

NWU competition discovers and develops next generation of female engineers

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Are you a high school girl looking at the world around you and imagining ways in which you can make it better? You may be part of the next generation of female engineers who, with fresh, innovative ideas, will make a profound impact not only on South Africa and Africa, but also globally!



Prof Leenta Grobler

You now have the opportunity to kick-start your career in engineering and at the same time be in line to win a once-in-a-lifetime prize if you triumph as overall winner. But hurry up – entries close on 3 May 2021.

The North-West University and the Manufacturing, Engineering and Related Services Sector Education and Training Authority (merSETA) have joined forces to discover, develop and support future female engineers through the annual Modiragatsi innovation competition.

Modiragatsi gives high school girls between the ages of 15 and 18 the opportunity to try their hand at and shine in the one thing engineers are known for – problem-solving! Even though engineering is traditionally a male-dominated field, it is a well-known fact that female engineers excel in creative problem-solving.

The competition is called Modiragatsi because it is the Setswana word for performer. Women are those performers who change South Africa and find solutions to problems that have not even been identified yet.

“As a female engineer working not only as an academic and researcher but also in the field as a medical device developer is clear that my approach in finding engineering solutions differ greatly from those of my male colleagues,” says research and innovator Prof Leenta Grobler. “I think that as a woman I see problems differently, since I focus on the intended user and actively involve them in the product development journey. I firmly believe that women have an important role to play, especially when it comes to engineering products that are aimed specifically at female users.”

She says finalists in the competition will be empowered with new skills in design thinking, creative problem-solving, advanced manufacturing methods, mobile application development and introductory robotics.

See a problem? Find a solution and win!

All participants in the competition have to do is to identify a problem about which they feel passionate or that they have experienced themselves. They must then develop a concept solution that is technology-based.

For the first phase of the competition you have to submit a 250-word summary and either a two-minute video or a 15-slide slideshow explaining the problem and the proposed solution to the problem you identified.

The semi-finalists will consist of teams of two girls and their maths or science teacher and will be selected from all over the country. They will be hosted in an online mentoring training programme facilitated/run by the NWU's Faculty of Engineering during the winter school holidays.

After the mentoring programme, teams will pitch their ideas and solutions for the ultimate prize: a once-in-a-lifetime technology tour for the girls and their teacher of Silicon Valley in California and attendance of the Girls in Tech Catalyst Conference in June 2022.

Faculty carries the torch for female engineers

The NWU's Faculty of Engineering is proudly led by a female dean, Prof Liezel van Dyk. It also boasts a significant number of inspiring female role models that include, among others, Prof Sanette Marx, an expert in the field of biofuels, Prof Leenta Grobler, an expert in the field of digital health, and Ms Nthabiseng Modiri, a researcher in carbon-based products.

The faculty constantly aims to increase the number of female engineers who are available for the industry to employ and to promote gender equality in the workplace.

In addition to the Modiragatsi competition, the NWU's partnership with merSETA to develop a dedicated Women in Engineering (WiE) programme has brought about a number of projects that include:

- The Femmeengineering Event: a conference for high school girls to expose them to engineering as a career.
- The i-code-robot, which is a three-day short course to up-skill primary school teachers in coding and robotics to prepare them for this new curriculum matter.
- The Femmtor Bursary Scheme for deserving female undergraduate and postgraduate students.

For more information on Femmeengineering, visit www.engineering.nwu.ac.za/femmeengineering.

For more information about the competition, visit: <http://engineering.nwu.ac.za/engineering/modiragatsi-girls-competition>, contact Prof Leenta Grobler at 018 299 4058 or leenta.grobler@nwu.ac.za.

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