

A decade of excellence in service-learning

The compulsory undergraduate Community-based Project (JCP) module for students in the Faculty of Engineering, Built Environment and Information Technology has become an institution at the University of Pretoria for the past 10 years.

The model, managed by Dr Martina Jordaan, received the Community Engagement Award of the University of Pretoria in 2015. It was also accredited by the Engineering Council of South Africa (ECSA) in 2006 and 2012, received an Education Innovation Award in 2006, was a finalist in the MacJannet Prize of the international Talloires Network in 2010 and won the Marketing, Advancement and Communication in Education (MACE) Excellence Award in the category Integrated Campaigns/Projects and the subcategory Social Responsibility and Citizen Development in 2014.

The JCP module requires students to dedicate 40 hours of their time to a community project that they plan and execute themselves. These are usually projects about which the students are passionate and in which they feel they can make a contribution in their personal capacities.

Involving students in community service gives them the opportunity to become aware of their social responsibilities as critical citizens and encourages them to use their knowledge and skills to improve the communities they serve.

A module such as this is an essential part of the curriculum of all undergraduate programmes in the Faculty,

as it accommodates the need for community service and service-learning projects in a higher education environment.

Furthermore, the JCP module is ideally positioned to contribute towards achieving the outcomes of the University's strategic plan, which emphasises the importance of civic responsibility and citizenship.

The study programmes offered in the Faculty of Engineering, Built Environment and Information Technology

at the University of Pretoria are highly technical and emphasise the development of technical skills. However, in the professional arena, graduates are required to interact with people who not only have different technical experience, but also come from various socio-economic backgrounds.

As a service-learning effort, the JCP module is structured with the explicit goal of developing the soft skills that graduates from these technical programmes need when they enter the workplace. These include communication, interpersonal and leadership skills.

In the past decade, the Faculty has managed to produce more than 13 000 well-rounded graduates who possess the skills needed to make a meaningful contribution to society, not only during their time at university, but also during the course of their careers.

Dr Jordaan has been the primary contact person and lecturer for this module since its inception in 2005, and has dedicated many of her research efforts towards improving the processes and outcomes of the module.

Her research interests relate primarily to the practice of service-learning and community engagement, specifically



Dr Martina Jordaan

Students develop a sense of social responsibility, and an awareness of personal, social and cultural values.

in disciplines related to engineering. With regard to the JCP module, Dr Jordaan has succeeded in setting this module aside from other service-learning modules not only by its scale, national impact and blended approach to learning and its ability to deal effectively with large student numbers, but also by its long-term impact on alumni of the Faculty.

Dr Jordaan conducted research among the 2005–2010 cohort of JCP students in order to establish the perceived value of the module for alumni, as well as enrolled students.

Enrolled students were requested to complete an online survey of their experience of the module at the end of their academic year, and the alumni were requested to complete the survey after having experienced distance and emotional growth. The participants in the study indicated that the module has been an important tool in raising awareness of their social responsibility. Enrolled students were positive about the role of the module in their curriculum, and the alumni indicated that the module had an impact on their decision to continue with community outreach projects after graduation.

In recent years, JCP alumni have decided to stay involved with their community projects, with the help of new JCP students. This becomes possible when students manage to develop a well-structured project with a high impact. Three of these projects have developed into true success stories. 🍀

Retang and the Siyaphila Youth Literacy Programme

Retang Phaahla studied BSc Quantity Surveying and is the founder and programme manager of the Siyaphila Youth Literacy Programme. She coordinates all programme activities and mobilises resources to enable operations.



→ *Retang Phaahla, accompanied by some of the learners enrolled for the Siyaphila Youth Literacy Programme.*

In 2013, Retang completed the JCP module and used it as a platform to start the Siyaphila Youth Literacy Programme, which tutors learners from Grade 6 to Grade 12 in Mathematics, Science and English. The programme not only tutors these learners, but also contributes to their holistic development. This is achieved with the programme's inclusion of life skills training and skills development.

The Siyaphila Youth Literacy Programme has grown over the past three years, and now has more than 157 learners enrolled in the Mamelodi project on the University of Pretoria's Mamelodi Campus. It has also launched a new project in Daveyton, where some 30 learners are already enrolled. Each year, new JCP students participate in the programme by providing tutoring services and playing a mentoring role. This supports the programme in its attempts to have a meaningful impact on the lives of the learners with which it interacts. 🍀



No act of kindness is ever wasted.

David and the SAAF Museum

David Bahaa Samuel Toma Ebeid is a mechanical engineer working at CHAERO Industries and is currently enrolled for his honours degree at the University of Pretoria. He has also completed his flight instructors' training, and works as a freelance commercial pilot. He first visited the South African Air Force (SAAF) Museum in 2009 as a first-year student to watch the annual air show. His official involvement with the museum commenced in 2010, while he was looking for a place to do an aeronautically based JCP project. For his JCP project that year, he and his team restored a World War II armoured car, and spent many hours on this project over three years.

Consequently, David has been identifying student projects that can be completed during the required JCP period in an attempt to help this museum, which lacks financial support and has minimal staff. He is a permanent volunteer at the SAAF Museum and currently supervises and manages the annual preparation of the display aircraft for the air show. Teams exceeding 50 students are brought in for their JCP module and David guides them through the process of completing their various projects. These include washing the planes or restoring the paint of the planes as a result of years of neglect and oxidation.

For the past four years, David has received the award for the best mentor of a JCP project. ➔



➔ A JCP group eagerly working on one of the planes at the SAAF Museum.

Samukelo and the MRYE project

Captain Samukelo Praise Vilakazi studied electronic engineering at the University of Pretoria, and is currently serving in the SAAF as a systems engineer in the Directorate: Combat Systems, where he works with Hawk and Gripen fighter aircraft and electronic warfare systems.

Samukelo serves as the chairman of the advisory board of the Mpepu Rural Youth Encouragement programme, affectionately known as MRYE, where he grooms and guides the current leadership of the programme.

MRYE was conceived from a discussion between Samukelo and Patience Maditsi, another engineering student.

They expressed their concerns about the fact that youth in rural areas do not have the same opportunities as youth from urban areas, and that this gap could be bridged with the right mentorship and encouragement.

Through the support of Prof Brenda Wingfield at the Centre of Excellence in Tree Health Biotechnology (CTHB), the first sponsored MRYE trip took place in

2006, and the programme has been a source of JCP projects ever since. Many students who participate in

MRYE for their JCP projects go on to join the initiative for the duration of their studies. ➔



➔ MRYE with its sponsor, the CTHB, in November 2014.

The next generation of role models is born

Following up on the excellent tradition established 10 years ago, several exceptional community-based projects have recently been executed in the JCP module. During their involvement in these projects, students develop a sense of social responsibility, and understanding of social issues, and an awareness of personal, social and cultural values.



Future Families sieve project

Engineering students MJ Ferreira, Hendrik Maritz, Johan van Schalkwyk, Fritz Viljoen and Philipus Wessels assisted a local non-profit organisation, Future Families, to build a sieve for a compost project. One of the initiatives of this organisation is the Seboko Earthworm Casting project, which uses earthworms to break down waste products into fertilizer, which is then sold to create work for people living with HIV. After waste materials are broken down, they are put through a sieving process to separate the fine compost from stones, clods and sticks. In the past, sieving was done by casting the compost through a meshed plate that stood almost vertically.

The students designed and built a rotary screen sieve, powered by an electrical motor, to accelerate the sieving process and increase the Seboko Earthworm Casting project's production and efficiency. Their YouTube video on the project was a finalist in the American Society of Engineering Education Community Engagement Division Film Festival. ➔

Mapetla Hospice Day Care Centre project



Keneuoe Mokati and Tshepang Mashike renovated a playing area at the Mapetla Hospice Day Care Centre in Soweto by painting educational games on the pavement and walls.

These renovations have the ability to teach the toddlers essential skills like counting and recognising shapes, and also brightens their environment and consequently lifts their spirits. ➔



Wetnose project

Wihann Botha and André Matthee repaired a livestock trailer that was damaged and heavily rusted for the Wetnose Animal Rescue Centre. They removed the rust and damaged plates and replaced these so that the trailer could be used again safely. The community was very happy with the final product. ➔

Be kind to every kind, not just mankind ➔



Lemur project

Two groups of students assisted the Bester Bird and Animal Zoo Park in Pretoria with projects for its ring-tailed lemur enclosures. The first group (comprising Gareth St Clair, Oliver Cribb, Hilton Gallagher, Tim de Mare and Henriette Schreiber) cleaned and restored an enclosure that had not been in use for many years, and improved the enclosure by constructing a wheelchair-friendly entrance. Many of the improvements were made by re-using some of the discarded features of the old enclosure. The second group (comprising Matthew de Kretser, Kaylan de Freitas, Timothy Lange and Greg Buchanan) covered the lemur interaction area with shade nets, erected perches and painted a mural on the back wall of the enclosure to make for a more interactive experience for visitors. ➔