REPUBLIC OF SOUTH AFRICA

ADMINISTRATION: HOUSE OF ASSEMBLY

DEPARTMENT OF EDUCATION AND CULTURE

POST-SCHOOL EDUCATION IN TECHNICAL COLLEGES

NATIONAL EXAMINATIONS

S Y L L A B U S

FOR

BASIC MINING AND REGULATIONS

N1

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SEPTEMBER 1989

DATE OF FIRST EXAMINATION:
NOVEMBER 1989

1. GENERAL AIMS IN BASIC MINING AND REGULATIONS N1

1.1 The direction of study at Technical Colleges requires, inter alia, that students obtain a comprehensive insight into the following:

1.1.1 meaningful participation in, experience of and the giving of meaning to that which is embodied in a Christian-National lifestyle;

1.1.2 industry as part of society in its totality;

1.1.3 the extension of vocational education within the bounds of existing technological and cultural programmes.

1.2 The teaching of this subject should provide bridging possibilities between general preparatory academic education and post-school education.

1.3 Pupils who leave the formal education system too soon, should be admitted to Technical Colleges until they have achieved the academic standard required for entrance to the specific examination.

1.4 The course will be directed at students who have already been exposed to the practical component, and who wish to improve their academic background through the adult education system.

2. SPECIFIC AIMS IN BASIC MINING AND REGULATIONS N1

2.1 Knowledge, application and insight are important aspects in this subject and the approximate allocation in each paper should be:

KNOWLEDGE	APPLICATION	INSIGHT
60 %	30 %	10 %

2.2 The subject will realistically prepare the student for entrance to the Blasting Certificate examination.

2.3 The lecturer should utilise the practical experience of his students to create a better understanding of the academic work.

2.4 Evaluation of the students must be done on a continuous basis and wherever possible, practical tests should be written.

2.5 Students must be encouraged to think logically and to work neatly, accurately and systematically.

3. SUBJECT AIMS IN BASIC MINING AND REGULATIONS N1

On completion of the subject, the student should:

3.1 have a thorough understanding of some definitions from the Mines and Works Act and Regulations as well as the most important mining terminology,

3.2 be able to distinguish between the various types of excavation on a basic mine plan,

3.3 be able to demonstrate his knowledge of a drag development round as well as a stope face round by drawing the round with dimensions and firing sequence,

3.4 be able to describe a logical cleaning cycle for both a stope face and a flat development end,

3.5 know the difference between temporary and permanent supports in a stope and a flat development end and will also be able to describe a method of at least one system for each dimension,

3.6 be able to indicate on a basic mine layout the reticulation of compressed air, water and electricity.

4. SYLLABUS FOR BASIC MINING AND REGULATIONS N1

4.1 The following Mining definitions from the Mines and Works Regulations, and their applicability to the work of the miner must be taught:

Complaint book
Competent person
Steep incline
Raise
Stope
Socket
Waiting place
Miner
Shaft
Winze
Waterblast
Shothole
Misfire

4.2 The following basic mining terminology must be understood:

Downcast shaft
Haulage
Connecting Crosscut
Travelling way
Stoping
Sidewall
Support
Boxhole
Gully
Centre Gully
Upcast shaft
Return Airway
Crosscut
Ledging
Hangingwall
Footwall
Dip
Boxfront
Advanced Strike Gully

4.3 Knowledge of the following basic layouts must be obtained and the following must be recognized on a simple plan:

Shaft
Connecting Crosscut
Boxhole
Raise
Haulage and Return Airway
Crosscut
Travelling way
Stope

4.4 The marking off and timing of a drag round in development as well as that of a stope face must be known.

4.5 The scraper cleaning method of a breast stope face as well as the cleaning of a flat development end by means of a mechanical loader must be explained in detail with the aid of sketches.

4.6 Temporary as well as permanent support in stoping and development must be taught and students should be conversant with at least one system for each of development and stoping.

4.7 Basic electricity, compressed air and water reticulation must be explained by means of flow diagrams.

4.8 MINES AND WORKS REGULATIONS

4.8.1 Regulation 8. 1 (8.1.1 to 8.1.6)

8. 3 (8.3.1 to 8.3.3)

8. 4 (8.4.1 to 8.4.7)

8. 8 (8.8.1 to 8.8.4)

8. 9 (8.9.5 to 8.9.8)

8.10 (8.10. 1 to 8.10.13)
(8.10.15 to 8.10.40)
(8.10.45 to 8.10.46)

9. (9.1.1 to 9.39.9)