

# Spotlight

**M**y academic career at Tukkies started again in 1997 when I was appointed by Professor André Fourie as senior lecturer in the Department of Mining Engineering. Little did I know that I would one day be appointed as Head of the Department to follow in the footsteps of great leaders such as Professors De Villiers Lamprecht, Leiding, Brown, Fourie, and Van der Merwe.

I experienced several highlights in the past few years in the Department, but the one thing that I will always cherish is the fact that I could be part of the 50th anniversary celebrations in the Department, and also as Head of the Department. The Department had its first (and than only) first-year student, Mr Johan Heysteck, in 1961 and therefore celebrates its 50th year of excellence in mining engineering education in 2011.

Over the past 50 years the Department made a huge contribution to the mining industry by providing it with world-class leaders. I have decided not to mention any of the absolutely wonderful high-flyers, in respect of those that I might forget to mention as well. We also did, however, lose several of our colleagues and alumni over the 50 years through age and some tragic incidents. I would like to pay tribute to them. We salute and honour them.

The Department went through some traumatic times in the late nineties. Pressure increased in the early 2000s with talks of closing the Department to create a single mining school for South Africa. Through this exercise I saw what the brotherhood of alumni meant in how we resisted this suggestion/proposal.

In 2000, the Department decided to change the language policy for third- and fourth-year students to English, only and this in itself was an excellent strategic decision. In 1998, we enrolled our first female student and in 2000 our first five black students (including one lady). The growth in student numbers escalated to an increase of approximately 300% in 11 years, with a similar growth in postgraduate numbers over the last 5 years. The Department now boasts approximately 250 undergraduate students and 50 postgraduate students. Tuks Mining is alive and well!

The undergraduate programme is accredited by ECSA and is as such internationally recognized through the Washington Accord. The demographics of the students have changed significantly over the past few years and there are presently 70% black students and 30% white students on our books. A significant number of foreign students are also enrolled in the Department. The Department is actively supported by the Mining Alumni Society University of Pretoria (MASUP), the South African Colliery Managers' Association (SACMA), and the Association of Mine Managers of South Africa, and guided by the Mining Advisory Board, on which prominent members of the mining community serve (including several alumni students).

A special note must be made of the contribution of the Minerals Education Trust Fund (METF), responsible for lecturers' salary subventions to industry equivalent and departmental financial support. Through visionary leadership the salaries of lecturers were subvented to 80% of industry equivalent in 2008, which enabled the Department to attract the high quality of lecturers currently employed. The Dean of the Faculty of Engineering, Built Environment and Information Technology (EBIT), Professor Roelf Sandenbergh, contributed to and supported the Department in all these activities, and in this we show our recognition and appreciation as well.

The Department of Mining Engineering is in a healthy state, and, therefore serves as a sound foundation for future development of its teaching, research, and community service. The development of our students as future managers and technical specialists remains a priority, and the development of life skills and responsible leadership through participation in student activities is continuously encouraged.

The Department is already actively involved with the community through the participation of staff in the activities of professional societies, expert consultation, and community projects within the Faculty. The Department is also offering short courses, in co-operation with industry and the professional societies, but there is a huge potential for further development of such courses. The greatest involvement and contribution over the last few years was the Safety Risk Management Programme for Anglo American, recently being followed up with a Global Industry Risk Management (GMIRM) Programme for Sasol Mining and with many more mining companies, I believe, to follow. Our students are very much aware of the challenges related to the mining industry and are educated and informed as such on a continuous basis.

The teaching staff is the prime resource of the Department. They are encouraged to improve their teaching and research skills, to be active in teaching in industry to remain current, and to contribute to departmental administration and community service. The participation of contracted-in industry experts as part-time lecturers forms a very important part of our education strategy. The involvement of several guest lecturers on an ongoing basis keeps us in touch with industry needs. The quest remains to develop each staff member into an internationally recognized engineer and scholar.

The Department of Mining Engineering of the University of Pretoria has gone through a major revamping exercise in terms of our professional image, which was well received by all in the Department and the industry as a whole. We have also embarked on a new innovative teaching and learning strategy for our third- and fourth-year students.

It was also in 2010 that all our final-year students, through sponsored support by the Department, started doing psychometric tests such as the Hermann Brain Dominance Instrument (HBDI), Shadow Match, DISC, and Myers Briggs evaluation as part of the process of understanding their own learning and thinking preferences. This is a major contribution to all our final-year students' lives and we envisage that this will remain part and parcel of our curriculum. Mentorship and coaching now form a very large part of the fourth-year academic programme. The introduction of clickers (a radio frequency-based interactive answering tool) for students has also added a new dimension in terms of lecturers proactively knowing what students know or don't know on a real-time basis.



## Spotlight (continued)

The introduction of discussion rooms has created a real multimedia interactive academic environment for our students. We are also the only engineering department with an employee doing instructional design of all our mining lecture material on a full-time basis, sponsored annually by SACMA. The main goal is to have all the mining modules instructionally designed and ready for the ECSA accreditation visit in September 2012. We will be the only mining department in the world that I am aware of that will offer instructionally designed material for all our mining-related subjects, including non-technical skills (soft skills) as part and parcel of every mining module in the fourth year of studies. In this way we enhance the learning experience for all our students.

We upgraded our computer facilities and now have our own mining IT Lab for use by our students. We are one of only a few engineering departments that have an active bulk SMS system available to communicate with our students. We have one of the most active student societies, the Tuks Mining Society which has its own developed student website on campus.

I want to congratulate and thank all who have helped in developing this Department to the next level of academic excellence. We do, however, have some challenges which we are dealing with, but with the quality of staff that we now have on board, I believe we can take care of any challenge. Key issues in developing good-quality mining engineers are discipline (including time management guidelines), passion and enthusiasm for the discipline, and coachability. Primarily, we have to ensure that the standard (quality) of the programme that we offer is not compromised in any way. This is what Tuks Mining stands for! We owe it to our alumni and the future generation of mining engineers that will be educated in this Department.

Mining is a great career, and we have several testimonies from our alumni. Our students have chosen an excellent career and it is therefore a real privilege for me, as Head of Department, to be part of this very prestigious branch of engineering. May the Department be alive and kicking when we celebrate its 100th anniversary in 2061. ♦

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