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South Africa: Plan to Boost Engineer Numbers

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Johannesburg — ALARMED by the shortage of successful engineering graduates, and the failure of the profession to transform demographically, the Engineering Council of SA (Ecsa) has launched a programme to address this.

Engineering is one of the catalysts for economic growth but, while SA produces good engineers who are in demand internationally, it produces far too few, experts say.

Ecsa and the Manufacturing, Engineering and Related Services sectoral education and training authority is piloting a programme this year to increase the number of engineering graduates, especially from indigent and rural backgrounds, the council's CEO, Dr Oswald Franks, said yesterday.

"The current lack of qualified engineers in SA has reached an unacceptable level at a time when such skills are in great demand by industry," Franks said.

"Therefore there is a dire need for a programme such as the South African Youth into Engineering Programme to assist in the recruitment, mentoring and development of students through their tertiary engineering years."

Between 1998 and 2008 SA produced only 53342 engineering graduates (diplomas and degrees) from an enrolment of 388606, and only 28019 degreed engineers from an enrolment of 135201, said Sandra Burmeister, CEO of mining, information and communication technology recruitment firm Landelahni.

"There are not enough engineers to meet the demand from business and there is an 11% pass rate among engineering and technology (students)," she said.

Franks said the graduation rate for engineering was 15%.

Of the 27071 engineers and engineering technologists registered in 2005, 1147 were women, 1235 Indian, 2939 black and 260 coloured. By this year these figures had changed to 29838 engineers and technologists in total, of whom 2474 were women, 2309 Indian, 6097 black and 520 coloured, according to Ecsa statistics.

The South African Youth into Engineering Programme has started with 50 students at the University of Johannesburg and the University of Pretoria but Ecsa wants the programme to expand, and needs more money.

"I ask the players within the engineering sectors and faculties to come to the table in terms of offering sponsorships and by participating in some of the academic support," Franks said.

The programme, costing Ecsa about R2m, offers students a comprehensive package of support, including academic aid, training in how to adapt to and cope with university and urban life, mentoring and financial help.

The programme picks students who have state tertiary education funding, and repays the loan part of that funding at year-end if the student passes. In this way it encourages and rewards success, Franks said.

It is aimed at matriculants and students with academic potential, but who are generally overlooked by university and industry recruitment programmes because of poor academic results and those who could drop out due to financial and other struggles.

About 30% of the students on the pilot programme were orphans, and most beneficiaries were black.

The programme concentrates on the disciplines of civil, mechanical, industrial and chemical engineering.

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