



STATUS OF MINING ENGINEERING EDUCATION IN SOUTH AFRICA

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SCHOOL OF MINING ENGINEERING
UNIVERSITY OF THE WITWATERSRAND
JOHANNESBURG, SOUTH AFRICA

29 JUNE 2009

OVERVIEW

- **STUDENT ENROLMENTS**
- **STAFFING**
- **RELATIONSHIP WITH INDUSTRY**
- **ADVOCACY ROLE OF MINING ACADEMICS**

STUDENT ENROLMENTS

- **FOUR INSTITUTIONS OFFER TERTIARY QUALIFICATIONS IN MINING ENGINEERING AND MINE SURVEYING**
- **ALL PROGRAMMES AT OR NEAR RECORD ENROLMENTS**

UNIVERSITY OF SOUTH AFRICA

Technikon level, distance learning programmes in Mining Engineering, Surface Mining and Mine Surveying

Qualification	Subject Registrations
ND Mining Engineering	600
ND Surface Mining	72
ND Mine Surveying	176
Total	848

The student body is 94% black, 30% female and is equivalent to approximately 220 FTE students

UNIVERSITY OF JOHANNESBURG

- **Residential university with both traditional university programmes and university of technology offerings**
- **Established 1 January 2005 through the merger of Rand Afrikaans University, the Technikon Witwatersrand and the Soweto campus of Vista University**
- **The mining and mine surveying programmes include National Higher Diplomas and B Tech degrees**

UNIVERSITY OF JOHANNESBURG

Semester	Mining Engineering	Mine Surveying
S1	122	43
S2		
P1	85	
P2		
S3	91	
S4		63
S5	69	20
S6 practical		19
Semester Students	367	145
FTE	184/367	73/145

UJ currently has 367 enrolled mining engineering students and 145 mine surveying students. FTE calculation is based on the assumption that the same students will also enrol for second semester

UNIVERSITY OF PRETORIA

- **A traditional university offering fully accredited professional undergraduate degrees and the full range of postgraduate qualifications**
- **Formally Afrikaans was the language of instructions, which limited the ability to attract all race groups**
- **Current undergraduate student body is 69% black and this years intake is 28% female**

UNIVERSITY OF PRETORIA

2009 Undergraduate and Postgraduate Registrations

Year of Study	Number of Registrations
First	66
Second	82
Third	39
Fourth	36
Total Undergraduate	223
Postgraduate	32
Total	255

UNIVERSITY OF THE WITWATERSRAND

- **Also a traditional university offering fully accredited professional undergraduate degrees and with a the full range of postgraduate qualifications**
- **Current undergraduate student body is 98% black and this years intake is 43% female**

UNIVERSITY OF THE WITWATERSRAND

Year of Study	Number of Registrations
First	223
Second	89
Third	79
Fourth	82
Total Undergraduate	473
Graduate Diploma	208
Masters	104
Doctorate	16
Total Postgraduate	328
Total	801

Note : Undergraduate numbers are 2009 registrations. Postgraduate numbers are for 2008 since P/G registrations are incomplete

SUMMARY OF STUDENT STATISTICS FOR SOUTH AFRICA

- **Approximately 1260 undergraduates registered for Mining Engineering degrees and diplomas**
- **Mine Surveying registrations have started to increase and currently there are 158 students**
- **Postgraduate Mining registrations are expected to be in excess of 350 this year**

STAFFING

- **In 2007 and 2008 each institution lost mining academics, mainly to industry**
- **Female academics were poached at a premium because of the “Mining Charter”**
- **In 2009 it has been possible to start the process of rebuilding the academic staff**

RELATIONSHIP WITH INDUSTRY (POSITIVES)

- **Since the end of 2008 the Minerals Industry Trust Fund has increased its subvention of academic salaries substantially and provided a retention bonus**
- **This has had a very positive impact on stabilising the staffing at all four institutions and attracting new staff**

RELATIONSHIP WITH INDUSTRY (NEGATIVES)

- **Effects of the global economic crisis. Gold mining has done better than other sectors over the past 9 months with platinum and diamonds worst affected**
- **Some companies have cut education and training budgets, including bursaries**
- **A few companies have refused their bursars vacation work leaving them unable to graduate this year**

ADVOCACY ROLE OF ACADEMICS

- **In 2007 and 2008 the “skills crisis” for mining industry professionals was the major issue**
- **In 2009 this is overshadowed by the “economic crisis”, with cost cutting, retrenchments and survival being the pressing issues**
- **We now have a “hidden” skills crisis and mining academics have a responsibility to remind industry of this at every opportunity**