far we have looked at the 7-steps for you to be a qualified artisan, now let us look at a few popular artisanships. This is not the full list but just shows you how exciting it is to be an artisan. It is really cool to be associated with such value-adding and cool professions.

## **Trade: Chef**

### **Field: Food Processing**



Figure 2: Chef

Do you enjoy cooking?

Do you enjoy serving people with your latest creative dish?

Do you want to be like the world famous Jamie Oliver?

Do you want to be a Master Chef?

This is one of the coolest jobs ever. Look at how Jamie Oliver now has chains of restaurants and ranges of cooking ingredients and utensils. He is a celebrity chef who did a course in Food Processing and is now reaping the fruits of his labour. You too can become South Africa next Top Master Chef if you put your mind to it and do the Chef course. There is no limit to creativity when you are doing this course or after you have graduated, look at Vusi Kunene who was a car guard but now runs his own sushi franchise called Blackanese.

There are endless opportunities in the tourism and hotel sector for you to exploit. This is definitely a career path to consider. Once you enrol on this course you will discover that planning and preparing food is an art and a way of life which touches the souls of those eating your food. Make a decision today to explore this exciting career path. Other chefs are well-known for their brilliance at coming up with mind-blowing recipes from unlikely combinations of food.

## Employment Facts

The best part in doing the Chef course is that you can work anywhere where food is eaten (everywhere in the world, people eat food). You will not be confined to being a restaurant or hotel employee but can utilise your newly acquired skills to unleash your entrepreneurial spirit. It is important that you prepare yourself for the wide range of opportunities associated with being a chef. Vusi Kunene has established a sushi-making school in Soweto and is using his skills not only for profit but for skills development as well, now that is true success.

## Requirements

With a grade 10 completion report, you can be admitted to a culinary school where you gain hands-on experience. With food, it is more about passion to make people happy through food preparation and presentation.

Once you have completed the course and demonstrated the necessary skills and standards then you can be an accredited chef. Chefs generally have to be hygienic people as they are dealing with food. To successfully run a restaurant, the chef has to be good at team-building and time management.

## Advancement Opportunities

Cooks may, with experience and additional training, become head cooks, chefs, entrepreneurs or consultants for catering companies.

### Chef / Head Cook duties and responsibilities



Figure 3: Head Chef

- Management of all aspects of kitchen operations i.e. menu planning, staffing, scheduling, training, and shift execution, meal preparation and presentation.
- Creation of menus, recipes, decorations, menus, banquets and special events.
- Legal compliance to health and safety regulations in the kitchen by all team members.
- Procurement of quality raw materials for food processing.
- Maintain budget in all financial areas: food, labour, operating costs.



Figure 4: Plumber's pride courtesy of [www.etsy.com](http://www.etsy.com)

## Trade: Plumber

### Field: Construction

What does one do in this career?

If you are wondering if every plumber is called Joe the Plumber then think again.

During the election campaign of Obama vs. McCain the profession that got the most exposure

is plumbing.

It was a symbol of the typical American employee who is working hard to earn an honest living.

This showed how pivotal to our lives plumbers are. Becoming a plumber is an accelerated ticket to entrepreneurship. One in three plumbers end up business owners thus you are encouraged to take up this noble profession, helping people by solving their pipe and leakage problems. Plumbers are not all brawn and no brains. As a plumber you have to know site schematics like the one shown in Figure 5 and be able to understand and draw housing and building plans manually or using sophisticated computer software like Autocad.



Figure 5: Piping, plumber's paradise courtesy of [www.wkrn.com](http://www.wkrn.com)

What will the work place be like?

Plumbers work any place that has pipes ranging from houses, alleys, huge buildings, pipes in the open space to pipes crossing beneath roads. It is an exciting job as you never know where the next assignment is as it can be anywhere. This is pure adventure and if you want to make lots of money whilst solving people's problems then start today and explore what plumbing is all about.

What instruments, tools or material will you work with?

A plumbers tools range from hand and power tools, taps, pipe cutter, screw-drivers, pipe-threads and hydraulic pipe benders, gas or acetylene torches, and welding, soldering and brazing equipment, blueprints, pipes, baths, heating and refrigeration systems and sinks.

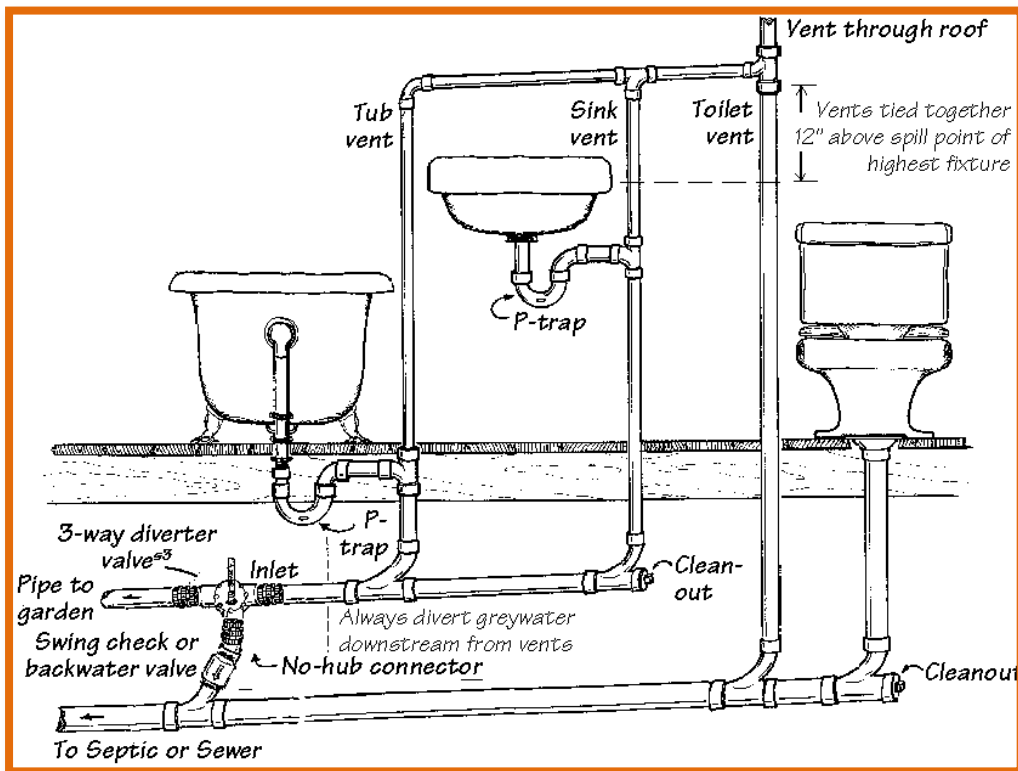


Figure 6:Plumber's schematics - Concept development (Open Library)

What are the advantages and disadvantages of this career?

Advantages:

- High income potential as an employee or entrepreneur.
- Guaranteed employment opportunities.
- Working with your hands and being creative in problem solving.
- Different tasks and locations dependent on the assignment at hand.
- Opportunity to extend your business through word of mouth advertising if good service is given.



Figure 7:Plumbing trade tools courtesy of [www.vpsupply.com](http://www.vpsupply.com)

Disadvantages:

- Sometimes working in uncomfortable positions and remote areas.
- High probability of injury while on the job
- Highly manual involving lifting of heavy pipes and equipment.
- Losing billable work time (and wages) during bad weather as it is difficult to work in those conditions.



- Working overtime and during day and night emergencies.

What types of companies might employ you after your studies?

Plumbing and fitting contractors engaged in construction, small to medium plumbing support contractors that fix burst geysers and general pipe problem repairs, government departments, public utilities, ship-building, aircraft construction companies, self-employment.

To prepare yourself for this great profession you should learn to do small repair jobs in your home. Find a holiday or a part-time work in a hardware store to become familiar with tools and equipment used by plumbers, or as plumber's helper. Consult the Department of Labour concerning apprenticeship programs in your area.

What other careers are almost similar to this one?

Airframe fitter, blacksmith, blaster, boilermaker, chemical plumber, coppersmith, pipe fitter, steam fitter, fitter and turner. It is worth exploring via the resources available to you as listed in Step-1 of the 7-steps to becoming a qualified artisan.

Are your interests and abilities the same as below?

- Alert
- Conscientious
- Accurate
- Practical and enjoy working with your hands
- Good communication skills and business sense.

What 1<sup>st</sup> year subjects can you expect to study?

- Plumbing Skills
- Mathematics
- Science
- Drawings
- Building Science
- Plumbing Theories
- Fitting and Machining Theory.

How long will I study for?

Since certain fundamentals need to be in place, we'd like to advice that you contact your educational institution of choice, employer of choice or SAQA for more information.

## Trade: Carpentry

### Field: Construction



Figure 8: Carpenter at work courtesy of [www.svie.co.in](http://www.svie.co.in)

#### What does one do in this career?

Carpentry is one of the oldest professions in the world but still has immense opportunity to everyone who is qualified and skilled to work wonders with wood. Some notable historical figures have been wood workers and the discipline, accuracy, tenacity and creativity required to be a great carpenter has helped them become leaders in their chosen fields. The list includes Harrison Ford, Joseph the father of Jesus from the bible, Julius Malema among others. It is

unfortunate that we never got to see any of their finished products but we will assume that they were good.

There are two main types of carpentry namely, 'Construction' and 'Finishing'.

Construction carpenters work outside on construction sites, erecting the supporting frames for bridges, roads, dams and buildings.

Finishing carpenters work inside commercial and residential buildings, installing final touches such as doors, ceilings, staircases and cabinets.

Modern infrastructure like the old one depends heavily on carpentry. The trade has been popularised by the cheaper price of wood compared to the metals thus our homes, cities and transport systems and the quality of our everyday surroundings depend on good carpentry.

The demand for carpentry has grown so much especially in countries like the United States of America where they build pre-fabricated wooden houses.

If you are physically fit, have good hand-eye coordination and can get on well with people around you, then you are likely to do well as a carpenter.

#### What will the workplace be like?

Carpentry workplaces range from home backyard industries, light commercial to heavy duty industrial sites as carpentry is needed for construction and finishings across all sectors of the economy thus it is a career worth pursuing as it will give you the much needed job security and peace of mind that you can turn into an

entrepreneur anytime you so wish. Be part of the great story of carpenters that have graced earth with their presence



Figure 9: Carpenters busy in a commercial site -  
courtesy of wikipedia

## Skills Needed

- Attention to detail and accuracy.
- Perfectionists.
- Creative
- Hard-working
- Geometric and algebraic skills for measuring materials and reading blueprints.
- Good eye-hand coordination
- Manual dexterity are required.
- Fitness and stamina for lifting heavy materials
- Good balance for work involving ladders and roofs
- Reliable and have good people skills

What instrument, tools or material will you work with?

- Drills for boring holes
- Saws and chisels for cutting
- Rulers, squares, levels and compasses for measuring
- Plumb-bobs to give a straight line
- Clamps for fastening
- Grindstones, sandpaper and files for sharpening and smoothing.

## Where can I study?

College courses in construction skills are also available, although most employers require these skills to be consolidated through on-site experience. Many colleges also offer apprenticeships to give the trainee the best of both worlds.

Refer back to the consultation resources in Step-1 of the 7-steps to becoming a qualified artisan. To prepare yourself for this trade, it is important to have some on-site experience before working towards skilled qualifications. You might work as a labourer and shadow a carpenter to see whether the job appeals.

## What other careers are similar to this one?

Furniture maker, coffin maker, sculptor...etc

## Skills required

- Attention to detail and accuracy.
- Perfectionists.
- Creative
- Hard-working
- Geometric and algebraic skills for measuring materials and reading blueprints.
- Good eye-hand coordination
- Manual dexterity are required.
- Fitness and stamina for lifting heavy materials
- Good balance for work involving ladders and roofs
- Reliable and have good people skills

## Let's Meet the Carpenter!



Figure 10: Carpenter Goodhope Nkosinathi  
Mqedlana at work

My name is Goodhope Nkosinathi Mqedlana. I am currently busy trying to promote and market my business at the same time working on the projects that I get. I am a carpenter; I do built-in kitchen units, wardrobes, ceiling decor and other carpentry related jobs. I live in Gauteng and

acquired my skills at Funda Centre through a learnership that was organized by the Government. I didn't pay money the learnership was free. I was in Funda Centre from 2008 and my course took me 18 months and that means I have been in business for 4 years. My clients differ from ordinary people to big organisations.

## Career: Entrepreneur

What does one do in this career?

Do you see problems in your community or city that you can provide innovative solutions for?

Do you have a passion for helping other people whilst growing your business and self at the same time?

Are you hungry for success and are driven to be the best in your chosen vocation?

If you answered the questions above with a positive answer then you have what it takes to be the next Patrice Motsepe. You can become the next Bill Gates, Steve Jobs, Nelson Mandela, and Desmond Tutu.



Figure 10: Different aspects of an Entrepreneur and Entrepreneurship courtesy of [www.columbiaredi.com](http://www.columbiaredi.com)

If you look at the short list above you will see that all these people were in different fields but they have been labelled as entrepreneurs because they have gone out of their way to answer humanity's problem, at times even sacrificing their own safety and happiness and eventually they reaped the fruits of their labour. Now you might say these are great men and you are an average township boy/girl who cannot get to the level these great people got to. That is the first thing you have to get rid of before venturing into entrepreneurship as the limiting thoughts will not get you anywhere.



It is your duty as a citizen of South Africa and a member of your community and family to aim high and achieve success. The good thing is that the government of South Africa has laid a strong foundation for you to flourish.

The Decade of the Artisan programme is testament to government's dedication to making sure that you are given the platform to be the man/woman you were meant to be.

Anyone can be an entrepreneur and it is necessary and sufficient that you use your earned skills in other fields and apply them to be a problem-solver as opposed to being a problem causer who expects to be handed freebies without going out of your way to be a citizen who contributes to the country's Growth Domestic Product (GDP) positively.

### What will the workplace be like?

Many entrepreneurs start their business from home and expand thereafter. Nowadays there are so many venture capitalists, incubation labs and enterprise development centres that are offering support too small to medium enterprises.

The buzz term nowadays is "sustainable social enterprises". Sustainable social enterprises are for-profit companies which solve society's problems at the same time making profits for re-investment into the businesses to ensure exponential growth. The funders will monitor and track your progress in order to measure impact of your enterprise.

Below is a list of some of the biggest supporters of social enterprises in South Africa:

- Small Enterprise Development Agency (SEDA)
- Industrial Development Corporation (IDC)
- Tshikululu (administers funds on behalf of corporate)
- Acumen Fund
- Banks

There are different types of finance providers in South Africa categorised as follows:

- Retail Banks
- Impact Investors
- Private Equity
- Socially Responsible Investment (SRI) Funds
- Venture Capital
- Other grant-issuers
- Venture Philanthropy
- Microfinance
- DFI
- Enterprise Development Finance

- Corporate Foundations

As an artisan, you can use your skills to pursue business ownership through forming a social enterprise. Some of the FET Colleges offer Entrepreneurship as a course and this will serve as your outlet for business success. Do not hesitate to ask the relevant people on how best you can be the next Patrice Motsepe of your community.

What instrument, tools or material will you work with?

Computers, office equipment like fax machine, telephones, copiers, etc. Files, bank statement, your product, cars, trucks, and other vehicles. The tools depend greatly on the line of your business. Check on the entrepreneurship course offered in training colleges and align your interests with the community needs and you will be on the highway to success.

What are the advantages and disadvantages of this path?

Advantages:

- You are your own boss
- Flexible hours
- You can be as ambitious as you want to be
- Being able to take initiative and make decisions yourself
- Being a job creator and employer
- Can be financially rewarding if run professionally

Disadvantages:

- It can be difficult getting started
- It is considered a risk (by risk-averse people) going the entrepreneurship route
- Hard work to get finance and clients
- Have to work extra hard to stay afloat
- Constantly have to prove your capability and capacity

What type of companies might employ me after my studies?

Self –employment or go into the intra-entrepreneurial divisions of corporate companies responsible for pushing the companies' boundaries.

What other careers are similar to this one?

Small business owner, inventor, franchisee

How can I prepare myself for this career?

- Start developing plans for your own small business while you are still at school.
- Read books on the economy and the current business trends.
- Seek employment with an entrepreneur.
- Identify problems in the community that you can come up with innovative solutions for a profit
- Start understanding funding models for your intended business line

Are your interests and abilities similar to those recommended below?

- Self-discipline
- Good head for business
- Strong communication skills; outgoing personality
- Determination to follow through projects
- Leadership qualities and motivated to succeed
- Interested in the business world
- Creative and innovative
- Conceptual thinker
- Good management skills
- Problem solver

What 1<sup>st</sup> year subjects can I expect to study?

- Personal Management
- Economics
- Business Management
- Marketing
- Management Communication
- Sales Management
- Retail Business Management
- Business Administration

How long will I study for?

4years

Below is a story of a South African university drop-out who against all odds achieved success in entrepreneurship. The story is as told by Herman Mashaba and Isabella Morris

## Black Like Me, Herman Mashaba, an Autobiography of the real South African entrepreneur



Figure 11: Herman Mashaba - true entrepreneur

Herman Mashaba is a veteran South African Entrepreneur who started his business activities during the harsh apartheid landscape and policies that once gripped this wonderful country.

He came from humble beginnings to become one of South Africa's wealthiest and best-known entrepreneurs. His remarkable story begins in a small village of Hammanskraal in Gauteng. He refused to settle for a future that offered nothing.

Forced to drop out of university, the determined young man fought to establish the first black-owned hair care company in South Africa. Mashaba struggled every day of his life – against apartheid, with its demeaning laws, and against his competitors to grab market share for his business. In the process, Mashaba learnt lessons that few business schools teach today.

This is a story of survival, and of determination in adversity. It is also a love story between Herman and Connie, his wife of 30 years, who embarked on this journey together. Mashaba shows the importance of having **a vision, daring to dream it, and then making it happen**. This inspiring book will leave you with the question: “**If he did it, why can't I?**”

Source: (<http://blacklikeyou.co.za/black-like-me-herman-mashaba-an-autobiography-by-herman-mashaba-isabella-morris/>)

If Herman could defy the odds why can't you? Set yourself on the path to greatness with the entrepreneurship course offered as part of the artisanship drive.

**Career: Bricklayer**

**Field: Construction**

What does one do in this career?



Figure 12: Photo of bricklayer courtesy of [www.specifile.co.za](http://www.specifile.co.za)

Once you have been accredited by Construction Education Training Authority (CETA), you are now a qualified bricklayer and can earn money that is commensurate with your expertise and skills. Bricklayers are an integral part of the building process as they foresee the mounting of every brick.

They ensure that enough concrete, cement or mortar has been placed between the bricks and the bricks are aligned to allow for structural stability and beauty of the end product. Whether it be laying bricks for a building wall, or a pavement, precision and intactness is the name of the game. If as a bricklayer you mess up alignment from the beginning it will have a domino-effect on the overall quality of the structure being constructed.

Careful estimation of bricks required, their size and shape is very important as these factors are determinants of a quality product. As a brick or block layer you can take a pile of blocks and mortar and turn them into a structure that lasts generations. The creative aspect in brick-laying is very important as from time to time decorative things like fireplaces are requested by clients.

### What will the workplace be like?

Depending on the site under construction, lots of movement is expected for bricklayers. Working away from home should not be a problem for you as this is an industry standard. If you are self-employed you can control your movement by restricting your business to the local precinct. Most often than not, you will stay in boarding-like conditions if the work-site is far from your home.

Training in Health and Safety will be a pre-requisite as you will spend a great deal of time on-site which might pose several dangers. Personal Protective Equipment like safety helmet, work boots, gloves, goggles, ear defenders and even a safety harness will be provided for you by the employer.

As much of your working time is spent up a ladder or on scaffolding, bricklaying can be dangerous. You need an excellent head for heights and a constant awareness of health and safety

On the upside, there is a high demand for professional bricklayers and this in turn improves your job security and financial rewards associated with the job.

Bricklaying is extremely physically demanding and requires accuracy, precision and a general gravitation towards order and beauty of final products.



## Skills needed

To be a bricklayer you will need:

- Good practical skills.
- The ability to work carefully and accurately.
- The ability to work as part of a team.
- A good awareness of health and safety issues (especially when carrying heavy loads at great heights).
- An ability to read technical plans.
- A good level of fitness.
- An appreciation for artistic beauty

## What instrument, tools or material will you work with?

As a bricklayer, your most regular tools will be these:



**Figure 13: Photo of some of bricklayer's tools courtesy of [www.dreamstime.com](http://www.dreamstime.com)**

- Brick trowel
- Pointing trowel
- Spirit level
- Plumb line
- Cold chisel
- Bolster
- Club hammer
- Hawk.

The brick trowel is used for laying and smoothing the mortar to cement the bricks together. Larger brick trowels also have a rounded edge for the 'rough cutting' of bricks.

The pointing trowel is much smaller and is used for more detailed work, such as fitting mortar between previously laid bricks (pointing) or putting a finish on brickwork.

Bricklayers also use a 'hawk', a board with a handle on the bottom, which is used to carry small amounts of mortar.

You will also need a spirit level to ensure that your layers are horizontal, and a plumb line to ensure that they are vertical. You will also need a lump or club hammer (essentially a very heavy hammer), a bolster (a large thick chisel used for the actual cutting) and a cold chisel (a smaller chisel used for tidying up cuts).

## What type of companies might employ you after your studies?

Bricklaying work is available as both contract work and permanent depending on the scope of the projects.

Large construction companies such as Group Five and Robert & Murray are the biggest and most stable employers for construction workers. In larger cities, working for such companies can mean less need to travel, and there may also be more opportunities for talented workers to climb through the corporate ladder.

Experienced bricklayers can go on to become self-employed or start their own construction businesses

### Where can you study?

The more technically skilled you are, the higher your wage will be. There are some basic courses available which could increase your starting salary. The best way into the business is to get a learnership with a building firm as you'll be paid to learn.

### Field: Engineering

According to [www.careerplanning.about.com](http://www.careerplanning.about.com), Engineers solve technical problems by applying their knowledge of science and mathematics. To become an engineer one must earn a bachelor's degree in engineering. Some jobs are available for those who have earned a bachelor's degree in physical science or mathematics. Engineers who offer their services directly to the public must be licensed.

If you want to have a career in engineering, you have two options from which to choose. You can be an engineer or an engineering technician. Each of these has different educational requirements, as well as different duties and salaries

### Career: Electrician

The SAIEE website gives a compelling summary of the steps and choices you need to take in order to pursue electrical engineering either as an artisan or engineer. Below is the SAIEE statement on subject choices leading to an electrical engineering career.



As early as your grade 7 year, you already start making choices for your future career. In this year you need to decide which type of High School you are going to attend. (For example a General Academic or Technical High School)

In your grade 9 year you need to choose the subjects and you need to decide which field of study you want to follow after matriculating. To enter into further studies for a career in Electrical Engineering you need to pass Mathematics, Physical Science and a Language. To go to University you need to pass 4 subjects reasonably well and these must include Mathematics, Geometry, Science and a language.

Universities and Universities of Technology require Mathematics and Physical Science as compulsory subjects for entry into their Electrical Engineering courses.

In your grade 12 year you need to decide whether you want to attend University, University of Technology or FET College to further your studies.

This choice will depend on your aim whether to become an Artisan, Technician, Technologist or Engineer in the Electrical Engineering field. You don't have to go to university immediately to become an Electrical Engineer. Some of today's most prominent figures in the Electrical Engineering society commenced their studies at FET College, then moved on to university of technology and ultimately qualified as Electrical Engineers at University.

Below is a Pnet electrical quantity surveyor job advertisement that serves as an example of why it is important to pursue an artisanship course in electrical engineering. This is just one of the many jobs that are being offered to highly sought after electrical technicians.

Source:

[www.pnet.co.za/?s=advert\\_view&q=2341&x=3297689&i=2302&pop=2&src=careerjet](http://www.pnet.co.za/?s=advert_view&q=2341&x=3297689&i=2302&pop=2&src=careerjet)

## Introduction

The Client is a global provider of engineering services in various disciplines, and is one of the diverse organizations with different operation nationally and internationally  
- Listed with New York Stock Exchange.

## Minimum Requirements

Qualifications: - N3 / N4 Electrical Engineering - Qualified electrician with the Electrical Board - Completed electrical apprenticeship programme

## Job Specification

The Client is a global provider of engineering services in various disciplines, and is one of the diverse organizations with different operation nationally and internationally  
- Listed with New York Stock Exchange.

To further their strategic business expansion plan, they are seeking to appoint new employees who are loyal, committed, competent and proud to work for them.

Successful candidate will receive a full training to become a full function Electrical Quantity Surveyor, read electrical drawings, installation according to project construction.

### **Qualifications:**

N3 / N4 Electrical Engineering

Qualified electrician with the Electrical Board

Completed electrical apprenticeship programme

Experience

2 – 3 years building services experience preferably office blocks

Electrical Engineering experience

Able to read drawings

Installation experience is essential

**Preferred Skills**

Electrical Engineering experience

Able to read drawings

Installation experience is essential



The advert shows how lucrative the electrical jobs are. Go for it and start your dream of a financial rewarding and in demand profession.

Electricians are in high demand, especially after the massive brain-drain of artisans leaving for overseas. If you really want a great job that is financially rewarding, then

think of doing the electrical technician course through your nearest FET college or consult via SAIEE.

Electricians' duties include generation, installation, distribution and usage of electricity via electrically-operated equipment, e.g. Refrigerator, generators, stoves, heaters and industrial and domestic installations.

#### Desired characteristics

- Good eyesight and not be colour blind
- Good communication skills
- Natural aptitude for working with tools

#### Career Opportunities

- Electrician
- Electro-technician
- Refrigeration Technician
- Master Electrician
- Lift Technician
- Millwright
- Electrical Fitter
- Electrical Engineer
- Electrical Wire person (Domestic installation)

#### Admission requirements for Apprenticeship

- For N1 Grade 12 Certificate with A Pass in Mathematics and Physical Science
- For N4 – N3
- For N2 – N1
- For N5 – N4
- For N3 – N2 /Technical Grade 12
- For N6 – N5

## Mechanical

Thinking of a career in mechanical engineering?  
Enjoy fixing engines and fixing performance issues?  
Are you hard working?

Do you want to have job security by getting a scarce skill in South Africa?

If this is you, then think mechanical engineering. Few careers offer more responsibility and satisfaction as you solve individuals' and companies issues through your mechanical skills. Once you are a mechanical engineer or technician then you are marketable anywhere in the world. Why wait? Start considering this exciting course.

Am I right for the job?

Desired characteristics are as follows:

- Good hand to eye co-ordination
- Accuracy
- Working with your hands
- Mechanical Insight
- Dexterous
- Good organizer
- Attention to detail
- Eye for detail
- Able to work alone
- Physically fit and strong

General Schooling / Academics required:

- This might differ from each training institution, therefore you need to confirm first
- Grade 9 or N1.
- COMPULSORY SUBJECTS: Mathematics
- RECOMMENDED SUBJECTS: Physical Science, Trade Theory
- Technical: Mechanical, Technical Drawing

What is an apprenticeship?

An "Apprenticeship" is a non unit standard based registered qualification and comprises of an integration of workplace and institutional learning and culminates in a national qualification. During the programme you will be taught the skills and practices that are associated with a given career path in the Aviation Industry. You will be trained in all aspects of a specific Trade until you are competent to do a Trade

Test to become a Qualified Artisan who can then function effectively within the local and international working environment.

## What are the benefits of an Apprenticeship?

There are various benefits to doing an Apprenticeship. You can earn while you learn, and learn in a way that is best suited to you – through hands-on experience on the job training. The training institution will make sure you have the necessary support. Your training will fit all requirements, offer the skills needed for the job and will ensure that you adhere to national and international standards.

## Engineering apprenticeship

Artisans are extremely important as they do the actual maintenance repair and overhaul of engines. If you wish to become an Artisan, then you have to start by entering into an apprenticeship and qualifying after approximately 3 years – then you are a qualified tradesman in the specific field of expertise and ready for appointment at most Aviation companies. After completing matric the student can enrol at University to study either mechanical, electrical or civil engineering. Upon qualification, the student can get appointed at a company as Engineer-in-training and registered with Engineering Council of South Africa (ECSA), where after the employee will get specific training related to the different disciplines in engineering. The next progression route is Junior Engineer, and based on experience and performance will become a fully-fledged engineer.

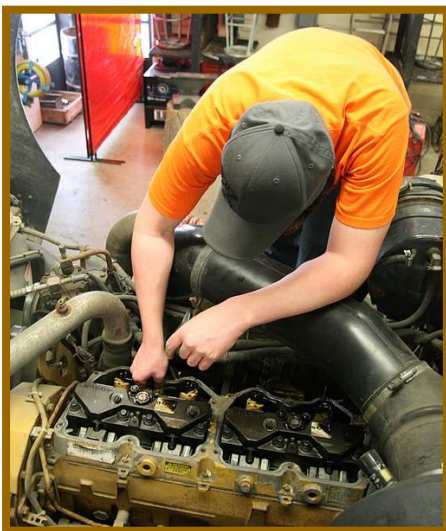


Figure 14: Mechanic working on an engine



## Career: Lift Mechanic/Operator



Figure 15: Lift operator at work

### Duties of Lift mechanics include:

- Installation of lifts
- Maintenance, trouble shooting and repair work on lifts.
- Assisting lift operations with the daily start-up and shut down of the lifts.
- Reading lift schemas and manufacturers' manuals, fit bearings, rebuild sheave trains, service grips and perform other mechanical procedures.
- Assisting in emergency situations
- Reporting and fixing any unsafe situations

### Knowledge, Skills and Abilities:

- Millwright or learnership and industry experience
- Good communications skills, self-motivated, mature, dependable, timely and able to work well with others
- Willing and able to work in all weather conditions
- Ability to work at excessive heights
- Valid Class 10 Driver's License
- Ability to operate snowmobiles, ATVs and 4x4 trucks in a safe and responsible manner
- Operators certificates for associated industrial equipment an asset
- Good working knowledge of current health and safety regulations
- Required tools

## Course subjects:

- Electrical theory
- Electronic theory
- Mechanical drawing
- Mathematics
- Physics
- Safety
- How to read blueprints.

## A Day in an Elevator Mechanic's Life:

On a typical day an elevator mechanic's tasks might include:

- determining what equipment is needed by reading blueprints
- installing elevators and components including doors, cables and control systems
- connecting electrical wiring
- diagnosing problems
- keeping records of service calls and maintenance

## Career: Draughting

Are you a person who understands concepts by drawing them into diagrams?

Do you enjoy simplifying the understanding process through diagrams?

Do you like using the computer to come up with interesting diagrams or animations?

Are you creative and artist whilst analytical?

Do you enjoy working with numbers, modelling real life situations into mathematics?

If you have answered YES to most of these questions the draughting and you could like each other. Chances are high that you would like the draughting programme offered at a number of FET Colleges country-wide.

As long as you can be given a concept and express it as an engineering drawing for easy interpretation by other stakeholders upon your explanation which should signal good communication then you are a candidate for this niche profession which is very fulfilling. To top up these pre-requisites you need mathematics and maybe science depending how you will apply the draughting qualification.

On a project there are different role players and the Draughting person is surrounded by engineers, quantity surveyors, project managers, surveyors, civil engineers and

project owners thus it require you to be a good team player. Draughting is used in the different types of engineering and architecture to express concepts in diagrammatic form thus is cross-sectorial.

Various accredited FET Colleges and universities of technology offer draughting as a course, The South African Institute of Draughting or visit the consultants mentioned in Step-1 of the seven steps to becoming a qualified artisan.

A draughtsperson needs to:

- be a great communicator
- pay attention to detail
- be a great problem solver
- be emotionally intelligent
- love drawing and design
- be computer savvy
- have some background in technical drawing
- be a projects oriented person
- be practical and systematic
- be hands-on

Workplace providers include:

- Construction Firms
- Mining Companies
- Petrochemical Industry
- Sasol
- Architectural firms

# Tips on How to Study

## How to study effectively

For these tips to bear fruit, apply them in your studies diligently.

1. Engage in active study (Always get a pen and paper and actively take notes in the process of understanding)
2. Take responsibility for studying, recognizing what you do and do not know, and knowing how to get your teacher to help you with what you do not know.
3. Attend class every day and do your work diligently. Teachers formulate test questions from work that has been covered as examples and exercises and from the text book.
4. Be an active participant in class. Get ahead in the textbook, try to work out some of the problems even before doing them in class-provided you have understood the covered topics. Anticipate the teacher's next step.
5. Ask questions in class. There are other learners wanting to know the answers to the same questions you have. So do not be afraid of being mocked.
6. Reassure yourself each and every day that you can make it, no matter how rough the road maybe.
7. Math is a doing subject. Do your homework, classwork, projects, investigations and other assignments to the best of your ability. (The more the problems you solve, the better you learn the necessary formulae and techniques as well as improve your problem - solving prowess.)
8. Learning is a cumulative so make it a point to always revise work that you already covered because it will be linked to whatever topic you will be doing (even the easy things that you have mastered).
9. Identifying and learning the fundamentals (basic key concepts and principles) means that you do not have to memorize.
10. Form a study group. Get help with problems and also teach others what you understand. Teaching others is one of the best ways to understand and retain knowledge.
11. The more challenging the material, the more time you devote to it.
12. Have a study time table that will help you with self - organization.
13. Make it a point to apply learnt principles in any practical applications.

*"The true genius knows that it is not enough for only him having reached the sky high levels – he has to take the rest of mankind with*

*him up and has dedicated his life in making it happen." - Jim Westergren*

These tips constitute good study habits and are key to your success.  
Study diligently and you will surely be on the path to success

# Girl Artisans Rock!

*“Glass ceiling” was coined in the late 1970’s to describe those invisible barriers that block the upward mobility of women in the workforce - namely organizational attitudes and prejudices that keep women from decision-making and leadership positions. Now, some 30 years later, there has been much progress for women in terms of employment opportunities, especially in business and education.*

*However, this has not been the case in science, where the under-representation of women, especially at senior levels, remains quite evident. In fact, a term has been coined specifically to represent this reality of women dropping out of science instead of moving up the career ladder: “the leaking pipeline”. (Amelia Goh, Helga Recke, CGIAR Gender and Diversity Program, 2008)*

“I like maths and science therefore I am going to be an artisan of note”, this is the bold declaration of Patricia who is a girl in Grade 8. Not enough women made this kind of declaration when they were girls due to societal and cultural imbalances of the past. This article has been written with you girls and women in mind. It contains a message of hope, faith and belief that you can pursue a career of your choice just like men. Gone are the days when society stereotyped women as weak and incapable of doing certain jobs in the science, engineering, financial and medical fields. My message to you is: THE TIDE HAS SHIFTED, WOMEN OF THE 21<sup>ST</sup> CENTURY ARE CONQUERING IN ALL SPHERES OF LIFE AND WOMEN HAVE DOMINION OVER THEIR DESTINY.

*“The world needs science...and science needs women” - Jennifer Campbell  
(Director of Philanthropy L’Oreal - L’Oreal’s For Women in Science Program with UNESCO)*

There is a saying that “women are the custodians of life itself”. My appeal to you is: GIVE LIFE TO THAT INNER CRAVING FOR SUCCESS WHICH KNOWS NO BOUNDS AND LIMITATIONS. What can stop every girl child in excelling beyond the subjects being taught in schools? Women ought to be at the forefront of discoveries related to female reproductive health as opposed to men leading them. I am not saying men should not study and advance female related subjects but women would be better suited to find solutions for women related issues. Come on girls, YES YOU CAN EXCEL AND BE THE BEST IN ANY ARTISAN, SCIENTIFIC; ENGINEERING; MEDICAL AND FINANCIAL FIELD. Just have self confidence in yourself and not even the sky is the limit for you. You can be what you want to be as long as you have the conviction that you can.

*“I work very hard and do not give up easily even when things are tough. I tend to take setbacks in my life as a way of working even harder. I actually get challenged*

*by doing the 'impossible.'” - Tebello Fokong (South African female researcher of a ground-breaking cancer diagnosis and treatment).*

I have gone over a lot of articles from many sources, looking for women artisans or engineers. Women who are the hallmark, the standard of what every girl can achieve. They have raised the bar so high that it is your duty to catch up and even set it higher.

With technology at your fingertips, I am sure you can do better than the legendary Marie Curie (I call her The Radium Woman) who had no technology in the 19<sup>th</sup> Century, but sheer determination and focus pushed her until she discovered the chemical elements Radium and Polonium.

In the process she got a double Nobel Prize which is the highest honour to be bestowed on an individual.

*“No matter what the detractors say, I will have unwavering focus to achieve that which I set out to do. I am a mover and shaker”*

Young lady, yes you can achieve success in any field of study or career if you put your mind to it. Despite the strides made by men in engineering and sciences in general, women have been contributing immensely and often times go unnoticed or uncelebrated.

It is my goal and wish that women will be recognised for their efforts and more girls will take up those jobs that previously were preserved for men. I hope it will catapult you to be the best you can be.

Dare to be strong, smart and courageous. Fasten your seat belt and be elevated to success, it starts with making up your mind to achieve success followed by choosing the correct subjects at grade 9 thereafter pursuing your chosen career with all your might and will.

*"You should know how many incompetent men I had to compete with - in vain!" - Inge Lehmann.*



# What stops girls from pursuing artisanship?

Education and employment are fundamental human rights thus all should have access, equal access to these vehicles of success. On the ground many girls and women have been marginalised with no conducive environment to learn and work optimally, especially in maths, science and artisanship which are historically a preserve for boys and men.

Women have to work almost twice as hard as their male counterparts to be recognised in maths, science and engineering. The challenges that girls face in the classroom or laboratory are far more than those of boys thus making it an uphill task to excel especially in the sciences and engineering.

*“Life is not easy for any of us. But what of that? We must have perseverance and above all confidence in ourselves. We must believe that we are gifted for something and that this thing must be attained” - Marie Curie*

Before listing the issues done, what I have noticed from personal experience is that girls lack confidence which in turn affects their interest and acumen at maths and science and ultimately their career choices.

This lack of confidence is a direct result of societal perceptions implanted in both males and females from a very young age.

At this juncture, I will reinforce the fact that girls are equally capable and if you were made to believe otherwise, then discard it and turn on a new leaf. Maths and Science can be done by anyone. It is a choice.

*“For the founders of many emerging building-toy brands—women engineers in their 20s and 30s—creating an opportunity for girls to work on their spatial skills is critical. Several of them cite as motivation the fact that there are far fewer women in science and technology professions than men”. - Diana Kapp*

Below is a list of the major barriers girls face when learning science (you can add more if you feel I have left out an important challenge faced by girls):

## Self-Confidence

*“Success is most often achieved by those who don't know that failure is inevitable.”  
- Coco Chanel, Believing in Ourselves: The Wisdom of Women*

Self-confidence is a manifestation of earlier experiences and reinforcement, meaning that your experiences dictate how you are going to see the world. Many people might be looking at the same object but seeing different things as a result of how our brain functions.

It associates everything we encounter with what it has already been exposed to. The brain is a tool that functions by making connections and establishing relationships between all our experiences.

Now if you have always been told that girls are not as smart as boys, science and engineering are for boys... bla bla bla then it is harder to imagine and see the truth. As we know, this is a lie.

You need to break free from such thinking and believe that you can. It might have been a loved one of yours who ingrained this in you, it was ignorance. Just forgive him/her and shift to that mindset which will assist you to succeed. Self-confidence contains the word self thus you are the only one who can control it. It is self thus you should take control over the management of your self-confidence.

Believe that all human beings are equal and can achieve whatever they set their mind to do. Be that star that shines and always achieves the set goals.

After so many years of being told that you are not good enough because you are girl, it is not easy to break free from that bondage but it can be done. Many women and girls have done it and have experienced true freedom. Free yourself from that mental prison and soar like an eagle. Girl you can do it.

As stated above self-confidence is a manifestation of prior experiences, I am going to list those issues that lead to lack of self-confidence in girls when learning maths and science. I do not have all the answers in addressing these issues but you can assist. Be the girl you want to be.

*“A 2010 study with 116 Israeli first-graders conducted by professors at Bar-Ilan University found gender differences in spatial skills disappeared after eight training sessions on mental rotation tasks. The kids practiced reproducing images from memory, and then were guided in perceiving them from different angles”. - Diana Kapp*

## Lack of Women Scientists to act as role models

Great strides have been taken in empowering women within the sciences and engineering although not enough has been done. We are still far away from a gender-equal science and engineering fraternity. As a girl do you know any prominent women scientists, mathematicians, artisans or engineers? Who inspires you on a day to day basis to achieve in maths, science and engineering?

There are too many unsung women in sciences heroines who could be helping the girls of our continent become great engineers and scientists. I believe that the women scientists and engineers are not doing enough to get publicity and inspire the girls out there.

It is not the duty of government to go and unearth women scientists and engineers from their workplaces. The women role models should unleash themselves and adopt schools and make a difference in the girl child's life and future.

As a girl, promise that when you become that successful engineer, doctor...etc you shall make it a point to shout out to all the girls of our land that it can be done. Shout out in whatever way you can and preach the gospel of success.

You can start now by organising a girls' science and engineering club in your school or community. Take custody of other girls and have STEM fun. Teach each other the way you would want to be taught in school. Girls will have to free girls from the bondage imposed on you by society and culture. Take control and be each other's role models in your small ways. Be the leader in your circle of influence.

I believe that if you are pro-active, government, NGOs, other women and girls will take notice and your project can grow exponentially.

Be the role model that you can I am talking to every girl in our land. Take over control.

### Geeks cannot find love – be blonde for your boyfriend

What nonsense! Geeks rule the world! I thought this was one of the most absurd comments ever. Girls actually dumb themselves to please boyfriends? Girls do not take up maths and science in order to be below their boyfriends?

Now listen to me young lady! Never will I hear such hogwash again. Get out there and perform your best, you are doing disservice to your intellect by allowing boys to control you like that. Be the captain of your future! If a boy cannot stomach the fact that you are smarter than him then RUN!

In this world there are so many restrictive cultural practices that reduce women to be of less intellectual capacity thus the subordinate role of women in society. I have a rule of my own, if a cultural belief is stopping me from progress, from my success then it is not worth observing.

Don't compromise with your success young lady. Run towards your goal with all your energy. I know you can do it. Don't stop!

Even if they call you a geek, just know that the so-called geeks actually rule the world because they have something to offer to the world. Do not conform to practices that lead you to under-perform. Never be dumb for the sake of someone else's ego. Run your race until the end. Be courageous and bold in your journey to success.

*"I believe that there isn't as much a bias with gender in science as much as a generation of women raised in a society where looks and reality show popularity have created a majority of shallow, self-centred women who choose "easier" paths in life. There are many intelligent women who have overcome this media*

*generalization, but with the compounding pressure to be a certain way in society if they want to "find a significant other" (intelligent women are not considered attractive by society), it makes wanting to pursue a scientific career very difficult from a social aspect.*

*I know many smart women who go so far as to pretend to be dumber, because they feel it is the only way to get men. I guess men can also be to blame for perpetuating this belief, desiring the attractive over the intelligent. Once women on the whole realize that being smart isn't debilitating to their social interactions, then I believe you will see many more female scientists. That is what it boils down to in the end, social interaction with potential friends and relationships." - Kagemusha*

## Girls can't think logical - they are emotional beings

Who said that? Who set that standard? This is a big misconception.

Society has always cemented the idea that women and girls are incapable of making rational decisions as they are super-emotional beings thus can never succeed in maths, science. I would like to meet anyone who supports this notion. I would want that person to explain to me how the great women in science, maths, engineering and business have made it.

How have they made it? These are my counter-examples to this misconception. To add impetus to my argument, I am of the conviction that there are far much more unsung heroines of maths, engineering and science than those that are sung. Most have fallen victim to the societal imbalances and pressures such that they never got to showcase their talent and aptitude to the world.

Study has shown that all human beings have the same kind of brain and its functions are similar. If you are one of those proponents of the idea that men are intellectually superior to women then please forward your argument to me and I will crush it. Girl, if you are not sure, seek the truth no further. I am here to liberate you from the prison you have been sentenced by society. Free your mind, free your intellect and soar like an eagle. Take your success by force, for it is your rightful heritage.

*In spite of the widely-held belief that boys and girls tend to have different learning styles, there is little evidence to bear this out. Research has questioned the validity of notions of discrete learning styles, and studies have also failed to find conclusive links between gender and learning style. Where learning practices and preferences may be gendered (for example, girls enjoying group work etc), such preferences may be due to social norms, suggesting a role for teachers in broadening (rather than narrowing) learning approaches. **Sources:** Coffield et al (2004), Younger et al (2005).*

## Curriculum not girl friendly

I am sure you expect me to say I disagree, or. I agree, yes the curriculum designers and content developers have to do more in making it more suitable for girls to thrive.

This is not an easy task but with the contribution and efforts of women in power and science it can be achieved.

The problem is that the basic frameworks of science and maths education were made for a male audience when it was exclusive to men. Now is the time to rethink and join hands to come up with a science syllabus that will stimulate the girl to love maths and science.

There has to be an improvement in the pedagogical approaches so as to enhance learning. The girl-friendly curriculum is not because girls are inferior, but because of the way society was structured by men consideration has to be taken of where women and girls are coming from. Those disadvantages and challenges faced by women have to be accounted for when coming up with any programme or curriculum.

**The most important thing in a girl's life is to be ready for marriage**

Hehehehehehe! Men are clever, they guaranteed themselves wives by making sure society emphasises on the need for women to get married. Marriage is good if it is consensual and adds value to a woman's life.

My advice to you is that; seek education and personal advancement first before being entangled in marriage, but the sequence is not written in stone. I know some married women who have taken charge of their lives and have become forces to reckon with in the maths and science fields.

I am of the firm belief that an educated woman will bring more to a marriage than an uneducated one. Pursue your dreams first; do not live a life of regret. Go for your dream.

Do not get me wrong, marriage is good but not an end in itself. Getting married should not be the ultimate goal that defines you as a girl. Marriage is a partnership that should be able to propel you to greater heights of joy, fulfilment and dream-chasing.

*"I think it is a duty I owe to my profession and to my sex to show that a woman has a right to the practice of her profession and cannot be condemned to abandon it merely because she marries." Harriet Brooks, 1906.*

No one should ever force you to get married; I know family and friends will start asking questions about when you are going to get married when you reach a certain age. Achieve something and they will see the fruits of your labour. Get married only when you want to and are old enough for it.

*"I have frequently been questioned, especially by women, of how I could reconcile family life with a scientific career. Well, it has not been easy". - Marie Curie*

Fight all those stereotypes labelling girls as dependent on men. We are all equal and we should co-exist on a level playing field. Girls are good in maths and science.

One of the absurd comments I heard (ranks second after the one above about being blonde for your man) was that only lesbians and tomboys pursue engineering, science and maths careers.

Ladies should pursue the less rigorous subjects and careers. Just earn money to buy groceries; the husband is the MAN and the primary bread-winner. This is crazy, mad! In no way is this true. This is what I call a fundamental fallacy.

Girl, get out of that thinking and work your way to the top. You can be anything you want to be. Self-reliance is the highest level of freedom. Do not be bottled, unleash your potential in your career of choice.

All this hogwash about girls who use tools or apparatus in manual jobs will break their nails or hurt them and won't find a man is not value-adding to your life. Do that which makes you happy and edifies you.

*"I have no dress except the one I wear every day. If you are going to be kind enough to give me one, please let it be practical and dark so that I can put it on afterwards to go to the laboratory". - Marie Curie*

## My Solutions

I don't have the full solution to the gender-inequality problem but if we all contribute we will achieve a gender-neutral society thus achieving equality. This is what I think would help in achieving neutrality:

- Girls love to be mesmerised. Keeping lessons interesting by enabling girls to dream and see maths, engineering and science come to life in their imagination.
- Having certain topics where you learn as girls only. Often if boys are there it becomes uncomfortable.
- A new subject called Gender-Equality should be introduced, taught and examined. It has to be a mandatory subject in both high school and tertiary education.
- Stories in books should not portray the traditional role of women which is below men in the social hierarchy. We need the heroines of science chronicled in the curriculum.
- Curriculum designers should realise that girls like their maths and science to be relevant and useful to their everyday life.
- It seems girls are not given any room to make mistakes. Any mistake made will be remembered by everyone and defines who girls become. Boys tend to go scot-free after mistakes. This should change. Girls should be encouraged to come out of their comfort zones and take some risks.

- Girls should not be judged when they are messy; this is a contributing factor to why women shy away from 'dirty' science and engineering jobs because they have to be lady-like. Society has come up with a model lady who is clean, naïve, gentle, needy and vulnerable. Are these the characteristics of a winner? I doubt it.
- Teachers, parents, government should expect girls to pass. Currently it seems normal if girls don't pass, since maths and science are reckoned to be for boys. This is a lie, go for it girl and be the best you can be.
- Science Curriculum design should be guided by the following principles: Empowerment, Equity, Enrichment, Edification and Fun.
- More companies should provide scholarships, bursaries and apprenticeships for girls to pursue maths, science and engineering. Remember, girls and women have been oppressed for many centuries and turning the tide is no easy feat thus it is imperative that every individual and organisation plays its part.
- An increased recruitment and training of female maths and science teachers is important.
- Every community ought to have an after-school and weekend girl's science and maths club supported by the community.
- Community campaigns on gender-equality ought to be increased in frequency and reach in order to carry the message across the spectrum of communities and to ensure the message takes effect. Once-off campaigns are a waste of time.
- Communities should take charge of the safety and security of girls especially in the rural areas where girls walk long distances to get to the nearest school.
- Women who are science, engineering and maths professionals ought to adopt a few schools each and be mentors to girls.
- Families should make sure that household chores are balanced between girls and boys so as to achieve equal study time.



# Scarce Skills

## Technical Skills

**Bricklayer** - A bricklayer or mason is a craftsman who lays bricks to construct brickwork. The term also refers to personnel who use blocks to construct block work walls and other forms of masonry.

**Requirements** – Grade 10

**Institution** - Further Education and Training (FET)

**Provincial Departments as potential employers** - Department of Human Settlements and Public Works

**Electrician (General)** - An electrician specialises in installing, maintaining, repairing, testing and commissioning electrical and electronic equipment and systems for industrial, commercial and domestic purposes. Electricians may be employed in the installation of new electrical components or the maintenance and repair of existing electrical infrastructure.

**Requirements** – NSC Dip with Engl and Maths and Physic Sci 4

**Institution** – Further Education and Training (FET)

**Provincial Departments as potential employers** - Department of Human Settlements and Public Works

**Plumber (General)** – A plumber is a tradesperson who specializes in installing and maintaining systems used for potable (drinking) water, sewage, and drainage in plumbing systems.

**Requirements** – Grade 10

**Institution** – Further Education and Training (FET)

**Provincial Departments as potential employers** - Department of Human Settlements and Public Works

# Management

**Economist** - Economists analyse economic information and make forecasts to governments and businesses on issues such as taxation levels, wages and prices, employment and unemployment, imports and exports, and interest and exchange rates. In addition they monitor social and political trends and their impact on the economy.

**Requirements-** Matric (Maths and English)

**Institution-** University and University of Technology

**Provincial Departments as potential employers-** Economic

**Accountant** - An accountant systematically records, reports, and analyses the financial transactions of a business. Accountants in government provide financial reporting services according to government policy and procedures. Duties could vary, but, in general, they design and administer accounting and information systems and prepare financial statements

**Requirements-** Maths Level 3

**Institution--** University and University of Technology

**Provincial Departments as potential employers -** All Government Departments

**Internal Auditor** - Auditors in government verify the accuracy of government's internal records and check for mismanagement, waste or fraud. They make sure that financial statements are accurate, analyse samples of work done for government by subcontractors and interview staff about the way they go about their work

**Requirements -** NSC Deg with Maths 5 and Engl and LO 4

**Institution--** University and University of Technology

**Provincial Departments as potential employers -** All Government Departments

**Financial Manager-** Finance managers prepare reports for management, summarising government's income, expenses, capital usage and cash flows, and assist with the preparation of strategic plans, budgets and financial forecasts. They also develop accounting and management policies according to government systems and procedures

**Requirements** - NscDeg with Engl 5 and Maths 4

**Institution** - University and University of Technology

**Provincial Departments as potential employers** - All Government Departments

**Project Manager** - A project manager is an individual who is responsible for the planning, organization, resource management, and discipline pertaining to the successful completion of a specific project or objective. Project Managers can work in all fields and disciplines.

**Requirements** - NscDeg with Engl 5 and Maths 4

**Institution** - University and University of Technology

**Provincial Departments as potential employers** - All Government Departments

**Organisation and Methods Analyst** - Analyses and evaluates current systems and structures; discusses current systems with staff and observes systems at all levels of organisation. An organisation and methods analyst directs clients towards more efficient organisation and develops solutions to organisational problems.

**Requirements** - NSC Deg with Engl and LO and Maths 4 and Info Tech or Life Sci or Physic Sci 4

**Institution** - University and University of Technology

**Provincial Departments as potential employers** - All Government Departments

## Science, Agriculture and Engineering

**Civil Engineer** - Civil engineers design and supervise the construction of roads, buildings, airports, tunnels, dams, bridges and water supply and sewage systems

**Requirements** – Maths level 6, life Science level 6 and English level 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Departments of Agriculture, and Environmental Affairs, Public Works, Human Settlements and Transport

**Civil Engineering Technician** - Technicians in this field provide technical support to civil engineers. They assist in the research, design, construction, operation and maintenance of projects such as roads, airports, railways, buildings, bridges, dams and drainage systems

**Requirements** – NSC Dip with Engl and Maths and Physic Sci 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Public

Works and Human settlements and Transport

**Mechanical Engineer** - Mechanical engineers are concerned with the principles of force, energy and motion. Mechanical engineers research, develop, design, manufacture and test tools, engines, machines and other mechanical devices. They work on power-producing machines such as electric generators, internal combustion engines and steam and gas turbines and also design tools that other engineers need for their work. Mechanical engineering is one of the broadest engineering disciplines and mechanical engineers may work in production operations in manufacturing or agriculture, maintenance or technical sales.

**Requirements** – Maths level 6 Physics Level 5

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Public

Works and Human settlements and Transport

**Mechanical Engineering Technician** - Mechanical engineering technicians help engineers design, develop, test and manufacture industrial machinery, consumer products and other equipment.

**Requirements** – 4NC (V) with Engl and LO and Maths and Physic Sci 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Public

Works and Human settlements and Transport

**Agricultural Engineer** - Agricultural engineers study and advise on the use of engineering science and technology in agricultural production and management of natural resources. They apply their engineering knowledge and skills to solve problems relating to such things as sustainable agricultural production, the environmental impacts of intensive agriculture and post-harvesting handling of agricultural products

**Requirements** – NSC Deg with Maths and Physic Sci 6 and Engl and LO 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Agriculture, Rural Development and Environmental Affairs

**Electrical Engineer** - This is a field of engineering that generally deals with the study and application of electricity, electronics and electromagnetism. Electrical engineers help design, develop, test and supervise the manufacture of electrical equipment. Some of this equipment includes electric motors, machinery controls, lighting and wiring in buildings, automobiles, aircraft, radar and navigation systems and power-generating, controlling and transmission devices used by electrical utilities.

**Requirements** – NSC Dip with Home Lang 4 and Engl and Maths and Physic Sci 3

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Public Works and Human Settlements

**Agricultural Scientist** - An agricultural scientist is also referred to as an agrologist. They provide guidance and conduct research on commercial plants, animals and cultivation techniques to improve the productivity and sustainability of farms and agricultural industries. In government they may develop and distribute information and advice to the public, producers, farmers and other stakeholders, manage and coordinate government programmes and make recommendations regarding agricultural and resource use policies and acts as liaisons between government personnel, business managers, environmental groups, educators and others

**Requirements** – NSC Deg with Engl and LO and Maths 4 and AgricSci or Life Sci or Physic Sci 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Agriculture, Rural Development and Environmental Affairs

**Veterinarian Technician** - Veterinary technologists and technicians perform medical tests under the supervision of a licensed veterinarian to treat or to help veterinarians diagnose the illnesses and injuries of animals.

**Requirements** – Maths level 6, Life Science level 6 and English level 4

**Institution** – University of Pretoria

**Provincial Departments as potential employers** - Department of Agriculture, Rural Development and Environmental Affairs

**Live Stock Inspector** - This is field inspection work enforcing the laws and regulations for the movement, sale, sanitary and health conditions of livestock, and the eradication of quarantinable diseases..

**Requirements** – NSC Deg with Engl and LO and Maths 4 and AgricSci or Life Sci or Physic Sci 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Agriculture, Rural Development and Environmental Affairs

**Architect** - Architects are professionals trained in the planning, design and oversight/supervision of the construction of buildings

**Requirements** – Engl and Maths and one 20 credit subject (excluding Lang) 3

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Human Settlements and Public Works

**Earth and Soil Scientist** - The Soil and Earth Scientist studies soil as a major natural resource on the earth's surface and includes studies and research into soil formation, soil classification and soil mapping

They conduct research and advise on the physical, chemical, biological, and fertility properties of soils; and the use and management of soils based on a better understanding of these properties. They can provide advice regarding the development of regulatory standards for land reclamation and soil conservation

**Requirements** – NSC Deg with Engl and LO and Maths 3 and Life Sci  
or Physic Sci 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Human Settlements and Public Works, Department of Agriculture, Rural Development and Environmental Affairs

**Geographer** - A geographer is a scholar whose area of study is geography, the study of Earth's natural environment and human society.

Geographers study the details of the natural environment or the human society, also the reciprocal relationship between these two.

**Requirements** – NSC Deg with Engl and LO and Maths 4 and Life Sci  
or Physic Sci 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Human Settlements and Public Works, Department of Agriculture, Rural Development and Environmental Affairs



**Quantity Surveyor** - A quantity surveyor (QS) is a professional working within the construction industry concerned with building costs. Quantity surveyors prepare cost estimates and plans, audit projects, manage construction costs and administer construction contracts for all levels and types of construction

**Requirements** – NSC Dip with Engl and Maths and Physic Sci 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Human Settlements and Public Works

## Health Sciences

**Physician/Medical Doctor** - A physician/medical doctor is a health care provider who practices the profession of medicine, which is concerned with promoting, maintaining or restoring human health through the study, diagnosis, and treatment of disease, injury, and other physical and mental impairments. They may focus their practice on certain disease categories, types of patients, or methods of treatment – known as specialist medical practitioners – or assume responsibility for the provision of continuing and comprehensive medical care to individuals, families, and communities – known as general practitioners

**Requirements** – NSC Deg with Engl and Life Sci and LO and Maths  
and Physic Sci 4

**Institution** – University

**Provincial Departments as potential employers** - Department of Health

**Clinical Oncologist** - An oncologist is a doctor who specializes in treating people with cancer. In most situations, a clinical oncologist manages the care and treatment once a person is diagnosed with cancer.

**Requirements** – Maths and Physical Science 4

**Institution** – University

**Provincial Departments as potential employers** - Department of Health

**Medical Orthotist or Prosthetist** – Orthotists/Prosthetists are responsible for the design, manufacturing and fit of artificial limbs to people with amputations or orthoses (supportive devices), as well as to those with muscular and skeletal disabilities to enable maximum functioning and support

**Requirements** – NSC Deg with Maths and Physic Sci 6 and Engl and LO 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Health

**Dental Therapist** – A dental therapist receives specialised training in treating the teeth of children and adults, performing local anaesthesia, restorations, cleaning and the taking of radiographs

**Requirements** – NSC Deg with Engl and LO 4 and Life Sci  
and Maths/ Maths Lit 3

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Health

**Dentist** – Dentists diagnose and treat dental diseases, injuries and abnormalities of teeth, gums and mouth, undertake preventive procedures, conduct surgery and perform other specialist techniques

**Requirements** – NSC Deg with Engl and LO 4 and Life Sci  
and Maths/ Maths Lit 3

**Institution** – University

**Provincial Departments as potential employers** - Department of Health

**Registered Nurse** – A nurse is a highly skilled health care professional who combines the art of caring with scientific knowledge and skills developed through their education and career.

**Requirements** – Maths level 3 and English or LO level 4

**Institution** – University and University of Technology or Nursing College

**Provincial Departments as potential employers** - Department of Health

**Registered Nurse (Child and Family Health)** – Provides nursing care to children from birth to school age, and their families, with an emphasis on the prevention, early detection and early intervention

**Requirements** – NSC Deg with Engl and LO 4 and Maths/Maths Lit 3

**Institution** – University and University of Technology or Nursing College

**Provincial Departments as potential employers** - Department of Health

**Registered Nurse (Community Health)** – Provides nursing care, health counselling, screening and education to individuals, families and groups in the wider community.

**Requirements** – NSC Deg with Engl and LO 4 and Maths/Maths Lit 3

**Institution** – University and University of Technology or Nursing College

**Provincial Departments as potential employers** - Department of Health

**Registered Nurse (Critical Care and Emergency)** – Provides nursing care to critically ill patients and patients with unstable health following injury, surgery or during the acute phase of diseases.

**Requirements** – NSC Deg with Engl and LO 4 and Maths/Maths Lit 3

**Institution** – University and University of Technology or Nursing College

**Provincial Departments as potential employers** - Department of Health

**Registered Nurse (Disability and Rehabilitation)** – Provides nursing care to patients recovering from injury and illness, and assists and facilitates patients with disabilities to live more independently.

**Requirements** – NSC Deg with Engl and LO 4 and Maths/Maths Lit 3

**Institution** – University and University of Technology or Nursing College

**Provincial Departments as potential employers** - Department of Health

**Registered Nurse (Mental Health)** – Psychiatric mental health registered nurses work with individuals, families, groups, and communities, assessing their mental health needs.

**Requirements** – NSC Deg with Engl and LO 4 and Maths/Maths Lit 3

**Institution** – University and University of Technology or Nursing College

**Provincial Departments as potential employers** - Department of Health

**Registered Nurse (Perioperative)** – Perioperative registered nurses provide surgical patient care by assessing, planning, and implementing the nursing care patients receive before, during and after surgery.

**Requirements** – NSC Deg with Engl and LO 4 and Maths/Maths Lit 3

**Institution** – University and University of Technology or Nursing College

**Provincial Departments as potential employers** - Department of Health

**Registered Nurse (Surgical)** – A nurse in this category performs surgical procedures under supervision of a surgeon. Evaluates perioperative patients and plans, implements and documents surgical nursing care.

**Requirements** – NSC Deg with Engl and LO 4 and Maths/Maths Lit 3

**Institution** – University and University of Technology or Nursing College

**Provincial Departments as potential employers** - Department of Health

**Clinical Psychologists** – A clinical psychologist is trained in the assessment, diagnosis and treatment of mental illness and psychological problems

**Requirements** – NSC Deg with Engl and LO 4 and Maths Lit 3 or Matric Exemption with Engl 'D' HG and Biol or Physic Sci 'D' HG

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Health

**Emergency Medicine Specialist** – Emergency medicine is a medical specialty in which physicians care for patients with acute illnesses or injuries which require immediate medical attention.

**Requirements** – NSC Deg with Engl and Maths 4 and Life Sci or Physic Sci 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Health

**Hospital Pharmacist** –Pharmacists in the government health sector are responsible for the control, dispensing and distribution of medicine in public hospitals and clinics. In addition to dispensing medicines they also dispense surgical material and instruments.

**Requirements** – NSC Deg with Engl and Life Sci and LO and Maths  
and Physic Sci 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Health

**Medical Diagnostic Radiographer** –Radiography is the use of ionizing electromagnetic radiation such as X-rays to view objects. A radiographer uses X-rays and other imaging equipment to take X-ray photos and other images of the body's internal structures which are used in the diagnosis and management of disease or injury

**Requirements** – NSC Dip with Engl and LO and Life Sci and Maths  
and Physic Sci 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Health

**Midwife** –Midwifery is a health care profession in which providers offer care to childbearing women during pregnancy, labour and birth, and during the postpartum period

**Requirements** – NSC Deg with Engl and LO 4 and Maths/Maths Lit 3

**Institution** – University and University of Technology or Nursing College

**Provincial Departments as potential employers** - Department of Health

**Occupational Therapist** –An occupational therapist (OT) helps people whose capabilities have been impaired by physical or mental illness or injury, emotional or developmental problems, or because of old age, in order to improve their ability to function in everyday life.

**Requirements** – NSC Deg with Engl and LO 4 and Maths 3 and Life Sci  
or Physic Sci 3

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Health

**Optometrist** – Optometrists examine patients' eyes, perform vision tests, diagnose diseases and disorders of the eye and associated structures, prescribe and dispense spectacles and contact lenses, prescribe therapeutic drugs and recommend appropriate treatments focussing on eye care.

**Requirements** – NSC Deg with Engl and LO and Maths 4 and Life Sci  
or Physic Sci 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Health

**Physiotherapist** – A physiotherapist assesses, treats and prevents disorders in human movement caused by injury and disease. They use their hands, mechanical and electrical equipment as well as heat and cold to ease pain, reduce swelling and improve range of movement. In public health they can also plan and implement community fitness programmes

**Requirements** – NSC Deg with Engl, Life Sci and LO and Maths and Physic Sci 4

**Institution** – University

**Provincial Departments as potential employers** - Department of Health

**Radiologist** – Radiology is a medical specialty that employs the use of imaging to both diagnose and treat disease visualised within the human body. Radiologists use an array of imaging technologies (such as x-ray radiography, ultrasound, computed tomography (CT), nuclear medicine, positron emission tomography (PET) and magnetic resonance imaging (MRI) to diagnose diseases

**Requirements** – NSC Dip with Engl and LO and Life Sci and Maths and Physic Sci 4

**Institution** – University

**Provincial Departments as potential employers** - Department of Health

**Ambulance & Emergency Care Worker (Paramedic)** – Ambulance and emergency care workers (paramedics) provide pre-hospital emergency medical care as well as transportation for the sick or the injured. They also operate sophisticated equipment in advance life-support ambulances

**Requirements** – NSC Dip with Engl and Maths/Maths Lit 3 and Life Sci or Physic Sci 3

**Institution** – University and University of Technology or Training college

**Provincial Departments as potential employers** - Department of Health

**Speech Pathologist** – Speech and language pathology is concerned with issues surrounding human speech and language communication disorders. Speech pathologists prevent, assess, diagnose and provide treatment and counselling for speech, language, voice (e.g. stuttering), swallowing and articulation disorders. They help people ranging in age from infants to adults to restore or improve their ability to communicate or swallow properly

**Requirements** – Matric Exemption with two of: Biol, Maths, Physic Sci 'E' HG/'D' SG

**Institution** – University

**Provincial Departments as potential employers** - Department of Health

## Social Sciences

**Archivist** – Archivists select, acquire, maintain and provide access to original documents of on-going value such as government records, corporate and municipal records and personal papers. They also plan and organise systems and procedures for the safekeeping of records and historically valuable documents.

**Requirements** – NSC Deg with Engl HL 4/FAL 3 and LO 3

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Arts and Culture

**Community Development Officer** – A community development worker works collectively with a particular community or communities to bring about social change and improve quality of life.

**Requirements** – NSC Deg with Engl and LO 4 and one of: Bus Stud

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Social Development

**Conservation Officer** – A conservation officer performs a type of law enforcement that protects the wildlife and the environment that they live in.

**Requirements** – NSC Deg with Engl and LO and Maths 3 and Life Sci or Physic Sci 4

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Agriculture, Rural Development and Environmental Affairs, KZN Ezemvelo



**Urban and Regional Planner** – Urban planning (urban, city, and town planning) is a technical and political process concerned with the control of the use of land and design of the urban environment. It concerns itself with research and analysis, strategic thinking, urban design, public consultation, policy recommendations, implementation and management..

**Requirements** - NSC Dip with Engl HL 4/FAL 5 and Maths 4

**Institution** - University and University of Technology

**Provincial Departments as potential employers** - Economic Development  
Department of Cooperative Governance and Traditional Affairs

**Social Worker** – A social worker is a professional who works with people and helps them manage their daily lives. They assist people to deal with personal and social problems, e.g. poverty, sexual abuse or violence either directly or by planning or carrying out programmes that benefit groups or communities. Social workers work as administrators in social service settings, write grants for non-profit agencies, advocate for social policy at various levels of government, and conduct research

**Requirements** NSC Deg with Engl HL 4/FAL 3 and LO 3

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Social  
Development

**Social Auxiliary Worker** – Social auxiliary workers render a supporting service to social workers. They assist with promoting healthy relationships and community life in South Africa.

**Requirements** – NSC Senior Cert and NSC Deg with Engl HL 4/FAL 3 and LO 3

**Institution** – University and University of Technology

**Provincial Departments as potential employers** - Department of Social  
Development

**Gallery or Museum Curator** - Is a content specialist responsible for an institution's collections and involved with the interpretation of heritage material

**Requirements** - NSC Deg with Engl and LO 4

**Institution** - University and University of Technology

**Provincial Departments as potential employers** - Department of Arts and Culture

## Information Technology

**ICT Customer Support Officer** – Provides support, education and guidance in the deployment and maintenance of computer infrastructure and the diagnosis and resolution of technical problems and issues.

**Requirements** - NSC Deg with Maths 5 and Engl and LO 4 and AgricSci or Life Sci or Physic Sci 4

**Institution** - University and University of Technology

**Provincial Departments as potential employers** - All Government Departments

# List of Colleges in SA

## Eastern Cape

College Name	Postal Address	Physical Address	Tel. no.	Fax no.
<b>Buffalo City FET College</b>	Private Bag 9016 East London 5200	Cnr Lukin Road & King Street  Selborne  East London  5201	043 704 9218	043 743 4254
<b>East Cape Midlands FET College</b>	Private Bag X35 Uitenhage 6230	Cnr Cuyler & Durban Street  Uitenhage  6229	041 995 2000	041 995 2008
<b>Ikhala FET College</b>	Private Bag X7110 Queenstown 5320	Robinson Cnr Zeiler Street  Queenstown  5320	047 873 8843	086 519 2489 086 613 0118 047 873 8844
<b>Ingwe FET College</b>	PO Box 92491 Mt Frere 5090	Cancele Road  Mt Frere  Eastern Cape  5090	039 255 1204/1415/141 7	039 255 0347
<b>King Hintsa FET College</b>	Private Bag X3018 Butterworth 4960	Factory No 1234  Acrytex Building  Centane Road  Butterworth	047 401 6400	047 492 2398

College Name	Postal Address	Physical Address	Tel. no.	Fax no.
<b>King Sabata Dalindyebo FET College</b>	Private Bag X5011 Umtata 5099	Engcobo Road  Cnr Cicira	047 5051001/2	047 536 0932

<b>Lovedale FET College</b>	PO Box 2156 King Williams Town 5600	Amatola Row King Williams Town 5600	043 642 1331	043 642 1388
<b>Port Elizabeth FET College</b>	Private Bag X6040, Port Elizabeth 6000	139 Russell Road Central Port Elizabeth	(041) 585-7771	(041) 582-2281

## Free State

College Name	Postal Address	Physical Address	Tel. no.	Fax no.
<b>Flavius Mareka</b>	Private Bag X2009 Sasolburg 1947	Cnr Hertzog Road and Fraser Street Sasolburg 1947	016 976 0815 /0829	016 976 3485
<b>Goldfields FET College</b>	Private Bag X95 Welkom 9460	36 Buren Street Flamingo park Welkom 9460	057 910 6000	057 392 1082
<b>Maluti FET College</b>	Private Bag X870 Witsieshoek 9870	Mampoi Street Phuthaditjhaba Qwaqwa 9866	058 713 6100	058 713 6492
<b>Motheo FET College</b>	Private Bag X20509 Bloemfontein 9300	73 Douglas street Bloemfontein 9301	051 406 9330/1	051 406 0340

## Gauteng

College Name	Postal Address	Physical Address	Tel. no.	Fax no.
<b>Central JHB</b>	Private Bag X70500 Houghton 2041	5 Ubla Road  Parktown  2041	011 484 1388 /351 6000	011 642 7358
<b>Ekurhuleni East FET College</b>	Private Bag X52 Springs 1560	Sam Ngema Road  Kwa-Thema  Springs  1560	011 736 4400  011730 6600	011 7361489 /9909
<b>Ekurhuleni West College</b>	Private Bag X1030 Germiston 1400	Driehoek and Sol Road  Germiston  1400	086 139 2111	011 323 1601
<b>Sedibeng FET College</b>	Private Bag X020 Vereeniging 1930	37 Voortrekker Street  Vereeniging  1930	016 422 6645	016 422 6930 /6646
<b>South West FET College</b>	Private Bag X33 Tshiawelo 1718	Koma Cnr Molele Road  Molapo Section  Soweto	011 527 8300	011 984 1262
<b>Tshwane North FET College</b>	PO Box 26193 Arcadia 0007	Cnr and Kgosi Mampuru  Pretoria  0001	012 401 1950  0120000135/ 441	012 323 86 83
<b>Tshwane South FET College</b>	Private Bag X1018 Lyttelton 0140	85 Schoeman  Street  Pretoria  0001	012 401 5021	012 401 5011  086 660 9313

<b>Western College FET</b>	Private Bag X17 Randfontein 1760	42 Johnstone Street  Hectorton  Randfontein  1760	011 692 4004	(011) 692 3404
--------------------------------	--	--	--------------	----------------

## KwaZulu Natal

College Name	Postal Address	Physical Address	Tel. no.	Fax no.
<b>Coastal FET College (Mobeni)</b>	P O Box 1795 Amanzimtoti 4125	No 50051 Old Main Road  Kwa Makhutha  4125	031 905 7200	031 905 1399
<b>Elangeni FET College</b>	Private Bag X9032 Pinetown 3600	15 Portsmouth Road Pinetown 3610	031 716 6700	031 716 6777
<b>Esayidi FET College</b>	Private Bag X713 Port-Shepstone 4240	3 Shooters Hill  Lot 462  Nelson Mandela drive  Port-Shepstone  4249	039 318 1433	039 684 0280
<b>Majuba FET College</b>	Private Bag X6602 Newcastle 2940	83 Allen Street Newcastle  2940	034 326 4888	034 326 4889/4855
<b>Mnambithi FET College</b>	Private Bag X9903 Ladysmith 3370	77 Murchison Str  Ladysmith  3370	036 637 4790	036 631 4146
<b>Mthashana FET College</b>	PO Box 9424 Vryheid 3100	266 South Street  Vryheid  3100	034 981 5337	034 9801012

<b>Thekwini FET College</b>	Private Bag X06 Dormerton 4015	262 Daintree Avenue Asherville 4091	031 250 8400 /8248/8256	031 250 8414
<b>Umfolozi FET College</b>	Private Bag X5023 Richards Bay 3900	Cnr Via Richardia & Naboomnek Richards bay 3900	035 902 9503	035 789 2585
<b>Umgungu-ndlovu FET College</b>	Private Bag X9060 Pietermaritzburg3 200	44 Burger Street Pietermaritzburg 3200	033 341 2100	033 345 9893 /9827

## Limpopo

College Name	Postal Address	Physical Address	Tel. no.	Fax no.
<b>Capricorn FET College</b>	Private Bag X9674 Polokwane 0700	16 Market Street Polokwane 0700	015 297 8367/ 8389	015 297 5448/287 0439
<b>Lephalale FET College</b>	Private Bag X210 Lephalale 0555	Cnr Nelson Mandela & Ngwako Ramatlhodi Street Onverwacht 0557	014 763 2252 /1014	014 763 2253
<b>Letaba FET College</b>	Private Bag X4017 Tzaneen 0850	No 1 Claude Wheatley Street Tzaneen 0850	015 307 5440 015 307 2215	015 307 2218
<b>Mopani South East FET College</b>	Private Bag X1024 Phalaborwa 1390	Cnr Combretum & Haarlem Streets Phalaborwa 1390	015 781 5721/ 5	015 781 5346
<b>Sekhu-khune FET College</b>	Private Bag X8660 Groblersdal 0470	Stand No 676 Motetema 0473	013 269 0278	013 269 0450 086 620 9839

<b>Vhembe FET College</b>	Private Bag X2136  Sibasa  0970	203 Sibasa  Unit A  0970	015 963 3156  015 963 3100	086 546 3217
<b>Waterberg FET College</b>	Postnet Suit #59 Private Bag X2449 Mokopane 0600	36 Hooze Street  Mokopane  0600	015 491 8581 /8602	015 491 8579

## Mpumalanga

<b>College Name</b>	<b>Postal Address</b>	<b>Physical Address</b>	<b>Tel. no.</b>	<b>Fax no.</b>
<b>Ehlanzeni FET College</b>	Private Bag X11297 Nelspruit 1200	29 Bell Street Ehlanzeni FET College Central Office Nelspruit 1200	013 752 7105	013 752 4902/4908/8214
<b>Gert Sibande FET College</b>	P.O Box 3475 Standerton 2430	18A Beyers Naude Drive  Standerton  2429	017 712 9040 /1458/1459	017 712 9058/9  086 509 4156
<b>Nkangala FET College</b>	PO Box 2282 Witbank 1035	Cnr Haig & Northey Street  Witbank  1035	013 690 1430 /3824	013 690 1450



## Northern Cape

College Name	Postal Address	Physical Address	Tel. no.	Fax no.
<b>Northern Cape Rural FET College</b>	P.O Box 1834 Upington 8800	Steve Naude Street  Upington	054 331 3836	054 331 3966  086 572 5793
<b>Northern Cape Urban FET College</b>	Private Bag X5031 Kimberley 8300	Central Office  37 Long Street  Kimberly  8301	053 839 2000 /2061	(053) 839 2068

## North West

College Name	Postal Address	Physical Address	Tel. no.	Fax no.
<b>Orbit FET College</b>	Private Bag X82096 Rustenburg 0300	Cnr Bosch and Fatima Bhayat Street Rustenburg 0300	014 592 8461 /2/8814	014 592 7013
<b>Taletso FET College</b>	Private Bag X128 Mmabatho 2735	Kgora Building Dr Albert Luthuli Drive, Next to SABC Mmabatho 2735	018 384 2346 /7/9	018 384 7511
<b>Vuselela FET College</b>	PO Box 10107 Klerksdorp 2570	133 OR Tambo Street Klerksdorp 2571	018 4067800	018 406 7810

## Western Cape

College Name	Postal Address	Physical Address	Tel. no.	Fax no.
<b>Boland FET College</b>	Private Bag X5068, Stellenbosch 7599	85 Bird Street Stellenbosch 7600	021 886 7111/2	021 886 8182
<b>College of Cape Town FET College</b>	P.O Box 1054 CAPE TOWN 8000	Kent Street, Salt River Cape Town, 7925	021 404 6700	021 404 6701
<b>False Bay FET College</b>	Private Bag X25 Tokai 7966	Cnr Main & Atlantic Roads, Muizenberg, 7945	021 003 0600	086 603 0669

<b>Northlink FET College</b>	Private Bag X1Panorama 7506	80 Voortrekker Road, Bellville, 7530	021 970 9000	021 970 9064
<b>South Cape FET College</b>	P O Box 10400 GEORGE 6530	125 Mitchell Street, George 6530	044 884 0359	044 884 0361
<b>West Coast FET College</b>	P.O Box 935 Malmesbury 7299	Clicks Building  2 <sup>nd</sup> Floor  48 Voortrekker Road  Malmesbury  7300	022 482 1143	022 487 3983

# Glossary

## Career

According to Wikipedia the term career describes an individual's journey through learning, work and other aspects of life.

The Oxford English Dictionary defines career as a person's "course or progress through life (or a distinct portion of life)".

It is a process of development of the person along a path of learning experiences and jobs in one or more organisations. Developing your career is a lifelong series of activities that contribute to your success and sense of fulfillment.

## Work

People search for meaning through their careers. Work provides more than an income, it provides people with a sense of purpose, challenges, self-fulfilment and opportunities to develop and grow in their self-expression.

Thus, work can be seen as a means of making a living, following a calling, expressing one's values, finding self-actualisation, contributing to a life-style, and developing and implementing skills. Developing skills is a very important element of modern workplaces as it makes you highly employable.

## World of work

The traditional world of work was characterised by job security, where people stayed in the same job or organisation for long periods of time. The world of work has changed. These changes are due to various socio-economic changes, globalisation, free trade, technological changes, diminishing resources, and downsizing.

This has resulted in people becoming responsible for their career choices and an acceptance that careers may change over an individual's life, sometimes resulting in three or four careers.

Understanding this is important for your career choice. It means that you must be proactive in your career choice and in acquiring skills and information that will assist you to manage your career.

Whilst the world of work continues to change, you will have to manage your own career. Manage your career over your life time, develop your skills and keep them relevant to the changes in the labour market.

## Acronyms used in the booklet

Deg	Degree
Dip	Diploma
Engl	English
FET	Further Education and Training
Lang	Language
LO	Life Orientation
Maths	Mathematics
Maths Lit	Mathematics Literacy
Matric	Matriculation
NSC	National Senior Certificate
NSC Deg	National Senior Certificate meeting the requirements for Degree level
NSC Dip	National Senior Certificate meeting the requirements for Diploma level
Phys Sci	Physical Science/s
AQP	Assessment Quality Partner
DQP	Development Quality Partner
QCTO	Quality Counsel for Trades and Occupations
SETA	Sector Education and Training Authority
NAMB	National Artisan Moderation Body
OFO	Organising Framework for Occupations

# References

<http://everydaylife.globalpost.com/roles-responsibilities-plumber-1238.html>

[www.engineersedge.com/mechanical\\_engineering/what\\_do\\_mechanical\\_engineers\\_do.htm](http://www.engineersedge.com/mechanical_engineering/what_do_mechanical_engineers_do.htm)

[www.go2hr.ca/careers/lift-mechanic](http://www.go2hr.ca/careers/lift-mechanic)

<http://ncap.careerhelp.org.za/occupation/675ec6df-21dd-449e-8093-247cb38bb91a>

- Career Planning: Culinary Careers-chef
- My Future, My Career (2013 Career Guide Booklet)
- Khetha, Make the right choice. Decide your future
- National Programme For Artisan Development; 7- Steps to becoming a Qualified Artisan
- Department of Higher Education and Training (DHET) website

[www.brainyquote.com/quotes/quotes/c/carltonfis265697.html#JygrkLcZLwhYhlfh.99](http://www.brainyquote.com/quotes/quotes/c/carltonfis265697.html#JygrkLcZLwhYhlfh.99)

<http://en.wikipedia.org/wiki/Career>

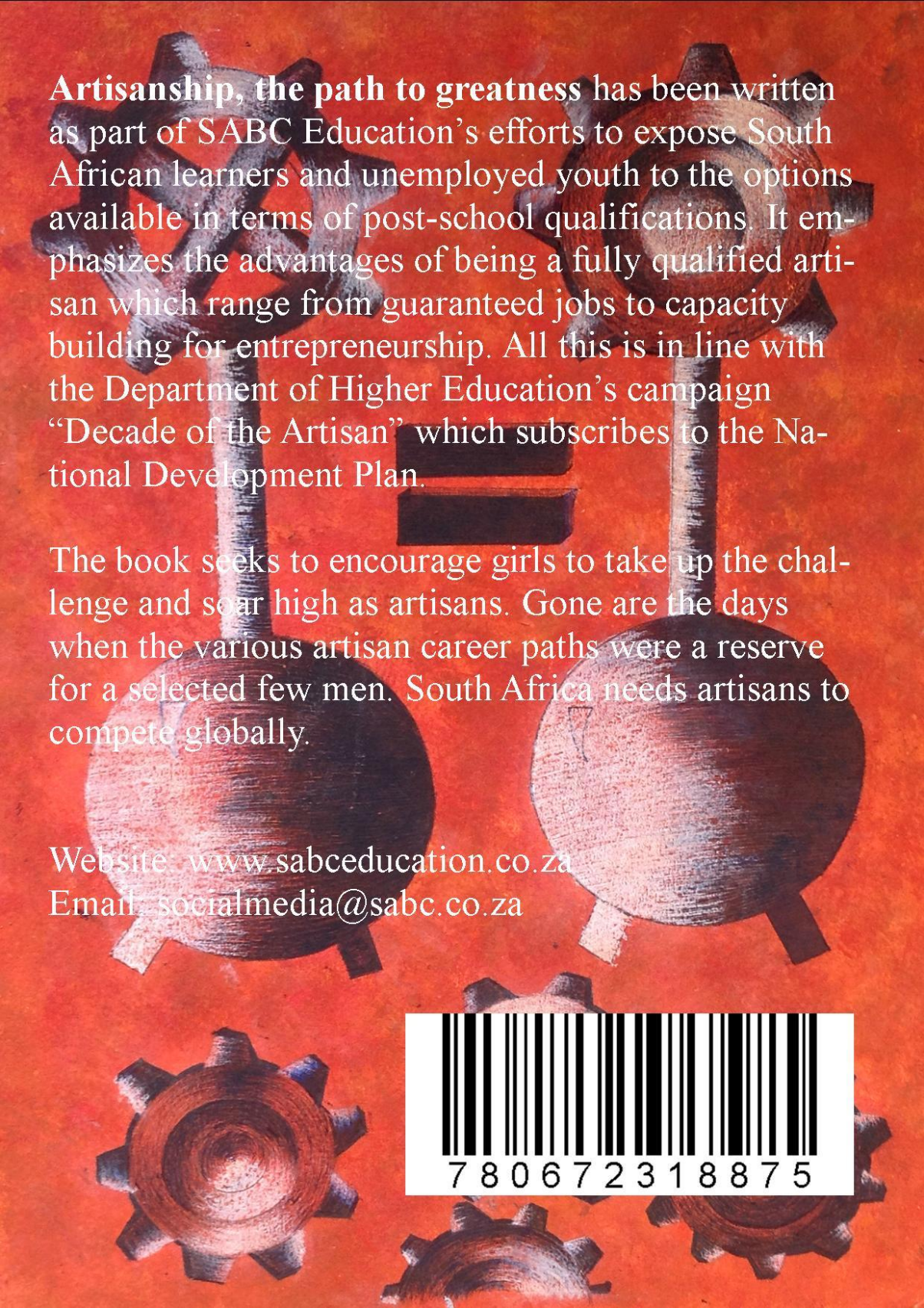
[www.skillsportal.co.za](http://www.skillsportal.co.za)

[www.investpedia.com](http://www.investpedia.com)

[www.sabceducation.co.za/ispani](http://www.sabceducation.co.za/ispani)

[www.saga.co.za](http://www.saga.co.za)





**Artisanship, the path to greatness** has been written as part of SABC Education's efforts to expose South African learners and unemployed youth to the options available in terms of post-school qualifications. It emphasizes the advantages of being a fully qualified artisan which range from guaranteed jobs to capacity building for entrepreneurship. All this is in line with the Department of Higher Education's campaign "Decade of the Artisan" which subscribes to the National Development Plan.

The book seeks to encourage girls to take up the challenge and soar high as artisans. Gone are the days when the various artisan career paths were a reserve for a selected few men. South Africa needs artisans to compete globally.

Website: [www.sabceducation.co.za](http://www.sabceducation.co.za)

Email: [socialmedia@sabc.co.za](mailto:socialmedia@sabc.co.za)

