

## Prospectus

of

## Services

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Isoglo - Overview

Isoglo is uniquely positioned in that it brings together some of the most knowledgeable people in industry under one roof thus ensuring that the best product is delivered to our clients.

It had it foundation when it became clear that there is a need in industry for has a unique organisation that can deliver a package of products that addresses not only one but the majority of industry standards which compromise quality standards, health and safety standards, risk management, auditing and training.

Collectively, our consultants have over 200 years of experience in the industry and are well qualified, highly respected individuals.

We have significant experience in skills development where one of our consultants have been involved in a Senior Management position in standards generation and skills development in one of the most successful Sector Education and Training Authorities (SETAs) in the country. The company is therefore well positioned to deliver competency standards to the industry, inclusive of the mining and minerals sector in various areas from quality to heath and safety and many more.



**Training Philosophy** 

### THE COMPETENCY MODEL

Isoglo follows the "Bloom's taxonomy" of cognitive, psychomotor and affective domains of learning. According to the taxonomy competency is vested in three significant skills. These are:

**Cognitive Skill:** This skill refers to a person's detailed understanding of the theory behind a process or methodology. It includes knowledge of legislative and standard procedural requirements associated with such activity. It also provides persons with the reasons for (the why) of performing a function.

**Psychomotor Skill:** This is the skills of doing. The skills is often practiced in a simulated (mock-up) environment and later refined in a real life (on-the-job) situation. These are skills such as driving, installing, marking off, loading, moving, repairing, etc. The learner demonstrates the activity or task, i.e. the learner demonstrates that driving is done according to the rules by actually driving whilst being observed by the assessor. During this phase of learning the cognitive skill is constantly re-enforced through discussion and assessment.



## Training Philosophy Cont.

Affective Skill: This skill reflects on a persons desire, motivation and drive to apply or not to apply the cognitive and motor skills. Often persons have an ingrained affective skill that was learnt from childhood, however, where the desire to perform is not evident in an individual it is usually possible to identify underlying reasons therefore and to implement competency programmes to support the development of the skill. An example of this may be the inability of newly employed supervisors to perform appropriately. This is often because such new and often young supervisors do not have the assertive and people handling skills to work with subordinates. It is therefore often possible to correct such behaviour through providing appropriate supervisory and or assertiveness training.



### The Competency Model



## Consulting

## Services



**Integrated Management** 

System

## Everything in its place and a place for everything, never misplace files again.

Policies, procedures, processes and records are easily accessible. Auditors find it easy to audit compliance with ISO or any other system.

Two Integrated Management systems are available. One system is based on Microsoft Office eliminating the need for separate expensive software for which licensing is required. The second system makes use of a Microsoft Office programme called Microsoft Office Visio. Visio has some features which is not available in the Microsoft Office version. It does however require separate software to be purchased and installed on the user's computer/s.

By setting up departments (or functions) as it operates in your organisation and by cleverly creating links users can follow a process to its conclusion. For instance, a user wants to order materials for a task at hand. He will open the Integrated Management System and link to the relevant department, say "Procurement".

A "Procurement Department" view will open showing the relevant policy(s), work standards and procedures applicable to purchasing. Procedures could be written documents or process maps.



## Integrated Management System Cont.

The user will follow the relevant procedure. Links in the procedure will take the user to a template(s) of the correct records (forms) to be completed and submitted to the correct authority.

Forms and records are stored without affecting the original document template, i.e. the template will not be changed in any way and is available as a blank template for the next user.

Please click here for an extract view of the IMS.



Implementing ISO

Implementation of:

ISO 9001\* Quality Management Systems, ISO 14001\* Environmental Management Systems, SANS 16000\* Managing HIV Aids in the workplace ISO 17025\* Laboratory Accreditation, and OHSAS 18001\* Occupational Health and Safety Management Systems

Each management system is designed to meet the needs of both large and small organizations and can be broken down into its most basic and simplest elements. It is therefore easy to implement and manage.

Isoglo will assist the organisation in the following way:

• Detailed survey of all operations, processes and procedures performed on site to custom design a management system according to the specific needs of a company.

 Writing of a documented manual to address each clause of the management system as required by the ISO, SANS or OHSAS document.

Implementation of the management system.

 Writing of policies, procedures and standards as well as the required documentation for each stage through development and implementation to planning and maintenance, checking and corrective action and management review.



Implementing ISO

Continued

### • All the internal training required by each individual or department concerned with the implementation and maintenance of the management system in their respective areas of responsibility.

• Conduct internal audits and management reviews to ensure that the management system is in place to the degree where it can be listed by an authorised external accreditation organisation.

\* Also done for custom developed systems.



## Human Resources Services

#### Management of Human Resources and Industrial Relations:

- Recruitment and employment of Competent Staff
- Staff induction into the client's organisation
- Management of leave, sick leave and family responsibility leave
- Management and payment of overtime
- Compliance with Basic Conditions of Employment Act
- Compliance with Labour Relations Act
- Compliance with Skills Development Act
- Compliance with Skills Development Levies Act
- Compliance with Industry Agreements
- Management of Wage Pay Roll
- Management of Salaries
- Employer/employee negotiations and agreements





## **Technical**

# Training



## Rock Engineering Certificate UNISA Certification

This course is designed for learners preparing for the Chamber of Mines Rock Engineering Certificate. Learners must have been accredited with the C.O.M. Strata Control Certificate and should have studied sufficiently since this course is presented at a high level by industry Rock Engineering specialists in final preparation for examinations.

The course is divided into four training modules in preparation for Rock Engineering Certification by UNISA (University of South Africa)

> Paper 1: 5 Days (Basic Theory) Paper 2: 5 Days (Applications) Paper 3: 5 Days (General) Paper 4: An underground practical coaching session in preparation for the practical examination



## Strata Control Certificate UNISA Certification

This programme is designed for learners studying towards the Chamber of Mines Strata Control Certificate. Learners must have completed some selfpreparation prior to attendance, since the intervention is final preparation for the examination. Learners intending to enrol for the examinations must have at least six months experience in a Rock Engineering department to qualify for enrolment. Learning takes place over five days. An underground session can be arranged in preparation for the practical examination if so required. A strata control for novices course is also available for new entrees into this profession.

#### The entire prescribed syllabus is covered, including:

- Basic mathematics
- Basic theory
- Definitions
- Stress & Strain
- Mining methods
- Support
- Energy absorption

- ERR
- ESS
- Pillar calculations
- Backfill
- Load Deformation
- Rock strength testing
- Stress distribution



Strata Control Middle Management

This programme is designed for decision makers within the mining industry who need to improve their knowledge of rock engineering and strata control principles and terminology.

The programme is presented at a high level by qualified Rock Engineering Practitioners and would be suitable for Managers with at least a basic knowledge of applied Strata Control. The programme is presented over a five day period and deals with basic stress/strain relationships, energy absorption, Energy release rate, support resistance and other criteria relevant to the daily management function.

The programme is also very useful to managers in training, learner officials, and graduates and diplomates who have just started their mining careers.



## Strata Control Production Supervisors

This programme meets the requirements of mine officials involved in the identification and control of hazardous ground conditions, mine planning and design processes. Learners must have a fair knowledge of the general mining process and be proficient in the English language.

Learners will be eligible to be assessed in terms of **Unit Standard MnH-G077/078** on successful completion. The programme is presented over four or five days, with one day spent underground for practical exposure and hazard identification. The programme deals with basic rock related hazard identification and control principles.

#### The content includes:

- Basic definitions
- Blasting Practice
- Support Characteristics

- Stress and Strain
- Mining methods
- Layout & design



**Strata Control** 

**Miners** 

## This programme is designed for the Rock Breaker. The learner will obtain sufficient background to identify and control rock related hazards in his or her workplace underground. The programme is practical, adding value to the development of practical miners related to safety and improved productivity. Learners attending this programme will be eligible to be assessed in terms of **Unit Standard**

**MnH-G077/078** on successful completion. The programme duration is four to five days, with one day spent underground for practical exposure and hazard identification. The programme deals with basic rock related hazard identification and control.

#### The content includes:

- Basic definitions
- Blasting Practice
- Support Characteristics

- Stress and Strain
- Mining methods
- Rock hazard recognition



## Strata Control Developers

This programme is designed for the Rock Breaker, spending most of his/her underground time in a non-stoping environment. Employees, such as Developers and Shaft Employees would reap the benefit of this practical strata control programme. The learner will obtain sufficient knowledge to identify and control rock related hazards in the underground environment. The programme is presented over four days with one day spent underground for practical exposure and hazard identification. The programme deals with basic rock related hazard identification and control.

#### The programme content includes:

- Basic definitions
- Blasting Practice
- Support Characteristics

- Stress and Strain
- Mining methods
- Hazard recognition



Strata Control Team Leaders

The programme is designed for Team leaders and/or Gang Supervisors, working in a supervisory capacity, and gives the learner sufficient knowledge to identify and control rock related hazards in the underground environment in order to guide and lead his team in the strive for optimum safety and production. Learners will become eligible for assessment in terms of **Unit Standard MnH-G078** on successful completion of the programme. The programme is presented over a four to five day period with one day spent underground for practical exposure and hazard identification and control.

#### The programme covers:

- Basic definitions
- Blasting Practice
- Support Characteristics

- Stress and Strain
- Basic rock behaviour
- Hazard recognition



Strata Control Team Workers

This practical programme is presented underground in the normal working environment of the Team Worker. Workers are coached in their regular workplace on Strata Control issues. Very little production time is lost and the learners can associate the Strata control concepts and principles to an environment known to them.

The workplace is audited and all related acts and conditions are recorded for discussion and rectification by the team. The programme is normally presented underground over a three day period with most of the tutoring taking place during the normal execution of the workers daily tasks.

This programme works wonderful as a tool to promote rock related safety awareness in the mining team.

With sufficient follow up after the intervention by a dedicated supervisor, the accident statistics can go only one way, and that is down!



Strata Control Safety Representatives

This programme targets Safety Representatives working in the underground environment. The learner will obtain sufficient knowledge to identify and control rock related hazards in the underground environment to enable him / her to make educated decisions when being approached by the team in his / her capacity as a Safety Representative. The programme runs for four to five days with one day spent underground for practical exposure and hazard identification and control.

#### The programme covers:

- Basic definitions
- Blasting Practice
- Support Characteristics

- Stress and Strain
- Basic rock behavior
- Hazard recognition



## **Strata Control Refresher**

This one day programme is presented to learners who have previously completed a formal Strata Control programme and who require only a reminder on safety aspects in the Company's strive to reduce accidents. The programme is based on **the appropriate unit standard, either MnH-G077 or MnH-G078**, depending on the competency skills programme. The programme serves ideally as a pre-assessment preparation and a hazard awareness blitz.



## Supervisory Skills Training

This five day programme is intended for the mining Supervisor, mostly Shift Supervisors and Foremen as a means of increasing their Supervisory Skills and Hazard awareness capabilities. Learners obtain knowledge of planning, leading, organising and controlling principles, ventilation measurement and control, tonnage measurement and calculation, regulations and other factors normally covered in a quality Learner Official training programme.

Each programme is tailor-made for the client and the facilitator will illustrate theory with appropriate practical examples drawn from the experience of the learners. Practical underground sessions are also included in this intervention. Learners can be assessed in terms of **Unit standard OcS-F015** after completion of this programme.



Mining Training Centre Management

Isoglo training can manage your whole training centre, supplying training to all disciplines related to the mining process. This total training process already being offered to a large mining house can reduce the mine Management involvement in the training process and also have very positive implication on your overall training budget. The training package includes all disciplines and outcomes based educational training, from ABET to various legal appointment training specified by the Minerals and Health and Safety act. Learners are enrolled in skills programs, working towards a qualification, with all outcomes, unit standard based, registered at MQA.

#### The range of disciplines trained covers skills such as:

- Winch driver
- Loco driver
- LHD Operator
- Drill rig Operator
- Tip and belt attendant

- Rock drill Operator and assistant
- Support workers
- Barring Skills
- Pump attendant
- P.T.V workers



### Mineral Resource Management

#### Programmes are presented on two levels:

- 1. For employees in the mineral resource or technical services department, to increase their knowledge and productivity. Learners will typically include samplers, stope observers and mappers, sample chippers, department assistants, geological and exploration technicians
- 2. For production officials and miners, to increase their awareness of the functions of the M.R.M. or technical services department and to understand their role in the mining value chain.

Programme duration will vary depending on the specific outcomes required by the client but a typical programme will vary between three and five days of classroom and underground exposure combined.



## Principles of Slope Stability for Opencast Mines

This programme targets all supervisory personnel from Team Leader level and above to increase their rock related hazard awareness. The programme is normally presented over a four to five day period with considerable time spent in the pit for practical exposure and hazard identification and control.

#### The programme content includes:

- Basic definitions
- Blasting Practice
- Slope Stability

- Stress and Strain
- Basic rock behavior
- Hazard recognition



## Strata Control for Company Representatives

This programme targets company management and representatives serving the mining industry who wish to improve their knowledge of Rock Engineering principles and terminology to enable them to communicate effectively with their clients or stakeholders. This five day intervention is presented at a fairly high level by qualified Rock Engineering Practitioners.

#### Some of the Rock Engineering principles covered include:

- Basic theory
- Definitions
- Streses & Strains
- Mining methods
- Support
- Energy absorption

- ERR
- ESS
- Pillar calculations
- Backfill
- Load Deformation
- Stress distribution



## **Special Barrer's Course**

This course is offered to mine personnel involved in the entry examination process, as a measure to enhance the knowledge and skills of such personnel. The course is unit standard based **(MnH-G038)** and would enable the learner to qualify for competency assessment on completion thereof.

This course has a two day duration of which one day is spent in the classroom and the second day as a practical coaching session. As with other unit standard based programmes, assessments of learners can be arranged on successful completion of the course.



Recognition of Previous Learning (R.P.L), Competency Assessment and Moderation of Assessments

Previous learning and applicable experience of learners are recognised by the relevant training SETAS. Our registered assessors are fully equipped to recognise previous learning of learners in terms of any unit standard prescribed by the MQA.

Competency assessments and moderations are also offered to clients to complete the education process in terms of the skills programme or qualification the learner is studying towards.



## Basic principles of Cave Mining

This programme is designed to give the learner a basic insight and understanding of the cave mining method. The target population is primarily operators and first level supervisors, but experience shows that the programme is suitable for any mining professional who may require exposure to this unique method of mining.

One of the prime objectives of the programme is to emphasize the importance of identifying hazards in order to maintain a safe and productive extraction of the ore body.

This programme is presented over a three to four day period depending on the represented learner knowledge level.



## Competency "A" and "B" Skills Programmes

- Skills programme for fall of ground regulations: Competent Person A Examine and Declare a Working Place Safe
- Skills programme for fall of ground regulations: Competent Person B Install, Maintain and Remove Support

The Competency "A" and "B" skills programs for underground personnel are covered in full. Isoglo Training facilitators will prepare learners in all **core unit standards**, as well as client-specified **elective unit standards**. In addition to training these skills programmes, our facilitators can also conduct assessments of the learners, and/or conduct moderations on the assessments

These skills programmes are mandatory for any person working in an underground South African mine who are involved in the specific activities and who do not hold a recognised qualification (Blasting Certificate)

Part of the suite of qualifications that defines the competency for a traditional Miner



## **National Certificates**

#### THE NATIONAL CERTIFICATE: INTRODUCTION TO MINING AND MINERALS SECTOR – (ABET 4, NQF Level 1 Qualification)

This qualification is designed to meet the needs of learners in a variety of environments in the Mining and Minerals Sector. It is a generic qualification designed as a first step towards obtaining a range of qualifications. The qualification would benefit learners within the mining industry or those learner who wish to enter the industry who:

- Were previously disadvantaged and couldn't complete schooling
- Have mining experience but no relevant qualification
- Wish to extend their mining knowledge and understanding

Leading up (entry) to the suite of qualifications that defines the competency for a traditional Miner



## **National Certificates**

#### THE NATIONAL CERTIFICATE IN ROCK BREAKING IN UNDERGROUND TABULAR HARD ROCK – (NQF Level 2 Qualification)

This qualification will provide learners working in the mining and minerals sector a formal qualification to balance their skills.

The qualification is aimed at people who work within a minerals extraction context, seeking recognition for essential skills in mining operations. This qualification can act as a springboard from which people may progress to other qualifications in mining related study fields.

Part of the suite of qualifications that defines the competency for a traditional Miner



**National Certificates** 

#### NATIONAL CERTIFICATE IN ROCKBREAKING: UNDERGROUND HARDOCK TABULAR ORE BODIES NQF LEVEL 3

This qualification will allow a learner in the mining and minerals industry to obtain a nationally recognised qualification in rockbreaking in the area of underground hard rock mining.

The qualification is aimed at people who work within a minerals extraction context and who are responsible for primary blasting operations. This qualification can act as a springboard from which people may progress to other qualifications in mining related study fields.

Part of the suite of qualifications that defines the competency for a traditional Miner



Health, Safety and Risk Management

Isoglo is currently well positioned to engage in the training of Safety Practitioners in the South African Mining industry. The training is based on the MQA developed programmes but is also expanded on to provide for the additional requirements of clients. The following typical interventions (or similar) can be provided at the client request:

Intervention	Description
OHS&E Induction	Understanding the basic prescripts of the MHS Act – ensuring that all levels of employees are familiar with their roles, duties and responsibilities in terms of the Act. Understanding the basic principles of Safety and Risk.
MHSA Legislation	The learner will have developed knowledge and understanding of the basic requirements within the MHSA; the roles and responsibilities as specified in the MHSA as well as any legal appointments in terms of the Act. Finally, the learner will be familiar with the most important sections in the Act. This intervention will go beyond induction.
OHS&E Representative	This training will provide Health and Safety Representatives with the knowledge and skills for the Representative to perform this function as envisaged by the MHS Act. This will likely be one of the interventions that will form the backbone of Isoglo's involvement in this area.
OHS&E Supervisor	Such training will equip management with the necessary knowledge and skill to develop awareness on the critical issues regarding OHS&E. It will also provide the necessary tools to identify & report hazards in the workplace; pro-actively recommend corrective action and manage his/her workplace or section with utmost confidence.



## Health, Safety and Risk Management continued

Intervention	Description
HIRA	Equips the learner with the required knowledge and skills to identify and manage hazards using a variety of methods and techniques. It also includes step by step procedures for following a risk assessment process.
Incident/ Accident Investigation	A detailed process allowing in-depth knowledge on incident and accident investigations and the required documentation.
Environmental Awareness & ISO 14001	Allows learners to develop the ability to identify and report hazards related to environmental management.
Safety Officer	Provides Safety Practitioners with the competence to manage an integrated Safety Management System and provides information on duties and functions.
OHS&E Office Safety	A possible future intervention which will equip office bound learners with the skill to improve OHS&E conditions within the Office environment.



## Health, Safety and Risk Management continued

Intervention	Description
Conducting of Risk Assessment	Conducts base line and issue based Risk Assessments based on the Roche Methodology. The methodology can be modified for client specific requirements.
Incident/Accide nt Investigation	Assists the organisation with conducting accident and incident investigations, getting down to the real cause/s of the occurrence and recommending appropriate action.
Safety and Health Audits	Conducts independent audits on prevailing conditions in the workplace, providing an independent opinion and making recommendations for improvement.
Safety and Health Management	Supply Safety Management services. Isoglo becomes the appointed Safety Officer for organisations who do not wish to appoint such dedicated Safety Officer and/or provides a comprehensive Safety Management service where required.
Quality Management	Supply Quality Management services. Isoglo becomes the appointed Management Representative or Quality control officer for organisations who do not wish to appoint such dedicated person/s.



## **Geology for Non Geologists**

#### GEOLOGY FOR NON GEOLOGISTS

This one-day introductory course has been designed for anyone (who is not a geologist) involved in, associated with or investing in the mining industry. Key geology and resource concepts are explained, along with rock specimens and activities. Delegates will learn how a company progresses a project from early-stage exploration through to a mining reserve. See examples of how to interpret mineral resource and exploration results in stock exchange company announcements. Find out or refresh their knowledge on what is involved behind the scenes, and learn about the key risks to be managed using geological data.

The key concepts covered are:

#### Geology, the basics:

- An introduction to major rock types and major commodities
- How ore types are formed key concepts geologists use to explore for new deposits

#### Examples of major ore types:

- Samples of key mineral and rock specimens
- Chief physical and chemical characteristics of major commodities



## Geology for Non Geologists Continued

#### Drilling and resource estimation:

- Simple explanations of major drilling and sampling methods and when they are used
- What is behind a resource or reserve estimate, and where the principle risks lie

#### Stock Exchange reporting of resources and reserves:

- Key requirements of the code, and what should be reported on the stock exchange
- Definitions of exploration results, minerals resources and ore reserves
- How to extract and interpret key geological information from stock exchange reports
- How to spot non-compliance, including a simple checklist you can take with you

#### Other relevant reporting codes:

- Other international codes
- Core differences



## Geology for Non Geologists Continued

#### Key geology and mining terms:

- · Common technical terms used in reporting
- Where to find more information when you need it

#### Mineral analysis and quality assurance:

- Major types of mineral and chemical laboratory analysis
- Key risks in sampling and important sampling checks



## **Mining for Non Miners**

#### MINING FOR NON MINERS

This one-day introductory course has been designed for anyone (who is not a qualified miner) involved in, associated with or investing in the mining industry. Key mining and mining services are explained, along with some very basic geology information.

Delegates will learn how a company progresses a project from exploration through to planning, and eventually closure.

Models and charts are used to explain mining lay-outs and concepts and some information on mining rock mechanics and mine safety is provided.

Delegates will find out or refresh their knowledge on what is involved behind the scenes, and learn about the key risks to be managed in mining.

The key concepts covered are:

#### Mining, the basics:

Mining methods: The following methods are discussed:

- Open cast;
- Narrow tabular hard rock;
- Massive mining.

Shaft sinking and equipping.



## Mining for Non Miners Continued

#### Services and departments:

Metallurgy; Surveying and sampling (mine evaluation); Geology; Rock mechanics.

#### Mine safety:

A perspective on mining safely is provided with particular focus on:

- Risk assessment;
- Accident, incident investigation;
- Safety auditing (inspections and observations);
- Standards and procedures.

#### Associated organisations:

- Mining Qualifications Authority;
- Department of Minerals and Energy and the Mine Health and Safety Inspectorate;
- Mine Health and Safety Council;



## Mining for Non Miners Continued

#### Mining economics:

Factors that influence the payability of a mine is discussed such as:

Pure risk versus speculative risk; Principal costs; Life of mine; Pay limit.



## Mentoring

#### MENTORING

If you would like help putting what you have learned into practice, please contact us about our mentoring service.