FACULTY OF ENGINEERING

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In 2010, it was only natural for the Faculty of Engineering to make a strong positive response to Stellenbosch University's HOPE Project, since engineers, by the very nature of their work, are creators of hope par excellence.

The Faculty's hope-creating strengths that could contribute building blocks to the HOPE Project are top-level research, quality training and extensive community interaction projects. The effect of these building blocks is not fleeting; they make a positive and lasting impact on people and communities.

RESEARCH THAT MAKES A DIFFERENCE

The Faculty is actively involved in three research initiatives that form part of the University's HOPE Project. All three personify the creation of hope and sustainability. The first initiative, Energy and the Environment, includes areas such as renewable energy, the efficient control of water supply and water quality, and the prevention and removal of harmful waste products. The second initiative, Communication and Information Systems, focuses on telecommunication systems for Africa, telemedicine, speech and image processing, as well as information systems for the process industries and traffic safety (see page 37). Thirdly, research is done in the area of Food and Water Security in collaboration with the Faculties of Health Sciences, Agrisciences and Science. Here, expertise in the area of water supply and treatment, as well as in the remote sensing of crops and water sources by means of satellites and unmanned aircraft, is used to help meet the evident need for adequate and safe food and water in South Africa and on the rest of the continent. Thanks to the R56,5 million in seed capital for these projects from the University Council, the Faculty was able to generate R41 million by means of third-stream income for these projects in their first 18 months.

MORE ENGINEERS FOR THE COUNTRY

The Faculty has spent the past few years working tirelessly to reduce the large shortage of engineers in South Africa by producing more engineers every year. This requires us, however, to take in more students. In addition to the tried and tested marketing campaigns, such as the Engineering Open Day and Winter Week, information sessions were held for top learners and their parents in six provinces and in Namibia. Jointly, the recruitment initiatives yielded a good number of first-year applications and admissions for 2011.

Access to engineering studies at Matieland is possible for all students who meet the admission requirements and show potential. Parallel-medium classes in Afrikaans and English for first- and second-year students, as well as support for students with language backlogs, make this Faculty one of the friendliest on campus as far as language is concerned. An alternative route for admission (Foundation Year) was introduced in 2010. It involves a year of study in preparation for the BEng and is aimed primarily at coloured, black and Indian students who were only just short of the required marks for admission, but did obtain the required marks in Mathematics and Physical Sciences.

COMMUNITY INTERACTION BROADENS HORIZONS

The engineering industry does not only focus on technology; it is also people-oriented. The Faculty accordingly is actively involved in 16 community interaction projects that include schools outreaches, service learning, and contract research by its institutes and centres. Two of these outreach actions are aimed at increasing student diversity. This year, 70 grade 12 learners and their parents attended the Role Models in Engineering function that encourages bright coloured, black and Indian learners to become Matie engineers. For eight years now the Faculty has also been marketing engineering specifically among girls, and in 2010 237 schoolgirls excelling in Mathematics and Science attended the Women in Engineering Afternoon.

The module Society in Perspective gained good momentum this year. Eight hundred learners from local high schools benefited from the tutorials in Mathematics presented by 210 senior students. The aim here is threefold: to make learners aware of engineering as a career, to help them realise better pass marks in this indispensable subject, and to help create a larger pool of potential engineers.

STRENGTHENING THE TIES WITH OUR ALUMNI

The Faculty strengthened its ties with alumni by holding convivial dinners in Stellenbosch and Sandton for graduates from 1970 to 1979. On these occasions, the Dean, Prof Arnold Schoonwinkel, addressed the alumni on the Faculty's Vision 2020 and made an appeal for financial support. The alumni responded enthusiastically, making generous donations to the Dean's Fund.

The year 2010 truly was a good year for the Faculty of Engineering, with many things that worked out well. It contributes to a firm base for Vision 2020.