

## **Mining Engineering celebrates 50 years of excellence**

**Despite being the smallest department in the Faculty of Engineering, the Built Environment and Information Technology, the Department of Mining Engineering packs a mighty punch and over the years has made huge inroads in the industry. Last year this small, but dynamic department celebrated its 50<sup>th</sup> anniversary and an increase of 400% in its student intake since its inception in 1961 – a remarkable feat, especially in light of the fact that it had to fight for its survival in the late 1990s.**

Head of department, Prof Ronny Webber-Youngman, attributes much of their success to the support of industry, effective strategic decision-making and an award-winning education programme aimed at helping students understand their own learning and thinking preferences, which in the long-run will stand them in good stead when they plan their careers. The programme includes for example psychometric tests such as the Hermann Brain Dominance Instrument (thinking preference), Shadow Match (identifying successful habits), DISC and Myers Briggs and recently introduced an emotional intelligence testing of all final year students (with a personal development program associated with it).

Prof Webber-Youngman firmly believes that the inclusion of this component in the curriculum helps prepare students to meet challenges once they enter the working environment. A full-time councillor has also been appointed to mentor and coach students.

Another innovation is the development of a multi-media platform in the form of a CD, which contains the curriculum as well as interactive videos and relevant website links to help students prepare for class.

Some of his colleagues were initially sceptic about the wisdom of providing students with the curriculum, arguing that it might dissuade them from attending class, says Prof Webber-Youngman.

But as the saying goes, the proof is in the pudding and since introducing the multimedia platform, student attendance has in fact improved and currently stands at 100%, he boasts (with each absence notified in advance by the students!).

Their innovative thinking was awarded last year when they won an award from the University of Pretoria's Department of Education Innovation.

## **Students**

Prof Webber-Youngman is extremely proud of his students, boasting that mining students from the UP has been selected for the Anglo American Fast-tracking programme every year over the past five years. The most recent Me Stefanie Ferreira, selected from 1500 applicants country wide.

More recently, students won the first four places in the SAIMM Student Colloquium final year project competition for mining engineering students. For the mining part of the competition the University of Pretoria, the University of the Witwatersrand (Wits) and the University of Lusaka in Zambia took part.

These students follow in the footsteps of some of their prestigious predecessors including amongst others Dr Con Fauconnier, Chief Executive Officer of Kumba Resources, Wilco Uys, Vice-president: Operations at BHP Billiton Energy Coal South Africa and Jannie van der Westhuizen, a former group general manager: group human resources, group IT at Sasol Mining.

Another cap in the feather of the department is Prof Webber-Youngman's recent appointment as president elect of the Society of Mining Professors (SOMP) for 2014 after winning the bid to host the body's annual conference in 2014 at the University of Pretoria. South Africa will be the first on the continent to host the conference. SOMP has 171 members from 71 universities in 40 countries.

## **Rocky road**

Since its inception, the department had had to face some very tough battles – the toughest of which was without doubt government's attempts to consolidate the two mining engineering departments countrywide (Wits and Tuks) into one department. Because of its relative low student numbers, the UP's department was earmarked for closure.

However, with support from the Mining Alumni Society of the UP and industry, the department managed to convince government to rethink its position.

## **Where it all started**

The Department of Mining Engineering traces its origin back to 1958 when the university council decided to establish a department for Afrikaans students following the discovery of gold in the former Eastern Transvaal (Mpumalanga). At that time, Wits was the only institution that offered mining engineering as a field of study.

In 1961 the department, headed by Prof De Villiers Lambrechts, opened its doors to its first student, Johan Heystek. The student uptake was slow and during its first years, the department averaged between 10 and 12 third- and fourth-year students per year (it must be noted that engineering students only specialise in their third and fourth years of study). In the late 1980s the numbers started to increase, only to decrease in the nineties. Currently the department has 29 final year students.

In 2000 the department took a strategic decision to change its language policy for third- and fourth-year students to English only. The growth in student numbers since then, is proof that this was indeed the right decision to make, says Prof Webber-Youngman.

Since then, student numbers have shown a steady increase and the department is expecting its biggest group of students to date to graduate in 2013.

Their decision also had an impact on its student composition. Where in the past the majority of students were white males, now approximately 70% of the students are

black and 25% are female. The first female student was enrolled in 1998 and in 2000 the department admitted the first five black students. In addition, 13% of its students are from other African countries including Botswana, Lesotho, Zimbabwe, Namibia, Swaziland, Tanzania and the Democratic Republic of the Congo.

## **Celebrations**

To celebrate its 50<sup>th</sup> birthday, the department published a beautiful journal chronicling their history. The journal, entitled *Celebrating 50 years of Mining Education (1961-2011)* features stories written by former students and a rich variety of photographs dating back to its earliest days.

A gala-event was hosted on 5 November during which the contributions of past and present staff members were recognised.

## **The future...**

Over the past few years, the department has increasingly started to focus on postgraduate research. Four research focus areas have been identified and incorporated with the help of industry partners.

These include rock mechanics, with Drs Francois Malan and John Napier at the helm, explosive engineering headed by Dr William Spiteri and energy and environmental engineering with Dr Jan du Plessis as the leader. The fourth one being Safety Health and the environment and it is envisaged that a chair will be established in this regard in the very near future.

Despite plans to increase its student numbers in future, Prof Webber-Youngman is adamant that the department will retain its intimate and close-knit ties with students, which has been their mainstay over the years.