



Central University of
Technology, Free State

Thinking Beyond



09

CUT Annual Report



Mr Mosiuoa Patrick Lekota, Chancellor



Mr Teboho Loate, Chairperson of Council

Vision

The vision of the Central University of Technology, Free State (CUT) is to be a globally connected African university of technology that focuses on the needs of Southern Africa and supports graduates for citizenship with skills and competencies in appropriate technologies.

Mission

In aspiring to fulfil its vision, CUT:

- Delivers high-quality appropriate Science, Engineering and Technology (SET) academic programmes supported by applied research;
- Engages with the community for mutually beneficial development;
- Promotes access with success in attracting potentially successful students and supports them to become employable graduates;
- Attracts and retains expert staff and supports their development and wellbeing; and
- Forges strategic partnerships.

Core Values

- Customer service
- Integrity
- Diversity
- Innovation
- Excellence



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Message from the Vice-Chancellor and Principal



Prof. Thandwa Mthembu, Vice-Chancellor and Principal

Management

Message from the Vice-Chancellor and Principal

The year 2009 can be summed up as the year in which we started to embed – and achieve some of the outcomes of – the institutional strategies emanating from the 15-point strategy that I developed in my capacity as Vice-Chancellor in 2008. It was in 2009 that Council turned that 15-point strategy into the bedrock for the institution's 2020 Vision and the concomitant strategic plans developed during the year.

In short, our strategy consists of three strategic sets, namely **building a strong foundation** (internal values, relations and organisational design), **enhancing the academic project**, and **establishing strategic partnerships and enterprises** in support of the first two strategic sets. Within these three sets are 14 institutional objectives and strategies that may vary from year to year.

By design, my message therefore focuses on some highlights of the embedding process and resulting achievements, a number of which are addressed further in the report.

Building a strong foundation has meant, amongst other things, that organisational redesign (otherwise known as restructuring) has been used to help us steer the institution to make it fit for the chosen purpose and strategies. The salary budget, for example, which took up far too much (72%) of the total tuition fee and subsidy amount in 2007, comprised only 63% of this amount in 2009 – a marked improvement. The savings that made this possible were achieved through a careful analysis of our functional efficiency as opposed to a task-oriented organisational design that tended to be unjustifiably labour intensive for an institution with limited resources due to size and capacity.

As reported in 2008, our strategic budgeting approach has borne fruit. During the 2008 budgeting process we were able to create a relatively substantial strategic fund of about R22 million from the normal income for use in 2009 and

beyond. This fund is being used to steer the university and kick-start projects that align with our chosen strategies, rather than spending all our resources on the normal run-of-the-mill activities of the past. Additional funds were set aside during the 2009 budgeting process, which saw the fund grow to approximately R47 million. Having invested substantial amounts of money in academic infrastructure, we have earmarked part of the strategic fund for a R15 million “equity and excellence” project, which is simply about building human capital – including the next generation of academics and university managers.

Part of the process of building a strong foundation involves government-funded academic infrastructure projects. CUT is investing a total of about R240 million in its infrastructure, based on earmarked funds from 2008 and additional funds of about R55 million granted in 2009. These projects should be complete by the end of 2011, and we envisage that we shall then embark on another phase of infrastructure development based on our own investments, as well as strategic partnerships with business/industry. Thus, in terms of infrastructure, CUT is poised to take its rightful place amongst the world's most modern and well-endowed universities.

Enhancing our academic project has meant, amongst other things, that the ratio of academic to support staff improved from 49:51 in favour of support staff in 2008, to 55:45

in favour of academic staff in 2009. In reality, we have added 28 brand-new academic posts, which translate into an 11% increase in the space of a single year. With the 2010 budget making provision for the funding of even more academic posts, we are surely starting to reinvest more in academia. Given our current academic resources, we have seen fit to embark on a newly integrated process of broader academic transformation in 2010. To date, more funds have been earmarked from the strategic fund for new professorships and for niche areas in research and innovation. We have also dedicated funds in support of academic literacy for students found wanting in this area. As part of the academic transformation project, imperatives like student-centeredness, technology-enhanced education, improved throughput rates and so on, will be the focal point.

As an institution focused on Science, Engineering and Technology (SET), we brought about an improvement in the proportion of SET students from 43% in 2007 to 48% in 2009. Concomitantly, a new Faculty of Humanities was established, with enrolments in humanities-related learning programmes increasing to about 9%, up from about 5% a few years ago. In addition, we work closely with the Free State Provincial Government (FSPG) and business/industry to improve mathematics and science competency amongst high-school learners, by means of our annual Winter School and Saturday School projects.

Establishing strategic partnerships and enterprises to build our foundations and enhance the academic project has meant, amongst other things, the creation of the Regional Innovation Centre and its adoption by the FSPG as a virtual centre that will foster innovation in socio-economic development in the province. In this respect, a start-up fund of R1.5 million was created, with contributions of one third each from the FSPG, the Department of Science and Technology, and CUT itself. Moreover, an Agriculture and Mining Tooling Incubator was established as a Section 21 company through seed funding of R1.2 million from the Small Enterprise Development Agency / Department of Trade and Industry. Over the next three years, this project will receive funding support to the tune of about R10 million. By the end of 2010, we would have seen the establishment of an IT Hub in partnership with the private sector and the FSPG with an advance pledge of about R8

million, as well as the CUT Enterprises Trust to house all commercial activities of the institution. Here we can also mention that through its rapid prototyping technology, CUT has over the years produced a number of products ready for mass production and commercialisation, such as the Genie Lamp, a lung tester, a safe paraffin-stove, a water-leakage detector, and medical implants for a leading UK hospital. The latter, combined with our emerging research and innovation niche area, may soon give rise to a medical device facility supported by the Medical Research Council.

In terms of a memorandum of agreement concluded with the Mangaung Local Municipality in 2009, training programmes to the value of about R1 million are being offered to personnel of Centlec, the municipality's electricity division, as from 2010. In addition, a number of programmes designed to provide municipal support have been devised and agreed upon with the municipality (e.g. National Certificate: Municipal Planning and Development, National Diploma: Infrastructure Planning and Maintenance, and National Certificate: Accounting), also to be run as from 2010. The National Certificate: Accounting is a particularly exciting strategic project of CUT in partnership with the Association of Accounting Technicians: South Africa and the South African Institute of Chartered Accountants. This initiative puts CUT at the forefront of government's Operation Clean Audit 2014 in the Free State. The expectation is that local and provincial government and the relevant Sector Education and Training Authorities (SETAs) will provide funding for those enrolling in these strategic programmes. In this respect, the Local Government SETA has been instrumental in providing the necessary funding for the training of municipal and provincial staff.

In closing, I trust that the selected highlights I have provided give some idea of the advancements CUT is making in its efforts to enhance not only its infrastructure, but also its research and innovation capital and overall socio-economic development in the region. Our fervent hope is that government, business and industry will continue to support us on this wonderful journey for many years to come.

Prof. Thandwa Mthembu
Vice-Chancellor and Principal

New Strategic direction for CUT

This section sheds more light on the strategic objectives the Vice-Chancellor refers to in his message by articulating their meaning for the success of CUT. As part of this new approach, the Vice-Chancellor's 15-point strategy (first established in 2008) has become a fully integral part of the institutional strategy in 2009. The 15 points have been consolidated into three strategic sets:

Strategic Set 1:

Building a Strong Foundation

The basic idea behind this strategic set is that the success of CUT depends on how it builds a strong foundation through broad transformation, the entrenchment of appropriate values and an academically oriented ethos, and the way in which it redesigns systems and structures to align with the vision.

- Improving "fitness for purpose" through institutional re-organisation and redesign.
- Equity and excellence, growth and redress, and development.
- Creation of a culture conducive to excellence, deliberation and innovation.
- Emancipating relations between academics and students and amongst different University community groupings.
- Transformation (transforming CUT from a technikon into an excellent university of technology).

Strategic Set 2:

The Academic Project

Beyond just having the best of foundations, a university's success depends on the quality of the programmes it offers and the innovations it produces; their relevance to the users in government, business, industry and the rest of society; and the quality of its staff and its facilities. There are six objectives under this strategic set, which are detailed below.

- Instituting a student-centred approach to teaching and learning.
- Enhancing Science, Engineering and Technology (SET), but with a human consciousness.
- Ensuring the supply of quality SET enrolments.
- Introducing vocational pedagogy as a research niche or area of scholarship.
- Creating a critical mass in research and teaching.
- Enhancing technology-oriented research and innovation.

Strategic Set 3:

Partnerships and Institutional Advancement

Once a strong foundation has been built and once the academic project is embedded in terms of the philosophy, content, methodology and structures, CUT shall require all sorts of external support mechanisms. Due to the nature of its academic mission – producing graduates mainly for the world of work and producing innovations that will enhance industrial and business development – CUT has to build purposeful strategic partnerships.

- The choice of business and industry as primary partners, for broader societal development.
- Government as a strategic partner (supporting and doing business with government for socio-economic development).
- Internationalisation of CUT.
- Engagement, strategic partnerships and advancement (making these part of a University of Technology's core business).



Memorandum of Understanding signed by: Free State Investment Promotion Agency (FIPA) and CUT.

Strategic Sets - Summary of achievements in 2009

- Various smaller units have now been combined into a more coherent and manageable number congruent with the size of the institution.
- Ninety percent of the posts in support services have been filled and 70 % of academic posts have been filled. As the Vice-Chancellor and Principal intimated, the salary budget was at 72 % of total tuition fees, and the subsidy stood at about 63 % in 2009.
- As planned, the ratio of academic to support staff improved from 49:51 in favour of support staff in the year 2008, to 55:45 in favour of academic staff in 2009.
- Academic and research development of academic staff continued, with an increase in the number of staff participating in research. The 28 new academic posts are at senior level, with six at professorial level.
- An annual programme of lunchtime talks, arts and cultural events and public seminars was produced, and the planned events took place as scheduled.
- Management held a series of workshops with the unions, the last of which took place in October 2009 and currently management is enjoying good relations with the unions.
- CUT's Transformation Framework was developed and adopted by Council and is now being implemented; On the academic front, CUT's Higher Education Qualifications Framework (HEQF) was agreed upon by

Senate in 2009. On the basis of this framework, some programmes are being re-curriculated; A process known as Strategic Transformation of Educational Programmes and Structures (STEPS) was planned in 2009. CUT's Vision 2020 requires that we review the academic philosophy, content and structures, which is what the STEPS process is all about; A CUT Higher Education and Leadership Skills Academy (HELSKA) is being planned for 2010.

- The Regional Innovation Centre concept was adopted by the Free State Provincial Government as a virtual centre in the province to foster innovation for SMMEs in particular; an Agriculture and Mining Tooling Incubator was established as a Section 21 company through funding of R1.2 million from SEDA.
- A CUT Enterprises Trust, which will house all commercial activities, will be established in 2010; as the Vice-Chancellor and Principal mentioned in his message, CUT has produced a number of products ready for mass production and commercialisation such as the Genie Lamp, a lung tester, a safe paraffin stove, a water-leakage detector, and medical implants for a hospital in the UK, using rapid prototyping technology.
- The network has been extended to residences so that students can have access to the internet.
- Web-based learning is available and there is a support unit for academics to launch their programmes in this mode. In 2009, a survey was conducted to determine the extent to which technology-enhanced education is entrenched, and relevant improvement strategies were identified.
- CUT's enrolment stood at 43 % SET in 2007, but has since improved and stands steady at 48 %, which is beyond the target. Business plans for each of the four niche areas (SET, Business, Commerce and Management (BCM) and the Humanities) were developed.
- Agreements have been reached with the Free State Provincial Government on a number of interventions: 1) Remodelling and expanding the Saturday School and Winter School programmes. In 2009, 220 students were catered for, and the pass rate for those students was 85 %. The Winter School programme is funded

by Standard Bank; 2) Providing some hands-on teacher support programmes for three disadvantaged schools; 3) Providing a teacher enhancement programme in curriculum and laboratory techniques; 4) Training in human resources for the department's senior officials; A feeder school bursary programme was initiated, to support excellent students from feeder schools.

- Through the JCSE (with the USA, Mexico and India also involved), three staff members underwent high-level training in software development through the American Software Engineering Institute based at the Carnegie Mellon University; the Free State Provincial Government entered into an agreement with CUT regarding the establishment of an IT Hub based on a concept paper produced by CUT; A partnership has emerged with BioPAD on the Biotechnology Thrust, with one of the new professors to be appointed in this area.
- A Memorandum of Agreement with the Mangaung Local Municipality was concluded in 2009. Under this agreement, training programmes for Centlec, its electricity division will be launched in 2010; a number of programmes designed to provide municipal support have been devised and agreed with the municipality (e.g. National Certificate: Municipal Planning and Development; National Diploma: Infrastructure Planning and Maintenance; National Certificate: Accounting). The LGSETA has been very instrumental in providing the necessary funding for municipal and provincial staff being trained.
- Partnerships with the Lesotho government and the South African Embassy in Lesotho were forged for the purposes of making applications and registration processes for Lesotho students easier in 2009; a partnership agreement with the Kigali Institute of Technology was concluded for implementation in 2010. A partnership with Chinhoyi University of Science and Technology in Zimbabwe was explored for implementation of projects in 2010; visits to and from some partner universities in Germany like Ulm and Aalen Universities took place. In particular, we have agreed on a project on renewable energy with Ulm, which will be finalised in 2010; a partnership with Missouri University of Science and Technology in the United States of America on manufacturing, mining and rapid prototyping has been established.

Leadership and Governance

Management and Administration

Administrative structures in both the support services and academic divisions have been aligned as part of the broader three-phased institutional restructuring exercise, which produced new structures and the staff establishment currently in place.

■ Financial Management System and Procurement Management

The University's financial management system has evolved fundamentally. In 2009, we were able to budget in such a manner that a R22 million strategic fund could be set aside for the implementation of our strategic priorities. This allows the institution not only to create a new vision, but to implement it incrementally. In 2007, we revised our Procurement Policy.

■ Internal Audit Function and Human Resource Function

The Internal Audit Function has improved its performance greatly since the days when it was an in-house function. In 2008, this function was outsourced and it continued that way in 2009, with great improvement in delivery

and quality, as well as costs. In 2009, for the first time in many years, the external auditors relied on work that the internal auditors had done.

■ Academic Administration

Academic Administration was consolidated through the restructuring process of 2008/9. We now have better co-ordinated and coherent units in this division than before. Preparations are in place to introduce online systems in this and other areas to ensure that staff and student services are delivered faster and more efficiently. In 2009 an audit of some of the systems in Academic Administration took place.

■ Infrastructure, Facilities Management, as well as Information and Communication Technology (ICT)

Infrastructure and Facilities Management is an area worthy of praise. CUT is one of the best-maintained universities in the country, even though we still have maintenance backlogs as a result of inadequate funding. Our ICT System underwent internal review in 2008/9 and recommendations from the review are being implemented.



Dr Gift Vinger, Registrar



*Prof. Talvin Schultz,
Executive Director: Vice-
Chancellor's Office*



*Prof. Mojalefa Ralekhetho,
Acting Deputy Vice-
Chancellor: Resources and
Operations*



*Prof. Rocky Ralebipi-
Simela, Deputy Vice-
Chancellor: Academic*



*Prof. Thandwa Mthembu,
Vice-Chancellor and
Principal*



Clr Playfair Morule, Executive Mayor of Mangaung Local Municipality, Mr Danny Jordaan, Head of the FIFA World Cup Organising Committee in South Africa, and Prof. Thandwa Mthembu.

Council and Senate

Council had decided on an institutional restructuring exercise in 2005, which could only be implemented as from 2007. The focus in 2007/8 was on Phase 1: Executive Management, whilst the focus in 2008/9 was on Phase 2: Middle Management.

A new middle management structure was approved in September 2008. Work towards populating the new structure then started immediately. Savings achieved from Phase 1 total about R3 million as from 2008 when the new structure

was put in place and, given the new middle management structure, savings of around R17 million were planned for 2009 when the new structure was fully in place. These savings have been reinvested in the academic sector.

An additional allocation of about R10 million (R8 million for academic and research appointments and a R3 million increase for the Library and Information Centre from the 2008 budget) was provided for in our 2009 budget in lieu of savings from restructuring and our subsidy grant. This resulted in the salary budget ratio of academic: support staff improving from 49:51 in 2007 to the current 55:45.



Dr Kopano Toale, Head of the National Institute for Higher Education (NIHE), and Prof. Rocky Ralebipi-Simela, Deputy Vice-Chancellor: Academic

In this way, CUT is beginning to shift resources towards our core business.

During 2009, Council also attended to and addressed a number of matters of significance for the institution, the most important of which were the following: Various policies, plans, constitutions and manuals such as the Institutional Operational Plan for 2009, the revised SRC constitution, revised Language Policy, the Whistle-Blowing Policy, the proposed new Vision Statement, a new medium-term vision statement called Vision 2020 was approved.

Council also approved the following fee increases for 2010:

- Tuition and residence fees to increase by an average of 7 % for 2010, as per policy.
- Registration fee to increase from R504 to R540 for 2010.
- Application fee to increase from R145 in 2010 to R150 for 2011.
- Late-application fee to increase from R280 to R290 for 2010.

- Enrolment deposit to increase from R1 500 to R1 875 for 2010.
- Residence fee instalment to increase from R1 300 to R1 400 for 2010.

The restructuring process at CUT resulted in the creation of 28 new academic positions in 2009. Of specific importance is the creation of six new senior positions of Research Professors in the following disciplines: Integrated Product Development, Evolvable Manufacturing, Teacher Education, Vocational Pedagogy, Leisure Management, and Biotechnology.

Council approved the following within this category as part of strategy one of the Institutional Strategy, viz. reorganising the University and making it *fit for purpose*:

- A revised Executive Performance Management System was approved for implementation at CUT.
- Council approved a Management Committee (MANCOM) mandate to consult and/or negotiate the post-retirement medical assistance “conditions of service” risk.
- Prof. NI Morgan was appointed as Deputy Vice-Chancellor: Resources and Operations, with effect from 1 January 2010.
- The Hosmed Medical Aid Scheme was added to the existing basket of medical aid schemes at CUT.

Council established the Commercial Enterprises Trust as a vehicle to advance the University’s third-stream income, to improve accountability for these activities through consolidation, which must be pursued by the Trust, and to limit the concomitant risk exposure to the University’s core mandate.

Compliance with the CUT Code of Ethics was constantly monitored and observed, and any perceived deviations whatsoever were dealt with effectively and expediently in terms of the relevant CUT rules, policies and procedures. The Ethics Hotline, managed by KPMG, CUT’s internal auditors, became functional in 2009.

Strategies to address the faculties’ employment equity profile

The faculties employ two strategies to address their employment equity profile (mainly equity in academia):

A “grow-your-own-timber” approach, whereby staff members develop their own developmental plan to facilitate their attainment of higher qualifications and to address areas lacking in skills or knowledge.

The recruitment plan for vacant posts allows for recruitment as widely as possible and, in the case of scarce skills, would also include headhunting.



Spanish Football team, practicing at the CUT stadium during 2009 Confederations Cup.



Campus Development

During 2009, CUT started with the implementation of the Master Plans on the Bloemfontein and Welkom Campuses.

Facilities and Major Capital Projects

We have seen the implementation of the DHET 140 Infrastructure Development Programme. The funding received from the DHET for the development of new academic infrastructure and the upgrading of the existing infrastructure put CUT in a position to develop four new buildings and extend two others.

Other projects completed on the Bloemfontein Campus include:

- Development of a new computer reading laboratory and the upgrading of several academic buildings as part of our Long-Term Maintenance Plan.
- Replacement of existing air-conditioning system in the BHP Billiton Building.
- Upgrading of the air-conditioning system in the Library and Information Centre.

Projects completed on the Welkom Campus include:

- Upgrading of the floor finishes in the Library and Information Centre.
- New study cubicles in the Library and Information Centre.

As part of the DHET Infrastructure Project, funds were approved for the upgrading and expansion of the Research and Innovation Section facilities. The planning of these facilities took place during 2009 and will be implemented in 2010.

In Bloemfontein, the 24-hour study facilities, the computer laboratories and an auditorium in the Library and Information Centre were upgraded. The Student Cafeteria was also upgraded, and new kitchen equipment was installed. In the Lapeng Student Centre, the Student Counselling offices were improved.



CUT opens doors of the Greenhouse.



The new vehicles which will replace some of the older vehicles in the vehicle fleet.

As a major partner of the 2010 FIFA World Cup Local Organising Committee (LOC) in Mangaung, CUT spent an estimated R4.2 million on the upgrading of the ABSA CUT Stadium in preparation for the 2009 Confederations Cup and the 2010 World Cup. As an official training venue for both of these major sporting events, FIFA declared this facility to be one of the best training facilities in South Africa.

As part of our ongoing Long-Term Maintenance Plan, the residences and other student facilities were upgraded, and CUT also started the process of developing new, more modern residences on the Bloemfontein Campus, and particularly the Welkom Campus, where no residence facilities were available.

In the effort to become a more environmentally conscious institution, CUT is investigating possible ways to save energy and to “go green” in as many areas as possible.

As part of the implementation of the approved Master Plans for both campuses, several projects to improve security and pedestrian safety were completed during 2009. On the Bloemfontein Campus, for example, the old wire fencing around the campus was replaced with new devil’s fork fencing, and the traffic circle in front of the Artec Hall was upgraded. On the Welkom Campus, the existing closed-circuit television (CCTV) security camera system was expanded, and the final phase of the upgrading of the perimeter fence was completed.

Vehicle Fleet Management

The old vehicle fleets on the Bloemfontein and Welkom campuses were replaced with five new Toyota Corollas and nine Nissan Tiidas. To assist staff members in the lower salary ranges, the old vehicles were made available to them at competitive and affordable prices.



Student Academic Support Centre with 24 hour study and computer rooms

Information and Communication Technology (ICT)

A separate data centre, in a separate building, was established as part of a disaster recovery plan to ensure system continuity. Critical services are separated to ensure that failures in the data centre can be recovered within a certain timeframe. The bandwidth increase in October 2009 saw an immediate improvement in the staff members' and students' ability to access online resources.



CUT Student Support Complex:





Academic Project

CUT embraced its status as a University of Technology and as such we are a regional university where all science, engineering and technology research programmes are directed at the development of the region and to solve the problems of the region. There are more than 50 programmes for students to choose from at CUT.

Academic Development and Support

The role of Academic Development and Support (ADS) is to support academic staff and students by enhancing student-centred teaching and learning approaches, providing need-directed academic staff development initiatives, leadership in student academic development practices, initiation of innovative curriculum development processes, implementation of educational technology strategies, as well as co-ordination of Work-Integrated Learning (WIL).



*Prof. Mabokang
Monnapula-Mapesela,
Dean of Academic
Development and
Support.*

During 2009, ADS achieved the following strategic objectives:

- Benchmarking academic development practices with other higher education institutions;
- Enrolling academic staff members for formal qualifications to update their teaching and learning practices;
- Managing the implementation of the Academic Literacy Programme for first-year students;
- Establishing institutional curriculum development committees to address the Higher Education Qualification Framework (HEQF);

- Managing the administrative and academic support services at the Kimberley Regional Learning Centre;
- Implementing quality assurance practices; and co-ordinating WIL.

The Academic Language Proficiency (ALP) course commenced at the beginning of the second quarter of 2009 on the Bloemfontein, Welkom and Kimberley campuses. The aim of the course is to help students develop their reading and writing ability in English to a level that will give them a fair chance of succeeding in their respective studies at the University.

| | Bloemfontein | Welkom | Kimberley |
|-----------|--------------|--------|-----------|
| Enrolment | 1 545 | 396 | 27 |
| Pass rate | 66 % | 54 % | 100 % |

The ALP enrolment figures and pass rate per campus in 2009.

Extended Curriculum programmes were offered in the following fields; Art and Design, Health Sciences, Information Technology and Engineering. An amount of R2.289 million was received from the Department of Higher Education and Training (DHET) to be used in the provision of Extended Curriculum programmes for the 2009 financial year.

The Centre for e-Learning and Educational Technology hosted the Blackboard Community Conference at CUT, which was attended by a total of 140 delegates from across

the country. More than 277 courses can now be actively accessed by students on eThuto, with another 300 in development. Approximately 80 % of all lecture rooms have been equipped with data projectors and network connections.

CUT and the National Institute for Higher Education: Northern Cape (NIHE: NC) signed a working agreement to collaborate on the implementation of the DHET policy on higher education provision in the Northern Cape Province. The Vice-Chancellor is a member of the NIHE: NC Board, while the Deputy Vice-Chancellor: Academic is a member of the Academic Committee of the NIHE: NC, which guides its programme offerings and its partnerships with other higher education institutions.

The following are some of the highlights per faculty:

Faculty of Management Sciences

- A senior lecturer of the Centre for Entrepreneurship and Business Development was appointed to the editorial boards of two business/management journals published in Canada, namely 'The International Journal of Business and Management', and 'International Business Research'.
- A staff member of the Hotel School was appointed president of Tourism, Hospitality and Sport Education Providers of South Africa (THEPSA).
- The Director of the School for Government Management was invited to present political analyses for SABC news broadcasts on a number of occasions during the year.



*Prof. Albert Strydom,
Dean: Faculty of
Management Sciences*

Faculty of Health and Environmental Sciences

- The Director of the School of Agriculture and Environmental Sciences was appointed to the South African Council for Natural Scientific Professions (SACNASP).
- A senior lecturer in the Radiography programme reviewed a number of articles for an in-house, peer-

reviewed and accredited journal. She also reviewed articles and designed multiple-choice questionnaires for a peer-reviewed radiography journal.

- The Director of the School of Health Technology reviewed articles for a number of peer-reviewed international journals, namely 'Frensenius Environmental Bulletin' (Parlar Scientific Publications, Germany), 'The International Journal of Environmental Health Research', as well as 'The Journal of New Generation Sciences'.



*Prof. Linda de Jager,
Dean: Faculty of
Health and
Environmental Sciences*

Faculty of Engineering, Information and Communication Technology

- During the Engineering Council of South Africa (ECSA) accreditation visit of 18 – 19 May 2009, the visiting team in general was highly impressed with the state of affairs.
- The Jewellery School exhibited their creations at Jewellex Africa 2009, held at the Sandton Convention Centre from 24-27 July. This prestigious event showcases the latest design and equipment trends in the national and international jewellery trade.
- With no fewer than four Graphic Design students amongst the thirteen finalists, CUT was well represented at the South African Bank Note Society's Seventh Bank Note Design Competition. The president of the Bank Note Society, Dr Heinz Wirz, applauded the CUT students for their exceptionally high standard of work. A third-year Graphic Design student, Kele Mokalake, won a top award for her excellent work in incorporating a unique security feature into her bank note designs. A second-



*Prof. Johnson Kinyua,
Acting Dean: Faculty of
Engineering, Information
and Communication
Technology*

year Graphic Design student, Nomakosi Sello, won the prize for the best design theme.

- After a careful and competitive selection process, a third-year Fashion student was one of the two Free State students chosen by the Durban July organising committee to represent the province at the famous horseracing event.
- During their time at CUT, two German exchange students developed a website for the Bana Pele Network, an NGO

dedicated to children infected with and affected by HIV and AIDS.

- A third-year Graphic Design student, as a finalist for the National Design Achievers Award, attended the awards ceremony in Gauteng.
- Guided by Mr FC Aggenbacht, a group of students participated in the annual Sasol Mini Baja Bug Competition during October 2009, where they won first prize in the Feasibility for Mass Production category.

Community Engagement

CUT espouses the three values of higher education, one of which is Community Engagement (CE). CUT envisages the meaningful integration of CE with teaching and learning, as well as research, in a structured environment. The Science Park, together with its Community Engagement Office, is seen as a major vehicle for CE, functioning as a bridge between the expertise inherent in CUT and the community, facilitating the transfer of technology to entrepreneurs, local NGOs and the community at large.

The following categories of CE received attention in 2009:

- CE as an element of formal academic activities;
- Support of new entrepreneurs via the Science Park;
- Support of business and industry;
- Support of government-driven CE initiatives;
- CE by the Office of Community Engagement (primarily civic support); and
- CE via Student Services and the various residences.

The functioning of the Community Engagement Office remained largely unchanged during 2009, yet special emphasis was given to community empowerment initiatives in collaboration with external bodies.

Apart from Service Learning, the following CE activities received special attention:

- Saturday Schools and Winter Schools projects is growing in leaps and bounds. As in 2008, this project once again boasted a 100 % pass rate in 2009.
- The School of Teacher Education hosts an annual Winter School for Grade 12 learners during the July holidays.

- Science Park and Commercial Centres supports a comprehensive incubation programme for new entrepreneurs
- Centre for Rapid Prototyping and Manufacturing (CRPM)
- Product Development Technology Station
- Fablab



School learners in Fablab



Vendor cart designed by CUT's CRPM

The Office of Community Engagement is involved in a number of projects, such as, efforts at job creation for outlying disadvantaged communities, efforts at securing suitable land for the creation of gardens for the cultivation of vegetables; and assistance with training in sewing skills.

Another highlight was the Hotel School being approached by FIFA to play a major role in providing waiter services during the 2010 Soccer World Cup.

Institutional Advancement: Working with Industry

CUT remains committed to its core activities of teaching and learning, research and community engagement as well as the pursuit of excellence within and across these core activities. Consequently, we strive for continued enhancement of our partnerships and co-operation agreements with government, business and industry.

The following high-lights are some of the key partnerships and co-operation agreements for 2009:

Faculty of Management Sciences

Co-operation with Microsoft and its Gold-certified partner, Praxis:

In 2008, a co-operation was established to improve the programme Financial Information Systems. This co-operation includes the embodiment of a long-term commitment from all the parties involved. Microsoft and Praxis installed and maintain the Plains Business Solution software (and all future updates) and participates in an advisory committee in order to inform CUT on changes in industry affecting the program. This agreement includes the provision that Microsoft and partner companies will accommodate CUT students in gaining practical experience through co-operative education and also assist with the placement of students after successful completion of their BTech degrees.



Hotel School Building

Co-operation with Volksblad, First National Bank, PricewaterhouseCoopers and Afrikaanse Handelsinstituut (AHI):

The School of Tourism, Hospitality and Sport ran a successful Free State 2009 town beautification project. Another venture undertaken to co-operate with industry and to promote access with success was the linking of curricula with industry through the involvement of relevant stakeholders, especially with regard to curriculum

development. Individual meetings continue to be held on a regular basis with industry.

Partnership with South African College of Tourism

An official partnership exists between CUT's School of Tourism, Hospitality and Sport and the South African College of Tourism in Graaff-Reinet, in terms of which the aforementioned School acts as moderator and quality assessor.



Partnership with Department of Higher Education and Training, Free State Sport Science Institute

There is also an official partnership between CUT's School of Tourism, Hospitality and Sport, the DHET, and the Free State Sport Science Institute (FSSSI) to present the Advanced Certificate in Education (ACE): Sport Development.

Partnership with Local Government Sector Education and Training Authority

An official partnership between CUT (through the School of Government Management) and the Local Government Sector Education and Training Authority (LGSETA), which was finalised in 2008, continued into 2009. LGSETA granted full programme approval status to CUT for the qualification of National Certificate: Municipal Integrated Planning.

Faculty of Health and Environmental Sciences

Co-operation with Free State Department of Health

Co-operation agreements exist between CUT and the Free State Department of Health (FSDoH), as well as between CUT and private radiology practices in Kimberley and Bloemfontein for the training of Radiography students. The agreements are maintained by means of standing committee meetings held twice per year in addition to the representation of the aforementioned bodies on advisory committees. Clinical Technology provided services to the Western Cape Government and the FSDoH. Private practices (industry) and state hospital units are represented on the Clinical Technology Advisory Board. Emergency Medical Care (EMC) presented three Intermediate Life Support short courses for the FSDoH. The programme also collaborated with private EMC services. All role players are members of the programme's Advisory Committee. Dental Assisting programme members worked with the FSDoH regarding the placement of students. The agreement with the FSDoH is also maintained through Standing Committee meetings.

Co-operation with PathCare, Van Rensburg Pathologists

Biomedical Technology programme members worked with private pathology laboratories (PathCare and Van Rensburg Pathologists) in Bloemfontein and Kimberley, as well as the NHLS. Representatives of the aforementioned also participate in meetings of the programme's Advisory Committee.

Faculty of Engineering, Information and Communication Technology

The economic recession had a limiting effect on activities of the Centre for Rapid Prototyping and Manufacturing (CRPM) and the Product Development Technology Station (PDTs) during 2009. A direct outflow of this was that many



Prof. Michelle Truscott, lead researcher in medical device innovations.



CUT annually enters the Sasol Mini Baja Bug Competition.



Students in Sport Management Programme get hands-on experience. Here they are being taught proper strapping techniques.

companies cut back on their research and development budgets, and less work came through to the CRPM. A total of 515 projects were completed in the Centre during 2009. Although projects generally tended to be smaller during 2009, several new clients started making use of the CRPM's services, especially new international clients from Wales, Slovakia and Russia.

The Centre for Environmental, Community and Industrial Development (CECID) completed the following projects in 2009:

- Ad hoc consultation with Coca-Cola and Dairybelle;
- Primary School Nutrition Programme (PSNP) for the Albert Wessels Trust;
- Short courses for the Free State Department of Sport, Arts and Culture; and
- Short courses for the Mangaung Local Municipality.

Work-Integrated Learning (WIL)

This philosophy and approach to education is what makes education in a university of technology different from all other forms of higher education. It offers a holistic approach to education by equipping students not only with the necessary theoretical background, but also with the opportunity to apply the theoretical concepts in practice. This component is undertaken after completion of the theoretical component of an instructional programme, depending on the structure and requirements of each instructional programme.

The Unit for Work-Integrated Learning plays an important role in the placement of students for this type of learning, and provides valuable information regarding opportunities in this area. Sector Education and Training Authorities (SETAs) advertise skills development initiatives, targeting students and graduates through the WIL Office, which in turn negotiates and co-ordinates recruitment processes. This has improved the success rate and the number of opportunities secured by CUT students and graduates. The WIL Office managed to secure donations totalling R12 230 million from the SETAs.

In the Faculty of Management Sciences, formal arrangements for WIL are in place for the learning programmes in Teacher Education, Marketing, Office Management and Technology, Financial Information Systems, Tourism Management, Hospitality Management, and Sport Management. The Ritz-Carlton group from the USA, as well as the Absolute Hotel

Group from Ireland, visited the Hotel School in 2009 to recruit students for WIL at their prestigious establishments.

In the Faculty of Health and Environmental Sciences, students in Biomedical Technology, Clinical Technology and Radiography can complete their WIL at the following accredited laboratories: National Health Laboratory Service (NHLS) at Universitas and Pelonomi hospitals, PathCare, Van Rensburg Pathologists, and the South African National

Blood Service (SANBS). Students also have the opportunity to complete their WIL in the towns of Kimberley, Welkom, Kroonstad and Bethlehem.

In 2009, the Faculty of Engineering, Information and Communication Technology enjoyed close and effective contact with a number of companies and organisations for the placement of students for WIL, with their representatives serving on CUT's Advisory Board.



Radiography students learning to work the machinery.

Research Development and Innovation

In 2009, CUT's three faculties (Faculty of Engineering, Information and Communication Technology, Faculty of Health and Environmental Sciences, and Faculty of Management Sciences) committed themselves to a number of research outputs in order to grow their research basis. *Nine identified categories* relate directly to the effort to address the current research shortfall. The committed outputs are based on the faculties' capacity to address the growth in their research outputs over the next three years. The strategies identified are directed at addressing the expected normative research output shortfall.



Prof. Laetus Lategan, Dean of Research and Innovation

A research plan to drive research development

To support the development of research at the CUT, a Research and Development Plan (2005 – 2010) emphasises three key areas for research and research development. The plan's overarching strategy is to (a) develop a sustained research culture, (b) improve research outputs, and (c) develop strategic research partners and programmes.

Research foci and strategic research programmes

In 2005 CUT identified three research clusters with a number of research programmes. The following table indicates the research foci and strategic research programmes.

| Research Cluster | Research Programmes |
|--|---|
| Industrial design, communication and development | New product development and design Automated material handling and radio frequency identification Hydro-informatics Information and communication technology |
| Quality of health and living | Applied food safety and technology Bio-environmental studies Applied health technology |
| People and skills development | Socio-economic development studies Education (sub-themes: medical education, general education, service learning, technical and technological education) Research education |

During 2009 a number of initiatives were introduced to further support the development of the four strategic (applied) academic programmes identified, these programmes are: new product development, leisure management, evolvable manufacturing, and biotechnology. The research clusters

and their projects are also supported through a number of external research grants. The table below illustrates the funds received for specific research projects in 2009.

| Output Targets | 2009 | 2010 | 2011 |
|--|------|------|------|
| Accredited articles | 33 | 39 | 44 |
| Papers read at South African conferences | 41 | 50 | 54 |
| Papers read at international conferences | 36 | 30 | 35 |
| Students enrolled for master's degrees | 158 | 167 | 171 |
| Students enrolled for doctoral degrees | 39 | 42 | 46 |
| Completed master's degrees | 18 | 20 | 22 |
| Completed doctoral degrees | 2 | 5 | 5 |
| Full-time researchers | 7 | 9 | 11 |
| Postdoctoral fellows | 2 | 4 | 5 |

In 2009 the faculties met all the targets set and, in some cases, exceeded the envisaged outputs. The progress made

in the effort to address the research shortfall is indicated in the table below.

Summary of research progress during 2009

| Outputs | Committed 2009 | Progress | Target |
|--|----------------|----------|---------|
| Accredited articles | 33 | 46 | > 100 % |
| Papers read at South African conferences | 41 | 87 | > 100 % |
| Papers read at international conferences | 36 | 37 | > 100 % |
| Completed master's degrees | 18 | 30 | > 100 % |
| Completed doctoral degrees | 2 | 4 | > 100 % |
| Full-time researchers | 7 | 7 | 100 % |
| Postdoctoral fellows | 2 | 2 | 100 % |

If the 2009 outputs are assessed against the overall research performance of CUT, it is evident that a sustained



Unrated researchers get assistance in becoming NRF rated researchers.

research culture was developed. The performance over ten years will serve as a platform to support initiatives to meet the expected research outputs within the next three to five years. The following tables present the research performance from 1998 to 2009.

Accredited publication outputs

| Year of Award | Articles |
|---------------|----------|
| 1998 | 16 |
| 1999 | 16 |
| 2000 | 13 |
| 2001 | 11 |
| 2002 | 23 |
| 2003 | 27 |
| 2004 | 36 |
| 2005 | 36 |
| 2006 | 42 |
| 2007 | 38 |
| 2008 | 29 |
| 2009 | 46 |

Completed master's degree studies

| Year of Award | Master's degrees awarded |
|---------------|--------------------------|
| 1998 | 17 |
| 1999 | 7 |
| 2000 | 10 |
| 2001 | 13 |
| 2002 | 13 |
| 2003 | 35 |
| 2004 | 17 |
| 2005 | 10 |
| 2006 | 22 |
| 2007 | 18 |
| 2008 | 27 |
| 2009 | 30 |

Completed doctoral degree studies

| Year of Award | Doctoral degrees awarded |
|---------------|--------------------------|
| 1998 | 1 |
| 1999 | 3 |
| 2000 | 1 |
| 2001 | 1 |
| 2002 | 4 |
| 2003 | 7 |
| 2004 | 7 |
| 2005 | 6 |
| 2006 | 6 |
| 2007 | 11 |
| 2008 | 5 |
| 2009 | 4 |

Ongoing performance is evident in the number of completed master's and doctoral degrees (based on degrees awarded). Since 1998, a total of 219 master's and 56 doctoral degrees have been awarded. Note the following: *Firstly*, the research topics express industry/business relevance (fitness of purpose). *Secondly*, the research topics in (especially) education address regional needs (which are not removed from the national agenda). *Thirdly*, academic development is shaped through the development of supervisory skills. A research culture progresses through the growth in a scholarly community. The dynamics of this process is that a scholarly community affects a research culture, and a research culture attracts scholars. It should be emphasised that staff and students learn from this experience. A relatively young research staff component still needs to master the challenges of postgraduate supervision, whilst supervisors and students still need to curve technological science, which is the mission differentiation of the universities of technology.

An important mechanism to increase the number of accredited publications is to develop basic scientific writing skills, which is primarily done through CUT's in-house research journal, *Interim*, which has published twice per year since the end of 2002. The goal of the journal is to afford novice researchers an opportunity to publish their

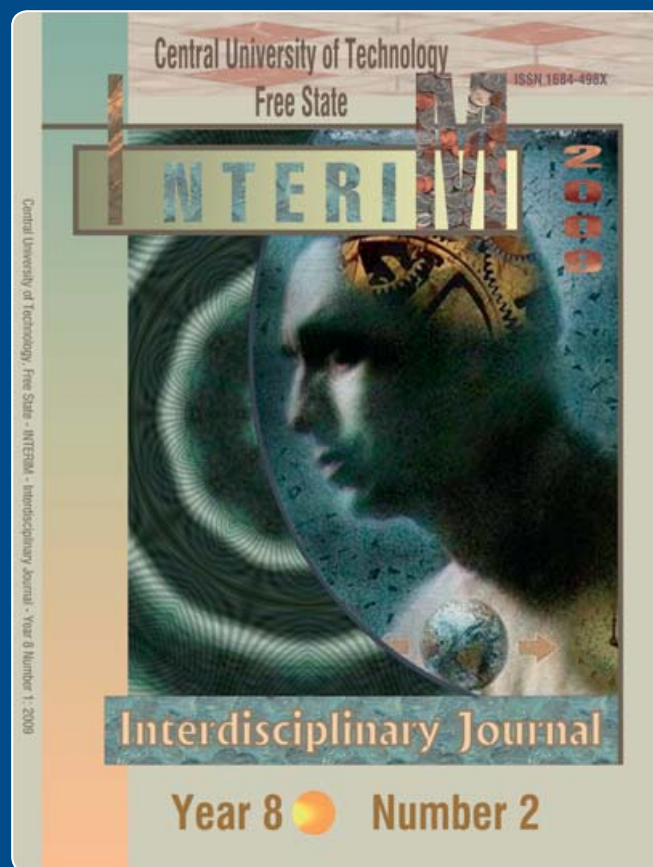
research, and to allow established researchers to publish work in progress. These articles are all peer-reviewed to expose researchers to this process. An in-house peer review approach is followed, with the main emphasis on improving the quality of the article, building self-confidence in the art of publication writing, and mastering the necessary skills and techniques in that regard. The table below shows the progress made thus far with publications in *Interim*, up until the second edition of 2009 (Vol. 8, No. 2):

Progress with scientific writing in *Interim*

| Category | Numbers |
|--|---------|
| Number of editions | 15 |
| Number of authors | 293 |
| Number of papers | 170 |
| Number of student contributions | 35 |
| Number of external research partners co-authoring articles | 37 |
| Number of published papers in accredited journals | 31 |

Closer analysis of this data reveals that fifteen editions of *Interim* in eight years are sufficient evidence that this model is in high demand and that staff, students and external research partners are eager to participate in this initiative. It should also be noted that of the total number of 293 authors, about 12 % were students and 13 % were external research partners. Approximately 12 % of the papers were co-authored by students. The participation of students must be understood within the context that many of the senior students are members of the CUT staff establishment. Although this is a journal directed at the CUT community, a number of these papers are co-authored by external partners (as supervisors, research associates, etc.) as part of the joint research venture. This is interpreted as a positive association with the University's research and the capacity development driven by this journal.

Another objective of the journal, namely preparation for accredited articles, is also on course. Almost 11 % of *Interim* articles have already been published in accredited



journals. It should be noted that in such cases, the article is often not in the exact same form as that published in *Interim*, but rather a revised, combined or multi-authored article.

External research funding

External research funding is not only supportive of institutional research activities, but also serve as benchmark and quality for research. Postgraduate student completion rates and published research articles based on the completed studies will grow the research outputs to the desired norm within the next three to five years.

NRF awards in the Institutional Research Development programme

| Year | Number of Grants | Amount |
|--------------|------------------|---------------------|
| 2001 | 20 | R 1 595 876 |
| 2002 | 18 | R 1 778 447 |
| 2003 | 12 | R 1 773 150 |
| 2004 | 16 | R 2 309 300 |
| 2005 | 19 | R 1 014 600 |
| 2006 | 15 | R 2 728 000 |
| 2007 | 15 | R 1 465 000 |
| 2008 | 12 | R 1 393 002 |
| 2009 | 10 | R 3 823 667 |
| Total | | R 17 881 042 |

NRF awards in the Thuthuka programme

| Year | Number of Grants | Amount |
|--------------|------------------|--------------------|
| 2003 | 5 | R 226 667 |
| 2004 | 4 | R 370 666 |
| 2005 | 12 | R 548 000 |
| 2006 | 14 | R 849 992 |
| 2007 | 8 | R 264 100 |
| 2008 | 10 | R 565 000 |
| 2009 | 11 | R 713 000 |
| Total | | R 3 537 425 |

Research Grant Awards Fund

In 2001 CUT established the Innovation Fund in support of research development, which in 2007 underwent a name change to become the Research Grant Awards Fund (RGA). The Awards Policy was approved by all structures and is

being implemented accordingly in three broad categories, namely (a) the development of core research competencies (through student training), (b) research infrastructure and consumables, and (c) research development and support. The return on investment is evident through the large pool of students being trained, and the table below reflects these awards during 2009.

CUT research grants to support staff and postgraduate student research

| Category | Number |
|-----------------------------|--------|
| Coursework: Master's Degree | 2 |
| MTech | 35 |
| DTech | 12 |
| Post-Docs | 2 |
| Equipment | 2 |

CUT research grants: Total amount awarded to support staff and postgraduate student research

| | |
|------|----------------|
| 2001 | R 1 522 370.00 |
| 2002 | R 1 002 880.00 |
| 2003 | R 3 110 788.62 |
| 2004 | R 2 405 376.07 |
| 2005 | R 2 928 948.00 |
| 2006 | R 2 010 257.00 |
| 2007 | R 2 055 949.19 |
| 2008 | R 2 972 012.00 |
| 2009 | R 2 281 534.00 |

The CUT used the Research Development Grant to support the operational and strategic development of research. The following awards from the CUT's RGA scheme confirm the university's commitment to the process, as indicated in the table below.

Research and Development Grant awards in 2009

| Category | Number | Award |
|---------------------------|--------|-------------------|
| Coursework Master's | 2 | R 10 000 |
| Master's Degree Awards | 35 | R 754 980 |
| Doctoral Degree Awards | 12 | R 274 360 |
| Postdoctoral Fellows | 2 | R 240 000 |
| Specialised Equipment | 2 | R 249 859 |
| Staff Projects | 1 | R 100 000 |
| Supplementation: Thuthuka | 11 | R 311 000 |
| Supplementation: IRDP | 9 | R 341 335 |
| Total | | R2 281 534 |

Research conferences

During 2009, 35 researchers were provided with support that enabled them to attend international conferences in order to read their papers and study research trends in their

particular fields of study. During this period, 37 papers were delivered, and grants close to the value of R940 000 were awarded. In 2009 some of these papers were already placed in the public domain, via conference proceedings, books or journals. Four conference papers were published in conference proceedings and two were published in books, while four articles were published in journals. The strategy in 2010 is to rework all conference papers into publishable articles in accredited journals. It should also be noted that publications are not the only desired outcome of conference attendance. Other outcomes include platforms to share research results, to study international research trends, and to create partnerships.

Teaching and Learning Activities

This section contains relevant CUT statistics, referring to and containing information on the student headcounts in 2009, details on CUT student performance, academic staff statistics, as well as transformation targets realised. The information is presented for groups defined in terms of Higher Education Management Information Systems (HEMIS).



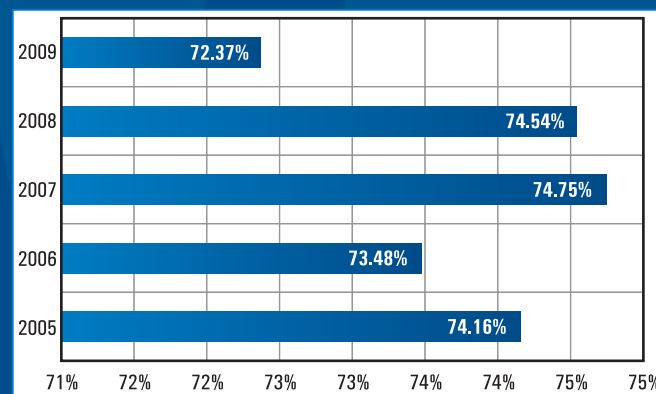


The following table represents student enrolment by race and gender.

Student Enrolment by Race and Gender

| Year | Female | | | | Male | | | | Total |
|------|--------|----|-------|---|-------|----|-------|----|--------|
| | Black | | White | | Black | | White | | |
| | No. | % | No. | % | No. | % | No. | % | |
| 2009 | 5244 | 43 | 628 | 5 | 5383 | 44 | 950 | 8 | 12 205 |
| 2008 | 4592 | 42 | 666 | 6 | 4659 | 43 | 978 | 9 | 10 895 |
| 2007 | 4318 | 41 | 773 | 8 | 4417 | 42 | 970 | 10 | 10 478 |
| 2006 | 4242 | 41 | 762 | 7 | 4434 | 42 | 1020 | 20 | 10 458 |
| 2005 | 4278 | 42 | 823 | 8 | 4151 | 40 | 1068 | 10 | 10 320 |

CUT Pass (Success Rate)
(FTE degree credits/FTE enrolled)



On the whole, overall success or pass rate declined from 74.5 % in 2008 to 72.2 % in 2009. The decline in success rate was more prevalent amongst female than male students. The pass rate is calculated by dividing the Full-Time Equivalent (FTE) degree credits with the FTE enrolments.

| Postgraduate (M & D) Enrolments per Faculty | 2008 | 2009 |
|---|------|------|
| Faculty of Health and Environmental Sciences | 74 | 75 |
| Faculty of Engineering and Information Technology (Formerly: Engineering, Information and Communication Technology) | 61 | 58 |
| Faculty of Management Sciences | 112 | 35 |
| Faculty of Humanities | - | 81 |
| Total | 247 | 249 |

The postgraduate enrolment figure remained stable.

During the March 2009 graduation ceremony, 12 master's and two doctoral degrees were conferred. During the spring graduation in September 2009, three doctoral degrees and 13 master's degrees were conferred. The table below reflects postgraduate studies completed in 2009, as academic year.

The following table presents the student headcount data for 2009

Post- and Undergraduate Enrolments, Graduates, and Graduation rate by Major field of study

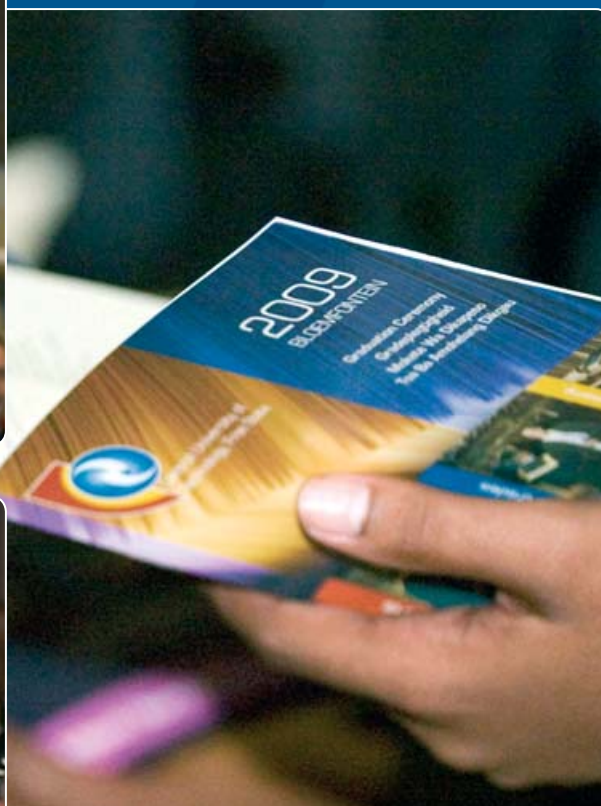
| Main study area | QDD Post Under Graduate | Headcounts | 2008 | | 2009 | | |
|--------------------------------------|-------------------------|------------|-----------|-----------|------------|-----------|-----------|
| | | | Graduates | Grad rate | Headcounts | Graduates | Grad rate |
| BUSINESS/MANAGEMENT | Post Graduate | 32 | 7 | 21.9% | 21 | 2 | 9.5% |
| | Under Graduate | 3,242 | 907 | 28.0% | 3,403 | 727 | 21.4% |
| BUSINESS/MANAGEMENT Total | | 3,274 | 914 | 27.9% | 3,424 | 729 | 21.3% |
| EDUCATION | Post Graduate | 317 | 154 | 48.6% | 351 | 177 | 50.4% |
| | Under Graduate | 552 | 165 | 29.9% | 708 | 155 | 21.9% |
| EDUCATION Total | | 869 | 319 | 36.7% | 1,060 | 332 | 31.4% |
| OTHER HUMANITIES | Post Graduate | 31 | 6 | 19.4% | 30 | 6 | 20.1% |
| | Under Graduate | 1,406 | 355 | 25.3% | 1,855 | 375 | 20.2% |
| OTHER HUMANITIES Total | | 1,437 | 361 | 25.1% | 1,885 | 381 | 20.2% |
| SCIENCE/ENGINEERING TECHNOLOGY (SET) | Post Graduate | 132 | 17 | 12.9% | 139 | 28 | 20.2% |
| | Under Graduate | 5,181 | 914 | 17.6% | 5,698 | 901 | 15.8% |
| SET Total | | 5,313 | 931 | 17.5% | 5,837 | 929 | 15.9% |
| Grand Total | | 10,893 | 2,525 | 23.18% | 12,205 | 2,370 | 19.42% |



The noticeable changes is that in Business and Management Sciences, the postgraduate student cohort size decreased, as did the undergraduate and postgraduate graduation rates. In total, the graduation rate declined from 26.8% in 2008 to 21.3% in 2009. In Education, both the undergraduate and postgraduate student cohorts increased in size, but only the postgraduate graduation rate improved. The overall graduation rate in this category declined from 45.8 % in 2008 to 31.2% in 2009. In Other Humanities, only the postgraduate student cohort reduced in size, but it showed

a small improvement in the graduation rate. The overall graduation rate in this category declined from 25.2% in 2008 to 20.2% in 2009. In SET, both the undergraduate and postgraduate student cohorts increased in size, but only the postgraduate graduation rate showed an improvement. The overall graduation rate in this category declined from 17.2% in 2008 to 15.8% in 2009.

For the University as a whole, the total graduation rate declined from 23.1% in 2008 to 19.4% in 2009.

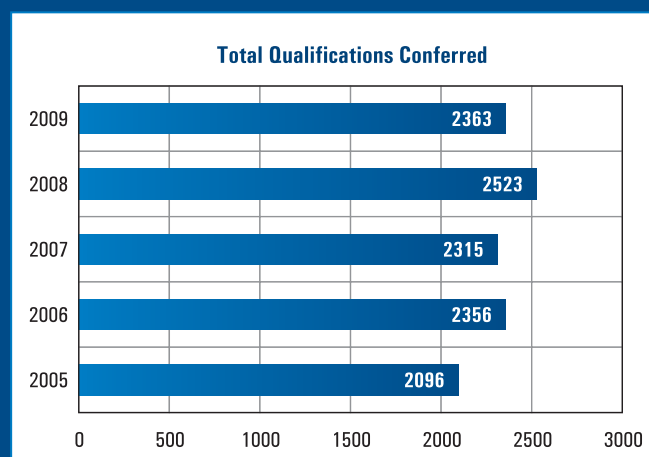


Top: Professor Gerhard Hechter was awarded the emeritus professorship for the major role he played in CUT's establishment as an institution of higher learning, over a period of 22 years. Bottom: Mr Pravin Gordhan was awarded the degree Doctor Technologiae (Honoris Causa): Business Administration in recognition of his exemplary service as a public servant.

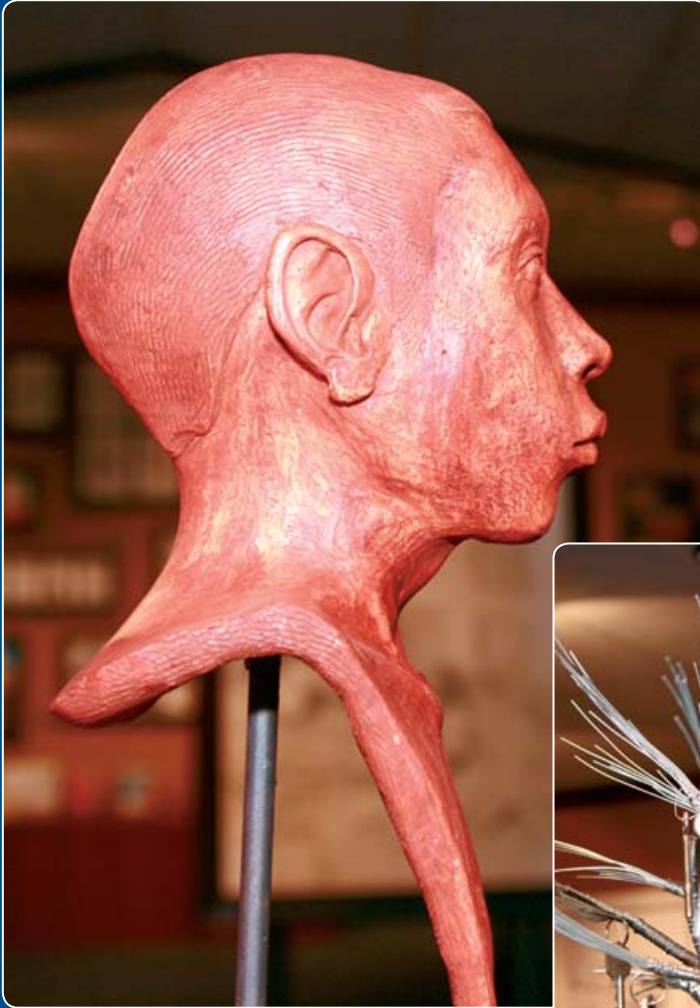
The following table gives a comparison between the 2008 and 2009 student pass rates by gender

| | | 2008 | | | 2009 | | |
|--|---------------------|--------|-------|-------|--------|-------|-------|
| Main study area | | Female | Male | Total | Female | Male | Total |
| BUSINESS/ MANAGEMENT | FTE | 1 257 | 924 | 2 182 | 1 370 | 953 | 2 323 |
| | Success (Pass) Rate | 73.2% | 69.8% | 71.8% | 70.5% | 66.6% | 68.9% |
| EDUCATION | FTE | 365 | 286 | 651 | 409 | 366 | 775 |
| | Success (Pass) Rate | 81.6% | 77.5% | 79.8% | 78.3% | 78.6% | 78.5% |
| OTHER HUMANITIES | FTE | 1 167 | 758 | 1 925 | 1 270 | 849 | 2 120 |
| | Success (Pass) Rate | 81.0% | 75.8% | 79.0% | 76.0% | 71.2% | 74.0% |
| SCIENCE/ ENGINEERING/ TECHNOLOGY (SET) | FTE | 1 484 | 2 268 | 3 752 | 1 764 | 2,714 | 4 478 |
| | Success (Pass) Rate | 76.3% | 70.8% | 73.0% | 75.3% | 69.6% | 71.9% |
| Total FTE | | 4 273 | 4 237 | 8 510 | 4 813 | 4,883 | 9 696 |
| Total degree credit success rate | | 77.1% | 71.9% | 74.5% | 74.4% | 70.0% | 72.2% |

In Business and Management Sciences there was a decline in success or pass rate, and this was found to be somewhat gender-neutral. In Education there was also an overall decline in success rate. The decline was most prevalent amongst female students, whilst the success rate amongst male students, on the other hand, showed a slight improvement. In Other Humanities, there was a sizeable decline in success rate overall and across both genders, as well as a noticeable differential in the decline between the genders. In SET, there was also a year-to-year decline in success rate. In this instance, the decline amongst males was noticeably higher.



The qualifications conferred by the CUT in 2009 totalled 2 363.



Heritage Festival

University Life

Special Events

The following are the broader institutional and faculty-based events:

- Autumn Graduation Ceremony (12 to 19 March 2010);
- Wellness Approach to Student/Staff Behaviour (WASB) Week (3 to 7 May 2010);
- Crowning of Mr and Miss CUT (13 May 2010);
- SET Week (14 to 16 May 2010);
- Tenth annual High-School Quiz of the Faculty Engineering, Information and Communication Technology (14 May 2009);
- The Winter School of the School of Teacher Education (July 2009);
- Annual Prize-Giving Ceremony of the Faculty Engineering, Information and Communication Technology (24 July 2009);
- The Regional Innovation Centre workshop (30 July 2009);
- National Science Week hosted by the Faculty Engineering, Information and Communication Technology for the third year running (August 2010)
- Career Fair (11 August 2010);
- Spring Graduation Ceremony (10 September 2010);
- The prestige lecture, presented by brand expert Thebe Ikalafeng (17 September 2009);
- The Heritage Festival (17, 18 and 21 September 2009);
- The Faculty of Management Sciences held a Prestige Research Seminar (14 October 2009);
- The Faculty of Health and Environmental Sciences annual Research Seminar (15 October 2009);



Mr Danny Jordaan, Head of the FIFA World Cup Organising Committee in South Africa.

- The Faculty Engineering, Information and Communication Technology's 12th annual Research Seminar (15 and 16 October 2009);
- Africa University Day (24 November 2009);
- Career Winter School of the Faculty Engineering, Information and Communication Technology (30 June 2010);



Student Life

The Student Services Section is involved in a variety of activities on both the Bloemfontein and Welkom campuses, providing a number of services.

Leadership training was arranged and a total of 60 students participated in 13 leadership programmes, namely Leadership; Setting Goals; Conflict Management; Presentation Skills; Understanding Power; Teambuilding; Interpersonal Relations; Planning and Organising; Assertiveness; Problem-solving; Wellness; Ethics and Values; and Communication. Similar workshops and training sessions were held for the Carnival Committee and the editorial staff of the student newspaper, amongst others.

Students' Representative Council (SRC) elections: The SRC elections for 2009/2010 were held on 16 September 2009 at three voting stations, and the counting of votes commenced on that same day and concluded at 12:00 the following day. The voting percentage was 23 % on the Bloemfontein Campus and 39 % on the Welkom Campus. The elections were for the first time conducted by the Independent Electoral Commission (IEC) through the Free State Provincial Office, which declared the elections free and fair.

The Bloemfontein and Welkom Campus choirs performed exceptionally well during the year. The Bloemfontein choir attended five national competitions and several workshops.

The Carnival raised R90 000 in cash for 15 charity organisations. Other donations were made possible through various fundraising activities, such as the Mr and Miss CUT competition, as well as the tireless efforts of the Carnival Committee.

The editorial staff of the student newspaper, *Speculum*, underwent training by Media24 journalists. Five editions of the newspaper were published during the year.

Students not actively participating in formal sport codes were also given the opportunity to keep active in their free time by participating in activities like beach volleyball, wall and mountain climbing, hiking, river rafting, informal sport leagues and fun days.

CUT students performed extremely well in a number of Latin-American and ballroom dancing competitions, taking first, second and third positions in various categories.



Fun and games, during Wellness Week.

The Chess Club participated in a tournament organised by the Free State Chess Club and also organised its own tournament on campus that was well supported by various high schools in the region. Members participated in the University Sports of South Africa tournament, held at Wits University from 7-11 December 2009.

On 9 May 2009, CUT hosted the third annual Provincial Debating Tournament, which was attended by participants from CUT's Welkom Campus, the University of Venda and Walter Sisulu University. Two CUT teams managed to reach the semi-finals of the national tournament held at Wits University from 4-10 July 2009, as well as the Pan-African Universities' Debating Championships held in Botswana from 11-18 December 2009.

Drama Society and Dance Factory Association: Both organisations participated in the Free State High Schools' performance, held in collaboration with the Office of the National Prosecuting Authority of South Africa. A joint cultural group workshop was held on 14 March 2009 on the Welkom Campus.

Other student clubs, organisations and societies: A total of 44 organisations were affiliated during 2009, with Student Life overseeing their effective functioning.

Residence Life

A total of 34 House Committee (HC) members were appointed in 2009 to manage the six CUT residences in co-operation with the residence managers. A total of 22 students were appointed as receptionists during the June/July and September holidays to assist delegates of groups making use of residence accommodation. They performed extremely well in this role and delivered excellent customer service.

Three men's residences and three ladies' residences provided accommodation to 726 students in a clean and safe environment that was conducive to learning. Residence occupation stood at 100 % in 2009, and a list of private accommodation options was also made available to students.

In January 2009, the HC members and residence managers received training in interpersonal relations, goal-setting, teambuilding and leadership skills. A follow-up training session on Emotional Intelligence was held for 34 HC members and six residence managers in April 2009. A one-day hand-over session was held for 12 wardens and eight staff members during the fourth quarter of 2009. Thirty cell group leaders received training in small group dynamics in April 2009.

The Health Centre and Psychological Services offered two Study Skills and Values workshops to first-year students. First-year students attended a presentation on HIV/AIDS during the first quarter of 2009. The Protection Services Section held fire evacuation drills in all residences and also provided the students with general information on health and safety. An event to celebrate the residence with the best academic performance for 2008 took place in May 2009. The Welgemoed residence was awarded the Vodacom-sponsored trophy for the best performing

residence of 2008. Prayer sessions and bible study meetings for students were held on an ongoing basis.

The six residences were involved in an array of community engagement projects ranging from visits to homes for the aged, handing out of food to washing windows.

The following groups made use of residence accommodation during CUT holidays:

- Confederation Cup attendees (17 June 2009).
- Drum majorettes (3-12 July 2009).
- Library and Information Association (LIASA) Conference attendees (29 September - 2 October 2009).

Careers Office

The role of the Careers Office is to equip students with the necessary skills and competencies to successfully compete in the growing and highly competitive labour market, to connect them with employers in the different sectors of the economy, and to reduce the unemployment rate amongst CUT students.

Career development training focuses on providing labour-related information and job-hunting skills such as job-search techniques, writing a covering letter, compiling a CV, and preparing for an interview. These training sessions are presented as part of formal class periods, during lunchtime presentations, and on a one-to-one basis on both the Bloemfontein and Welkom campuses. In partnership with the Centre for Entrepreneurship and Business Development (CEBD), the Careers Office runs a mock interview programme in which BTech: Human Resources Management students act as human resources practitioners.

Health Centre and Psychological Services

Reading development and academic study courses

Since students generally struggle with the volume of academic reading work at tertiary level, courses were presented to improve not only their reading rate, but also their comprehension and retention of information. Courses in study techniques, stress management, self-

actualisation and communication skills further contributed to the establishment of a learning-centred approach to education at CUT. The Reading Development programme is compulsory for all first-year students, and $\pm 2\,050$ students were accommodated in the programme in 2009.

Admission testing

CUT made use of two admission tests: The Academic Potential Test (GSAT) and English Proficiency Test were used to evaluate all students not meeting the minimum admission requirements of CUT. In certain courses, an interest questionnaire and interview were also utilised as part of the selection process. The scores achieved by prospective students on the above tests were listed in a hierarchy, and the prospective students with the highest scores above the minimum requirement were selected. A total of 2 214 prospective students were tested for the 2009 intake.

Student Counselling

The Centre for Counselling and Social Services rendered a wide variety of services to CUT students in 2009, with emotional and social wellbeing forming the core of this service. A large number of our students come from difficult backgrounds, with family and financial problems at the forefront. The Centre focuses on student support from a holistic wellness perspective, following an approach whereby the main areas of wellness, i.e. physical, social, mental, emotional and spiritual wellness, are all addressed via individual support or group sessions.

Services rendered to students

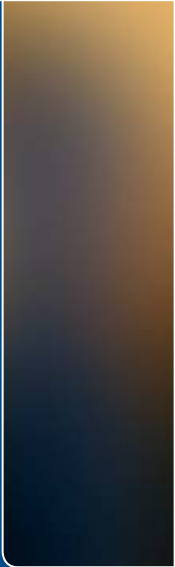
| Event | Number of Students |
|-------------------------------|--------------------|
| WASB Week | $\pm 7\,900$ |
| Study Skills | 690 |
| Other Workshops (Life Skills) | 1 190 |
| Emotional Support | 529 |
| Social Support | 131 |
| Academic Appeals | 397 |
| VCCT Week | $\pm 3\,000$ |
| Academic At-Risk Programme | ± 250 |

Supplemental Instruction

The purpose of the SI programme, which is aimed at first-year students, is to assist students in subjects with a high degree of difficulty, thereby improving student performance and retention. Through this programme, a senior student who has demonstrated proficiency in a targeted course undergoes SI training and then attends the course to model effective student practices and attitudes to first-year students. The objectives of the programme are to improve the throughput rate of first-year students, to establish a culture of study at the University, to encourage students to ask questions and formulate answers, to assist students in their mode of learning, and to link study skills with subject content. During the year, SI was offered in 75 subjects in all three faculties, as well as at the Regional Learning Centre in Kimberley.



Candle lighting ceremony during Wellness week.



Financial health of the University

In 2007/8 CUT had found it necessary to approach the then-DoE for an operating loan to cover expenses, as CUT had for many years been under pressure from an escalating salary bill and rising operating expenses. During 2009, the University managed to operate within the expenditure guidelines set by the CUT Council, as well as the guidelines set by the then-DoE to bring that expenditure under control. As a result, CUT has been able to accumulate R49.801 million to be reinvested in other items of expenditure, for instance in the academic sector. The restructuring of middle management, which took place in 2009, was intended to address this and have a reducing effect on the salary budget.

For 2009 the University was thus able to generate a surplus of R49.807 million due mainly to savings on operating expenses, including the salary bill, and investment returns of R24.475 million. The net asset position improved with an amount of R93.331 million. Moreover, an unqualified audit report was received from the external auditors.

The University received restricted donations of R1 909 million in 2009. Donations received were aimed at long-term projects, hence the larger, once-off donations to specific University centres, faculties and projects.

Financial aid totalling R91 544 466 was awarded to students in 2009 – an amount made up by CUT funds, National Student Financial Aid Scheme (NSFAS) grants, and externally funded bursaries and scholarships. Financial aid was awarded to students on the basis of academic performance and financial need.

Total CUT financial support was R10 255 million.



Prof. Thandwa Mthembu, Vice-Chancellor and Principal receives a cheque for R4,5 million from Mr Gideon Sam, chairperson of the distribution agency for Sport - National Lottery. The funds received were for the improvement of CUT's sport facilities.

Statement of Financial Position at 31 December 2009

| | Note | 2009 R'000 | 2008 R'000 |
|---|------|----------------|----------------|
| Assets | | | |
| Non-current assets | | 378 404 | 327 544 |
| Property, plant and equipment | 5 | 233 839 | 197 987 |
| Investment property | 6 | 1 352 | 1 368 |
| Other non-current financial assets | 7 | 142 577 | 127 487 |
| Non-current receivables | 8 | 636 | 702 |
| Student loans | | - | - |
| Other non-current receivables | | 96 | 242 |
| Leasehold asset | | 540 | 460 |
| Current assets | | 222 654 | 180 184 |
| Receivables and repayments | 9 | 12 849 | 28 953 |
| Student debtors | | 10 398 | 9 038 |
| Other amounts | | 2 451 | 19 915 |
| Cash and cash equivalents | 10 | 209 805 | 151 231 |
| Total assets | | 601 058 | 507 728 |
| Funds and Liabilities | | | |
| Funds available | | 367 353 | 308 911 |
| Property, plant and equipment | | 159 290 | 159 290 |
| Restricted use funds reserves | | | |
| Other – Education and general | | 78 566 | 29 536 |
| Unrestricted use funds reserves – Education and general | | 129 497 | 120 085 |
| Non-current liabilities | | 54 309 | 55 309 |
| Interest bearing borrowings | 11 | 3 801 | 8 304 |
| Post retirement obligations | 12 | 50 508 | 47 005 |
| Current liabilities | | 179 396 | 143 508 |
| Accounts payable and accrued liabilities | 13 | 175 621 | 139 656 |
| Leave accrual | 14 | 357 | 449 |
| Current portion of interest bearing borrowings | 11 | 3 418 | 3 403 |
| Total funds and liabilities | | 601 058 | 507 728 |

Statement of Comprehensive Income for the year ended 31 December 2009

| | Note | Council Controlled Unrestricted | Specifically Funded Activities Restricted | SUB -TOTAL | Student and staff Accommodation Unrestricted | 2009 R '000 TOTAL | 2008 R '000 TOTAL |
|---|------|---------------------------------------|--|----------------|---|-------------------------|-------------------------|
| TOTAL INCOME | | 366 963 | 39 237 | 406 200 | 7 809 | 414 010 | 365 911 |
| RECURRENT ITEMS | | | | | | | |
| State appropriations – subsidies and grants | | 215 951 | 7 742 | 223 693 | - | 223 693 | 206 150 |
| Tuition and other fee income | | 132 468 | 2 583 | 135 051 | 7 809 | 142 860 | 114 080 |
| Income from contracts | 17 | - | 14 761 | 14 761 | - | 14 761 | 13 568 |
| Sales of goods and services | | 5 357 | - | 5 357 | - | 5 357 | 9 200 |
| Private gifts and grants | | 807 | 2 057 | 2 864 | - | 2 864 | 2 921 |
| SUBTOTAL | | 254 583 | 27 143 | 381 726 | 7 809 | 389 535 | 345 919 |
| Interest income | | 12 380 | 12 094 | 24 474 | - | 24 474 | 19 992 |
| NON-CURRENT ITEMS | | | | | | | |
| Gain on investments realised | 18 | - | - | - | - | - | - |
| TOTAL EXPENDITURE | | 335 238 | 90 927 | 356 156 | 8 038 | 364 203 | 343 079 |
| RECURRENT ITEMS | | 335 238 | 20 927 | 356 165 | 8 038 | 364 203 | 343 079 |
| Personnel | 15 | 211 306 | 5 857 | 217 173 | 3 698 | 220 871 | 206 210 |
| Salaries | | 207 813 | 5 857 | 213 670 | 3 698 | 217 368 | 199 180 |
| Post retirement benefits: Deficit | 12 | 3 503 | - | 3 503 | - | 3 503 | 7 030 |
| Other current operating expenses | 16 | 107 506 | 15 070 | 122 576 | 4 221 | 126 797 | 122 522 |
| Depreciation | 16 | 13 527 | - | 13 527 | - | 13 527 | 10 810 |
| SUBTOTAL | | 332 349 | 20 927 | 353 276 | 7 919 | 361 195 | 339 542 |
| Finance costs | 19 | 2 696 | - | 2 696 | 119 | 2 815 | 3 248 |
| NON-RECURRENT ITEMS | | | | | | | |
| Loss on disposal of assets | | 193 | - | 193 | - | 193 | 289 |
| SURPLUS/ (DEFICIT) FOR THE YEAR | | 31 725 | 18 310 | 50 035 | (229) | 49 806 | 22 832 |

Statement of Cash flows for the year ended 31 December 2009

| | | 2009 | 2008 |
|--|------|----------|----------|
| | Note | R '000 | R '000 |
| Operating activities | | | |
| Cash generated from operations | 23 | 97 367 | 95 937 |
| Gain on investments realised | | - | - |
| Net cash flows from operating activities | | 97 367 | 95 937 |
| Investing activities | | | |
| Acquisition of property, plant and equipment | | (49 556) | (23 668) |
| Proceeds on the disposal of assets | | - | 157 |
| Increase in other non-current financial assets | | - | (20 000) |
| Interest received | | 18 067 | 15 649 |
| Net cash flows used in investing activities | | (31 489) | (27 862) |
| Financing activities | | | |
| Repayment of borrowings | | (4 488) | (3 908) |
| Interest paid | | (2 815) | (3 248) |
| Net cash flows used in financing activities | | (7 303) | (7 156) |
| Net Increase in cash and cash equivalents | | 58 575 | 60 919 |
| Cash and cash equivalents at 1 January | 10 | 151 231 | 90 312 |
| Cash and cash equivalents at end of year | 10 | 209 806 | 151 231 |



