



AMGC News

Director General's Message



During this month we have organized training courses on Environmental Management in Mining, Quality Control and Quality Assurance, and a new course on Structural Geology. The Structural Geology course was carried out in collaboration with Geology Department of University of Dodoma. This month is also in the season of students' practical attachment and students were taking their practicals in the different departments of the Centre. The Centre was visited by a number of dignitaries during the month, including the Representative of Tanzania in the AMGC Board of Directors, Ambassador of the Republic of Turkey, Ambassador of Republic of Nigeria, and Ambassador of Comoros in Tanzania. The Mining Policy Officer at the African Union Commission also visited the Centre.

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Industrial Practical Training for University Students from Tanzania



AMGC is privileged to see a number of fresh graduates from Geo- Scientific higher academic institutes in Tanzania, the host country of AMGC benefiting from an Internship Programme which offers recent graduates the opportunity to gain direct practical experience with AMGC's work as well as to get a taste of AMGC's community. The Centre has received two recent graduates who are Mr. Callington and Ms Fatuma for 9 months as interns in the Mineral Processing and Small-scale Mining Department of AMGC



A ceremony for 4 undergraduate university students from Ardhi University in Tanzania who completed successfully their eight-weeks (25 July - 16 September 2022) free of charge Industrial Practical Training at African Minerals and Geosciences Centre. The names of students who completed their free of charge Practical Training programme are; Mr. Lusekelo Japhet Kangele, Miss. Doris Mangowi Frank, Miss. Renister Mbunda Bruno and Miss. Josephine Stewart Urassa

Congratulations



The Management of African Minerals & Geosciences Centre (AMGC) has the honor to congratulate Mr. Maruvuko Msechu, Acting Assistant Commissioner for Local Content and Corporate Social Responsibility in Ministry of Minerals of Tanzania for being appointed member of the Board of Directors of AMGC. The Board of Directors (BoD) which is composed of representatives of Tanzania, Angola, Kenya, Mozambique, Sudan, Uganda, UNECA, AUC and Ethiopia which is currently chairing the BoD meets more than once in a year and has an overall responsibility, and on behalf of the Governing Council, monitors, advises and supports the Centre and oversees the execution of the AMGC work programme and takes all necessary steps to ensure the effective and rational execution of such work programme. The Board member representing the host country (Tanzania) attends the monthly management meetings of the Centre.

Visit of Representative of Tanzania in the AMGC Board of Directors



The African Minerals & Geosciences Centre (AMGC) was honored to receive Mr. Maruvuko Msechu, Acting Assistant Commissioner for Local Content and Corporate Social Responsibility in Ministry of Minerals of Tanzania. Mr. Maruvuko in his capacity as the Representative of Tanzania in the Board of Directors (BoD) of AMGC attended the monthly management meeting for September 2022 as well as he paid a familiarization tour to the various technical departments of AMGC.

Visit of H.E. the Ambassador of Turkey in Dar ES Salaam, Tanzania



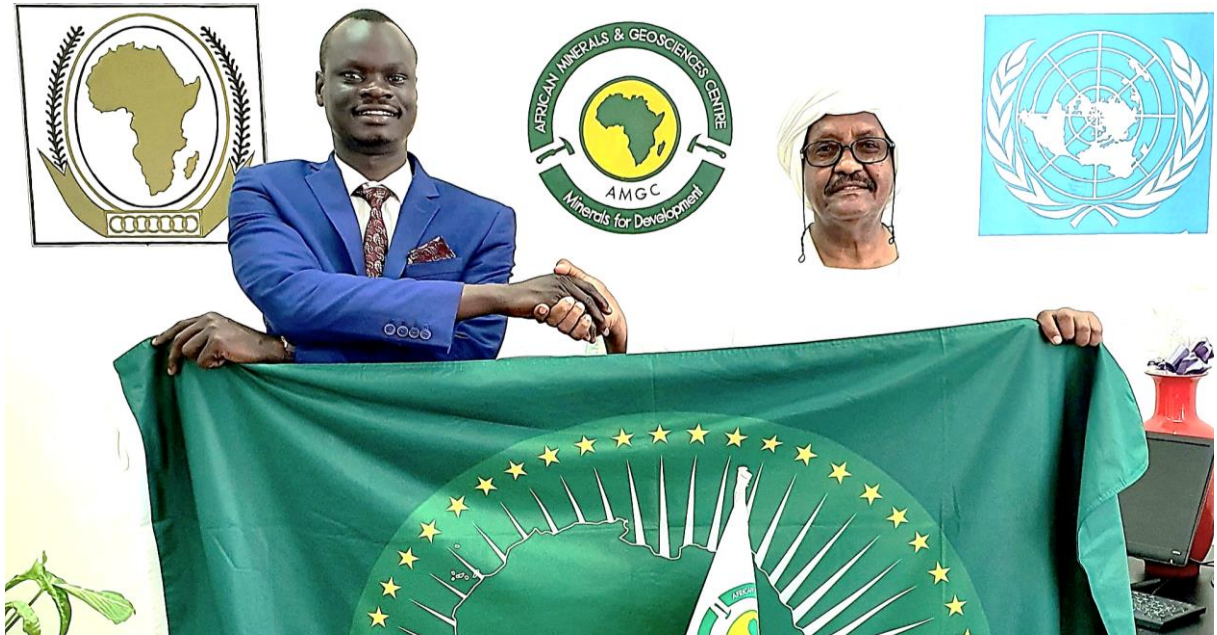
H.E. Dr. Mehmet Gulluoglu, the Ambassador of Turkey in Dar ES Salaam, Tanzania accompanied by Mr. Onur Bilgen, the Commercial Counsellor paid a visit to the African Minerals and Geosciences Centre (AMGC) on 13th September 2022. The distinguished Turkish diplomats had familiarized themselves with the Geoscientific-Mining services being provided by the Centre. The visit was initiated by a formal invitation extended by Mr. Ibrahim Shaddad, the Director General of AMGC seeking a development partner and support in technical cooperation and collaboration between AMGC and the General Directorate of Mineral Research and Exploration (MTA). Previously invitations were extended to MTA delegation met during the International Geological Congress in Cape Town, South Africa in August 2016. Further, to and fro letters were exchanged with MTA copied to Embassy of Turkey in Tanzania on 21st September 2016 and 26th September 2016. It is worth mentioning that Mr. Ibrahim Shaddad, used to be in a good working relationship with MTA since he had received an investment team from Turkey when he was Director of the Regional Office in the Blue Nile State for the Geological Research Authority of Sudan (GRAS) in 1999. Then when Mr. Shaddad was the Director of the Regional Geology Administration for GRAS, he developed a bilateral technical institutional cooperation between GRAS, and MTA in 2002. He paid a number of official visits to MTA in Turkey as well as he had the opportunity to be trained on Digital Image Processing - Geographical Information System in MTA at and consequently he established a Digital Image Processing Unit in GRAS.

Visit of H. E. the High Commissioner of Nigeria in Dar es Salaam, Tanzania



The African Minerals and Geosciences (AMGC) was honoured by a familiarization visit paid by H.E. Dr. Hamisu Umar Takalmawa, the High Commissioner of Nigeria in Dar es Salaam, Tanzania on 15th September 2022. H.E. Dr. Hamisu visited all the technical departments providing mineral services including analysis, training and consultancy to the Geoscientific Institutions and Mining Sector in Africa. H.E. the High Commissioner has promised to follow closely with appropriate authorities in Nigeria, the invitations that had been extended by the AMGC's higher levels of authorities to Nigeria for joining the Centre since 2008

Visit of Mr. John Youhanes, a Mining Policy Officer AUC



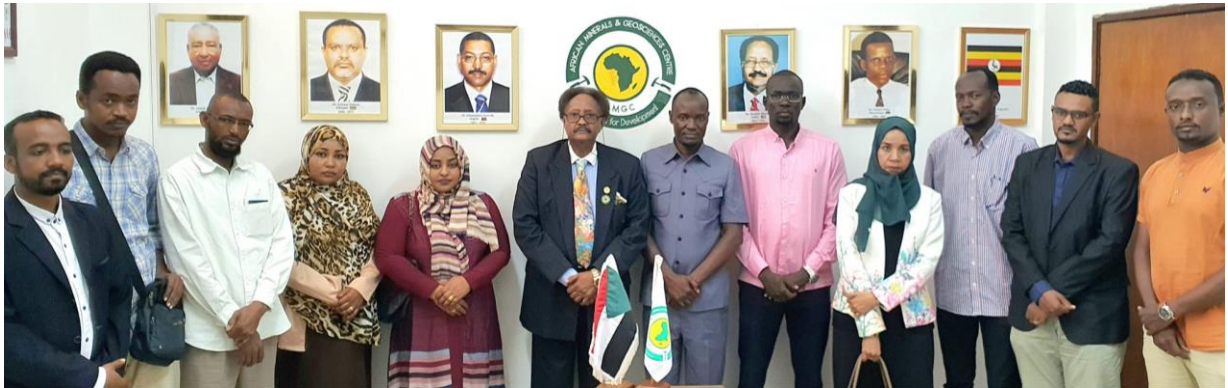
The African Minerals and Geosciences Centre (AMGC) received a courtesy visit by Mr. John Youhanes, a Mining Policy Officer at the African Union Commission (Department of Economic Development, Trade, Tourism, Industry and Minerals). Mr. Youhanes who was a delegate to the just concluded African Continental Free Trade Area (AfCFTA) Conference on Women and Youth in Trade, held in Dar es Salaam appreciated the role of the AMGC in training African experts from the AU Member States on technical skills and value addition into raw minerals.

Industrial Practical Training for University Students



A ceremony at African Minerals and Geosciences Centre for 3 university students from University of Dodoma (UDOM) who completed their free of charge Practical Training programme which started from 25 July 2022 to 16 September 2022. The names of students are; Mr. Gripa Zege Makambuya, Mr. Fredrick Makori Mafuru and Mr. Alphonse Marwa Sospeter.

Training course on Structural Geology and Geo-tectonic



The African Minerals and Geosciences Centre (AMGC) received the 2nd group from the Geological Research Authority of Sudan (GRAS), Ministry of Minerals to participate in a two-weeks training course on "Structural Geology and Geo-tectonic" from 19 - 30 September 2022. The training is conducted by a resource expert who is Dr Michael M Msabi, a Senior Lecturer and Head of Department of Geology; College of Earth Sciences and Engineering- University of Dodoma. The 2nd group of the Sudanese trainees comprises ten (10) geologists from GRAS's Regional Offices as follows:- Mr. Fakhdeen Eissa Haroun Ali, Mr. Ismail Twakul Ahmed Fadol, Ms Entisar Mukhtar Ahmed Mustafa, Ms Ayat Siddig Mohamed Babiker, Ms Wegdan Mohyeeldeen Mohamed Ahmed, Mr. Mohamed Eltahir Mohamed Abdelaziz, Mr. Ibrahim Kamal Ibrahim Elamin, Mr. Mudrik Hussien Osman Hussien, Mr. Edriss Omer Salih Mohammed and Mr. Mobsher Mahmoud Hamid Abdal

A Visit of H.E. the Extraordinary & Planetary Ambassador of Comoros in Tanzania.



On 21 September 2022 AMGC was honoured by a courtesy visit from H.E. Dr. Ahamada El Badaoui Mohamed Fakih, the Extraordinary & Planetary Ambassador of Comoros in Tanzania. H.E. Dr. Ahamada was accompanied by his wife became acquainted with the Centre's various Geo-sciences and Mining services, particularly in use of industrial minerals in the production of ceramic wares. It is worth mentioning that His Excellency pressed an order for a ceramic plaque and promised to continue working very close with the Centre hopes to deepen its relationship with Comoro, especially in terms of various Geo-sciences and Mining Sector services.

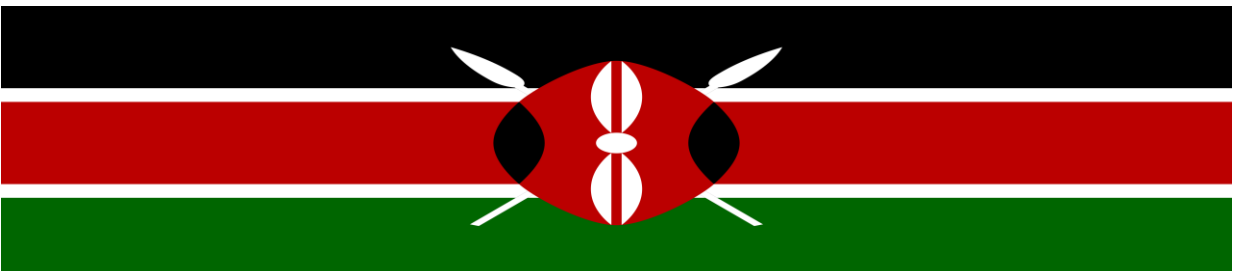
Trainings on Quality Control and Quality Assurance in Laboratories and Environmental Management in Mining



The African Minerals and Geosciences Centre (AMGC) has been privileged to see the Sudan is one of leading member states of AMGC which honour its financial commitment timely to the Centre. AMGC, as a Centre of excellence is engaged in providing geosciences-related training to African states, is delighted to see the Ministry of Minerals of the Sudan maximizes benefiting from mineral services provided by the Centre particularly human capacity building service through on paid job training courses at AMGC's premises in Dar es Salaam, Tanzania. It is worth mentioning that the Sudan has benefited from almost 500 opportunities of paid on job training since Mr. Ibrahim Shaddad, the current Director General of AMGC fully on board on July 2015. The Centre held at its premises in Dar es Salaam-Tanzania certificate ceremony of twelve professionals from Ministry of Minerals of the Sudan who participated in paid two training courses from 12 - 23 September 2022. The ceremony was attended by two guests of honours who are:- H.E. Mr. Asm Mustafa, the Charge' d'affairs a.i. of the Sudan Embassy in Dar es Salaam, Tanzania and Eng. Ismail M. Mahgub, the President of Sudanese Community in Dar es Salaam, Tanzania. Eng. Ismail was accompanied by two Sudanese business men intending to invest in the mining sector of Tanzania. Two out of the twelve professionals are geochemists from Ariab Mining Company Ltd. (A.M.C), who have participated in training course on "Quality Control and Quality Assurance in Laboratories". The two Sudanese trainees from GRAS are the following:- Mr. Hisham Abdalla Altayed Mohammed and Mr. Huzaifa Ahmed Salih Mohamed. Ten (10) out of the twelve (12) professionals are from the Geological Research Authority of the Sudan (GRAS) who participated in a two-weeks training course on "Environmental Management in Mining". The ten Sudanese trainees from GRAS are the following:-Osman Abuagla Daffalla Hamid, Houzifa Mohamed Omer Habballa, Mohamed Ali Mohamed Elsedig, Badreldeen Abdallah Suliman Alameen, Majdi Babiker Ahmed Suliman, Mosab Mohamed Ahmed Awad Mohamed, Abazar Ahmed Yassin Osman, Ammar Ahmed Mohammed Salih, Saeed Abdalla Ali Hamouda and Amna Abdalrheem Mohamed Ali

APPRECIATION & GRATITUDE

The African Minerals and Geosciences Centre (AMGC) would like to express its much appreciation and gratitude to Tanzania, the host country of the Centre for fulfilling its financial commitments to the Centre.



Congratulations



The Management of the African Minerals and Geosciences Centre (AMGC) has the honour to congratulate Hon. Salim Mvurya for being appointed as Kenya Cabinet Secretary for Mining, Blue Economy & Maritime Affairs.

Clay Day Workshop



On 30th -09 -2022 the African Minerals and Geoscience Centre (AMGC) received 13 children (from Braeburn secondary school, Dar es Salaam) for clay day workshop .The clay day workshop is a special short training program conducted under Industrial Minerals Application Department (IMAD) designed for women and men, children, schools and families for acquiring the basic know-how and skills in ceramics and pottery simple technology. IMAD also provides other various training courses for production of ceramics, pottery, researches and consultancy services for industrial minerals (Development Minerals).

AMGC – University of Dodoma Cooperation



AMGC is pleased to initiate a cooperation with College of Earth Sciences and Engineering- University of Dodoma; Tanzania through Dr. Michael M Msabi, a Senior Lecturer and Head of Department of Geology in conducting two-weeks training course on "Structural Geology and Geo-tectonic" for Sudanese geologists during 19 - 30 September 2022.

Training course on Structural Geology and Geo-tectonic



H.E. Mr. Asm Mustafa, the Charge' d'affairs a.i. of the Sudan Embassy in Dar es Salaam, Tanzania as a guest of honour has attended certificate ceremony of 2nd group comprising ten professional geologists from Regional Offices of Geological Research Authority of Sudan (GRAS), Ministry of Minerals. The Sudanese geologists participated in two-week paid training course on "Structural Geology and Geo-tectonic" from 19 - 30 September 2022. The training was organized by the African Minerals and Geosciences Centre (AMGC) in collaboration with a resource expert who is Dr. Michael M Msabi, a Senior Lecturer and Head of Department of Geology; College of Earth Sciences and Engineering- University of Dodoma. The ten Sudanese geologists as follows:- Mr. Fakhdeen Eissa Haroun Ali, Mr. Ismail Twakul Ahmed Fadol, Ms Entisar Mukhtar Ahmed Mustafa, Ms Ayat Siddig Mohamed Babiker, Ms Wegdan Mohyeeldeen Mohamed Ahmed, Mr. Mohamed Eltahhir Mohamed Abdelaziz, Mr. Ibrahim Kamal Ibrahim Elamin, Mr. Mudrik Hussien Osman Hussien, Mr. Edriss Omer Salih Mohammed and Mr. Mobsher Mahmoud Hamid Abdal





NEW Training Courses

African Minerals and Geosciences Centre (AMGC) is pleased to announce the introduction of four new courses Geostatistics, Petroleum Sciences and Resource Estimation in collaboration with Khartoum based Consulting firm called **Knowledge and Training Centre (KTC)**. The course shall be facilitated by the Director of KTC, Dr. M. Zayed Awad, an eminent specialist in the areas of Geostatistics, resource evaluation, stratigraphy, reporting, training and mentoring, risk and decision analysis, petroleum economics, project management. The training course will be organized in Dar es Salaam at the AMGC training facilities. The following training courses are going to be offered through this collaboration.

1. Fundamental of Petroleum Economics

Duration: One Week

Course fee: US\$ 1,200

This course introduces the participants to requirements for conducting petroleum economics; different stages of the petroleum industry life cycle involving upstream, mid-stream and downstream sectors will be explained. Participants will learn how to construct a Cash Flow Model for oil and gas investment decision. They will also learn how to deal with the different financial components of petroleum cost, and classification of costs into OPEX and CAPEX. Net Cash Flow Stream analysis and computation of economic indicators (Yardsticks) such as NPV, IRR, PBP, MCE and DPI, and their interpretations are essential for petroleum investment decision-making. Cash Flow Adjustment using discount rates is also considered. Types of fiscal regimes will be explained, participant will also learn how to incorporate the fiscal parameters into a cash flow stream.

2. Geostatistical Mineral Resource Estimation

Duration: One Week

Course fee: US\$ 1,700

The course will focus on the fundamentals of Geostatistical application in mining that are required for domain specification that are required for mineral resource estimation and will include hands-on training with Geostatistical software. Geostatistical conditional Simulations may be used to assess the uncertainty associated with the Reserves Evaluation at exploration,

feasibility, and production stages. The simulations provide a range of potential reserves for the ore body's Tonnage, Metal Quantity and Recovered Grade.

3. Introduction to Oil and Gas Industry

DURATION: One Week

Course fee: US\$ 1,200

This course is designed for a wide-ranging of petroleum industry personnel. It is designed to provide green-hands technical, and a non-technical personnel with practical petroleum industry life cycle. The course covers the key phases of the exploration, development and production industry as well as transportation and refining of crudes oils.

4. Geostatistics for Mining - foundation Course

Duration: Two Weeks

Course fee: US\$ 2,000

Geostatistics, in combination with other statistical methods, offers a wide range of mathematical tools that can be used to analyze, model, provide estimates and assess uncertainties, for different types of spatial phenomena, for example, grades or geological features. The course will focus on the fundamentals of Geostatistics and statistics and will include hands-on training with Geostatistical software.

THE INSTRUCTOR



Dr. M. Zayed Awad, the former Sudanese Minister for Oil and Gas (September 2014-May 2017) BSc (Hons) from University of Khartoum, Sudan, MSc (Geol) from Technical University of Berlin (TU), PhD (Stratigraphy) from Technical University of Berlin (TU). Dr. Zayed is a university instructor with postgraduate qualifications in petroleum geology, stratigraphy, economic geology, Geostatistics, and relevant application soft wares. He has more than 35 years' experience in university teaching and more than 25 years worldwide experience in

the petroleum industry and training. He has supervised many MSc and PhD research students and reviewed several reports and research papers. He is the founder of Knowledge & Training Center (KTC) in Sudan, and he is active as a trainer since 2003. He worked on many projects and given training courses to hundreds of attendees on many aspects of geology. Dr. Zayed's skills are in Geostatistics, resource evaluation, stratigraphy, reporting, training and mentoring, risk and decision analysis, petroleum economics, project management. Dr. Zayed was the initiator and editor-in-Chief of the book titled "Petroleum Geology and Resources of the Sudan" published by Geozone (Berlin) in 2015.

LIST OF TRAINING COURSES

Tanzanian government issued a new directive on restrictions with regards to the COVID-19. All travelers coming to Tanzania will not be required COVID 19 Free Certificate if they have a valid full vaccination certificate. If one is not vaccinated a COVID 19 Free Certificate with PCR Test and will be subjected to screening and possible additional test at the airport with Rapid Antigen Test. Below is the list of the training courses offered by AMGC.

Those who are interested to participate in the training courses at AMGC facilities are advised to consult the airline they plan to travel with about the current requirements of travel to Tanzania when planning the trip to Dar es Salaam.

| Training Topics | Duration | Fee |
|---|----------|---------|
| Finance and Administration Department | | |
| Leadership and Management Skills Training Course | 2 Weeks | \$800 |
| Financial Management Skills Training Course | 2 Weeks | \$800 |
| Executive Secretarial Training Course | 2 Weeks | \$800 |
| Chemical and Environmental Department | | |
| Spectrometric Methods of Analysis. | 2 Weeks | \$800 |
| Analysis of Gold and Other Base Metals | 2 Weeks | \$800 |
| Quality Management Section | | |
| Laboratory Certification and Accreditation | 2 Weeks | \$1,500 |
| Modern Laboratory Management Methods | 2 Weeks | \$800 |
| Quality Control and Quality Assurance in Laboratories | 2 Weeks | \$1,500 |
| Mineralogy, Petrology and Gemology Department | | |
| Mineralogical and Petrological Sample Preparation and Analytical Techniques | 2 Weeks | \$800 |
| Gemstone Identification Techniques | 1 Week | \$400 |
| Gemstone Value Addition Techniques | 2 Weeks | \$800 |
| Usage of Benchtop X-ray Diffraction (XRD) | 2 Weeks | \$800 |
| Gemstone formation, mode of occurrences and mining methods | 2 Weeks | \$800 |
| Industrial Minerals Application Department | | |
| Pottery for Beginners | 2 Weeks | \$800 |
| Mould Making | 2 Weeks | \$800 |
| Forming Techniques | 2 Weeks | \$800 |
| Decorations in Pottery and Ceramics | 2 Weeks | \$800 |
| Bricks & Tiles Manufacturing [Clays] | 2 Weeks | \$800 |
| Glaze Formulation | 2 Weeks | \$800 |
| Body Composition Formulation | 2 Weeks | \$800 |

| Mineral Processing and Small-scale Mining Department | | |
|--|------------|---------|
| Practical Mineral Processing and The Basic Mineral Processing Flowsheet | 2 Weeks | \$800 |
| Sampling and Sample Preparation for Laboratory Testing | 2 Week | \$800 |
| Artisanal and Small Scale Mining Activities | 2 Weeks | \$800 |
| Techniques of Gold Cyanidation | 1 Week | \$400 |
| Mineral Economics | 2 Weeks | \$800 |
| Metallurgical Balance and Process Evaluation | 2 Weeks | \$800 |
| Extractive Metallurgy – Metallic Ore Deposits, Metal Extraction and Purification Processes | 2 Weeks | \$800 |
| Environmental Management in Mining | 1 Week | \$400 |
| Geo-information Department | | |
| GIS and Remote Sensing for Mineral Exploration and Geological Mapping | 2 weeks | \$800 |
| Best Practices in Mineral Resource Estimation | 1 week | \$400 |
| Geodatabase Development for Web mapping | 2 weeks | \$800 |
| GIS and Remote Sensing Application for Assessment and Mitigation of Geohazards | 1 week | \$400 |
| Integrated Mineral Exploration Techniques | 2 weeks | \$800 |
| GIS and Remote Sensing for Hydrological Applications | 1 week | \$400 |
| Open-Source GIS | 2 weeks | \$800 |
| Fundamental of Petroleum Economics | 1 week | \$1,200 |
| Geostatistical Mineral Resource Estimation | 1 week | \$1,700 |
| Introduction to Oil and Gas Industry | 1 week | \$1,200 |
| Geostatistics for Mining - foundation | 2 weeks | \$2,000 |
| Geoheritage / Geoparks | On Request | |
| Geo-safari – Geo-traverse across the Pan-African terrains: Tanzanian Craton, Greenstone belt, East African Rift Valley, the Kibaran and Mozambique belts. | On Request | |



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