



Q & A

WHAT FACTORS INFLUENCED YOU TO CHOOSE THIS CAREER PATH?

Growing up in an area surrounded by beautiful rivers and rocky mountains, I was fascinated by this natural beauty. I was curious and wanted to understand it. This influenced me to become a Geologist/Earth Scientist. At the same time, I also had a special interest in health science. This is because I believed that becoming a medical doctor was the best way for me to help my community and follow the same path as my parents, who always strived to help others. However, when it was time for me to choose my career path (after obtaining my matric), I had to opt for "Earth Science/Geology" over "Health Science" because of my sensitivity and fear of seeing people ill and possibly not being able to help save their lives. Fortunately, I later realised that there is a way to do both (Earth Science and Health Science). This is through what we call "Medical Geology", which is a science field that deals with the impact (both positive and negative) of the geological environment (including factors, processes and materials) on human and animal's health.

WHAT KIND OF EDUCATION, TRAINING OR BACKGROUND DOES YOUR JOB REQUIRE?

I lecture, conduct research and supervise postgraduate (masters and doctoral) students at the University of Johannesburg's Faculty of Science. To get a high ranking position in academia in general, you need to obtain a doctoral degree. In total, this process requires a minimum of 9 years of undergraduate and postgraduate studies. Firstly, you need to study for a general undergraduate degree (i.e. BSc) for about 3 years. Then, you can study further towards an honours degree

(i.e. BSc Hons), which requires about a year. Thereafter, you need to conduct research for about 2 years to obtain a masters degree (i.e. MSc). Finally, you will need to complete about 3 years of research to obtain a doctoral degree (i.e. PhD). To specialise in the field of Medical Geology, you will need to enroll for an MSc degree in Geology, which requires an honours degree in Geology.

WHAT DO YOU DO? WHAT ARE YOUR DUTIES/FUNCTIONS/RESPONSIBILITIES?

As an academic, my duties include but are not limited to (i) lecturing at undergraduate and postgraduate levels and (ii) conducting research and supervising masters and doctoral students. The research work leads to publications in international peer-reviewed journals and presentations at international conferences. Also, I am involved in other national and international professional activities such as editorial boards and conference committees. I am also a member of international and national organisations such as the International Union of Geological Science (IUGS), and the International Medical Geology Association (IMGA).

WHAT PART OF THIS CAREER DO YOU PERSONALLY FIND MOST SATISFYING?

I feel satisfied when my undergraduate students pass with distinctions or very good marks, and when my postgraduate students complete their degree on time, with distinctions and publications. I am also satisfied when they find jobs after the completion of their studies. Ultimately, I am happy when my students advance in their academic careers and attain high ranking positions.

WHAT HAS BEEN THE GREATEST CHALLENGE YOU HAVE FACED IN YOUR CAREER TO DATE?

I would say, the lack of commitment by some students both at undergraduate and

postgraduate levels.

WHAT ARE THE MAJOR QUALIFICATIONS FOR SUCCESS IN THIS CAREER?

You will need a BSc Honours degree in Geology with a very good background in Chemistry and Mathematics. This can be followed by an MSc degree and a PhD degree for those interested in pursuing higher and more successful positions.

WHAT PARTICULAR SKILLS OR TALENTS ARE ESSENTIAL IN PURSUING SUCH A CAREER?

Like any discipline in science, problem solving and critical thinking are amongst the most important required skills. Also, in the field of Medical Geology specifically, it is important to be able to work in a team with different professional expertise and cultural backgrounds.

WHAT ADVICE WOULD YOU OFFER LEARNERS WHO ARE INTERESTED IN PURSUING THIS CAREER PATH?

They need to excel in natural science subjects. Furthermore, they need to work hard, be committed, and curious about their environment and how to make their knowledge and work relevant to their communities.

WHAT IS THE FUTURE OF THE FIELD IN TERMS OF NEW AND EXPANDING OPPORTUNITIES?

Medical Geology is an emerging field of science, based on multi-cross and interdisciplinary approaches. It brings together experts from all fields of science, including geoscience, health science, environmental science, toxicology and epidemiology. Based on the nature of the field and the problems that we are facing from a health and environmental science point of view, this field is gaining an



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important position within the scientific community. Therefore, there is no doubt that this field will grow significantly in the nearest future. Hence, many opportunities will be open for a new generation of scientists.

WHAT EDUCATIONAL PREPARATION WOULD YOU RECOMMEND FOR SOMEONE WHO WANTS TO ADVANCE IN THIS FIELD?

A very good background in natural science and English as the language of research, coupled with a strong interest in multi-cross and interdisciplinary studies.

WHO WOULD YOU SAY HAS BEEN THE MOST HELP IN YOUR CAREER? HOW DID THEY HELP YOU?

My mother was the first person who inspired me to become an educator. Her care, sacrifices and constant willingness to help others inspired me to think about ways to make my research relevant and worthy to my community. As a result, I developed the field of Medical Geology, which has a very important application and impact on communities.

CAN YOU SUGGEST SOME WAYS A LEARNER COULD OBTAIN THIS NECESSARY EXPERIENCE?

The University of Johannesburg's Soweto Science Centre organises National Science Week activities every year, where my postgraduate students and I present our research activities, including exhibiting posters and material related to the field of Medical Geology. This can be an important opportunity for learners to learn about this field. Furthermore, there are many interesting websites and social media platforms where learners can also learn about the field. Learners can also reach us by email to discuss possible ways of helping them to learn more if they are interested.

WHAT EXACTLY DOES THE WORD 'SUCCESS' MEAN TO YOU?

Success to me means the pursuit of a dream, and working hard towards achieving, and not giving up regardless of the challenges that one could face. ●

