

CUT Annual Review 2008



Central University of
Technology, Free State

Thinking Beyond



Mr MPG Lekota, Chancellor

Mr TO Loate, Chairperson of Council



Motto

THINKING BEYOND captures the aspirations of a new university of technology prepared to boldly shape its own future in dynamic and innovative ways.

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 the 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
- Forges strategic partnerships

Core Values

- Customer service
- Integrity
- Diversity
- Innovation
- Excellence



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1 Message from the Vice-Chancellor and Principal

The spurts of energy experienced in 2007 as part of remaking CUT and building a firm foundation for it to realise its mission propelled us even more in 2008.

We continued to make various interventions through: institutional introspection and information sharing (communiqués); deliberation (public lectures and lunchtime talk-shops); inculcating values, discipline and the work ethic required of any successful institution (the Leadership Charter); incrementally revising our processes so that they transfer some responsibility and accountability to other executives and managers; and embedding quality management principles at all operational levels.

As reported in the 2007 review, the four major tasks set by Council in 2007 continued to attract focus, namely: managing a salary budget that had been progressively bulging; revitalising institutional and operational planning; establishing strategic partnerships; and expediting the institutional restructuring process.

With regard to the salary budget difficulties we faced in 2007 – and the challenge to reduce the budget from about 72% of the subsidy plus tuition fee income to within 65% – I am pleased to report that we managed to bring the salary budget down to 66% in 2008, having ended the year 2007 at 69%. We optimised

executive functions and thereby reduced the number of executives from nine (plus an additional highly graded but non-executive position) to only four.

We also scoured the whole staff establishment and either removed or combined a number of lower level positions. These interventions allowed us to turn the academic-to-support staff salary ratio around to 51:49 by the end of the year. We can now afford to invest more in academic positions in 2009 onwards and thereby reduce the high student-to-instructional staff ratio to more acceptable levels.

After the Institutional Planning Division was revived and restructured in 2007, this division started work on aligning CUT's operations to the overall strategy through various strategic sessions and new processes. A 15-point Institutional Strategy was produced in March 2009 and supported by Council. The 15 points were later reformatted into three major strategic sets, namely: building the institution's foundations as a university; aligning the academe with the needs of business/industry and government; and building strategic partnerships.

A strategic budgeting approach to the 2009 institutional budget was also agreed upon. This is to allow us to invest in the university's strategy rather than continuing with the same old expenditure patterns that do not necessarily support the strategy.



In the area of strategic partnerships, one of the major projects we pursued in 2008 involved securing the requisite support from the Department of Science and Technology (DST), the Free State Provincial Government and various partners in business/industry for the establishment of a Regional Innovation will help to drive the province's innovation strategy and will become an interface between the academe and technology transfer on the one hand, and industrial and socio-economic development on the other. We are on course to get this centre off the ground in 2009.

As was the case in 2007, the most challenging of all the tasks was that of cascading institutional restructuring down to middle management level, after the example set by the executive management restructuring process. The sheer volume of the positions and functions involved and the potential loss of productivity and skills due to attendant uncertainties made this task substantial and complex. Disagreements and legal challenges did not allow us to start this process during the fourth quarter of the year, as had been planned. All of the above notwithstanding, we plan to realise a saving of about 14% of the support services salary bill when the new positions come into effect in 2009. Again, this will give us more room to reinvest these savings in the academe and other strategic priorities.

The academic infrastructure project funded by the Department of Education, worth about R180 million (including CUT's own contribution), started in earnest with the appointment of a project management company to manage the various sub-projects, along with various professional teams to design and cost the new developments. Given the university's size, this is a substantial injection not only to our balance sheet but also to the state-of-the-art facilities we boast.

We should see the year 2009 as one in which we will focus on putting the most competent and innovative people in the new positions in support services, teaching and research. Our people, our new infrastructure and our facilities therefore give me confidence that CUT is on course to greater things.

1 October 2009

Professor TZ Mthembu

Vice-Chancellor and Principal

[FOTO VAN PROF. TZ MTHEMBU]

2 Vice-Chancellor and Principal's Report on Management/Administration

Principal's leadership and managerial achievements

The purpose of this section is to present the Vice-Chancellor (VC) and Principal's leadership, managerial and administrative achievements, as measured against goals and objectives set by Council for the period 1 January to 31 December 2008. It must be noted that these achievements would not have been possible without contributions from the rest of the executive team and other levels of staff.

Below, the elements of the VC's 15-point strategy are presented.

- **Strategy 1: Reorganising the university and making it fit for purpose**

In functionally realigning the structures, systems and operations across the institution, a middle management restructuring report was produced (March 2008); a new Executive Management structure was approved by Council in September 2007 and implemented in full by March 2008 (Phase 1 of institutional restructuring); and a new middle management structure was approved by Council in September 2008 (Phase 2).

In order to establish a logical, coherent and productive administrative and management system, the Institutional Planning Unit is working more coherently on the CUT Dashboard and many Institutional Planning and Management Information projects; Finance, Human Resources and Operations have been combined; Academic Administration and the Registry have been combined; Faculty management structures have been realigned: four faculties instead of three, with a new Faculty of Engineering, Information and Communication Technology.

To secure organisational efficiency in costs and operations, the salary budget has been managed within about 65%, down from the 72% budgeted for 2007. About R15 million in savings was realised after restructuring and reinvested in the academic sector; At about 51:49, the academic : support staff ratio is realigning positively in favour of academic staff and there are plans to improve this to 55:45 in 2009.

- **Strategy 2: Equity, quality of staff and staff development**

Due to restructuring, there is a general moratorium on new support staff appointments, even though academic staff appointments have been allowed.

The CUT presents equity plans and submissions to the Department of Labour (DoL), but these are mechanical or compliance exercises; The VC will ensure that one of the Key Performance Areas (KPA's) for each executive for 2009 relates to equity so that implementation and monitoring can start in earnest.

With regard to staff development programmes to ensure optimal performance, the following can be noted: Research development of academic staff continued; the CUT has identified the need to build a critical mass in research because it would not be possible to achieve the objectives only with the existing research staff (funds will be set aside for this in the 2009 budget); Executive Management development took place (executive coaching and monthly knowledge-sharing sessions).

- **Strategy 3: Creating an institutional culture conducive to deliberation and innovation**

The CUT Leadership Charter (which identifies expected and humane behaviour towards students

and fellow staff) was created and approved in 2008; training of staff on the charter took place in March/April 2008.

In unleashing a creative and innovative spirit among staff and students and to engage students and staff in scientific thinking, a programme of lunchtime talk shows and early-evening public lectures was put in place and delivered; an evidence-, policy- and procedures-based approach to resolving disputes and appeals has begun to inculcate the rule of law on campus.



- **Strategy 4: Emancipating relations between academics and students and amongst different groupings**

Lecturers and administrative staff must exhibit an orientation towards an 'emancipatory concept' in their engagements with students and other staff. A survey has been planned to assess this in 2009 and to implement some strategies to improve on these aspects.

- **Strategy 5: Instituting a learner-centred approach to teaching and learning**

The VC aspires to introduce approaches or methods to teaching and learning that emancipate students and make them proactive, creative and more independent. 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.

- **Strategy 6: Enhancing Science, Engineering and Technology (SET)**

The CUT stood at 43% SET in 2007, but is now at 48%, which is beyond the target; Through the South African Technology Network (SATN), a consortium of universities of technology (UoTs), a performance indicators project has been launched; Presentations to the Department of Education (DoE) were made in November 2008, showing that there is a great need for Peer Group Educator (PGE) programmes in the country and at UoTs; Business plans for each of the four niche areas were developed and additional funding for their implementation will be made available in the 2009 budget.

- **Strategy 7: Ensuring the supply of quality Science, Engineering and Technology enrolments**

In helping to increase the number of SET-qualifying matriculants in the Free State (through a partnership with the Free State DoE), the following is worth mentioning:

Meetings culminating in a workshop on 21 July with the FSDoE have led to the identification of four areas of intervention; Funding proposals have been prepared on 1) Remodelling and expanding the Saturday and Winter School programmes; 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.

- **Strategy 8: Vocational pedagogy as a possible research niche or area of scholarship**

There seems to be a lack of knowledge of a vocational pedagogic approach to teaching for the world of work as it pertains to South Africa and the UoT approach to Work-Integrated Learning; this also relates to the learner-centred approach at UoTs for learners who need competencies for the world of work; funds for this research project will be set aside in 2009.

- **Strategy 9: Creating a critical mass in research and teaching**

In establishing a critical mass of senior professors in a selected number of research and teaching areas, six new professorships in five fields have been created and budgeted for in 2009; the recruitment and appointment processes will be completed in 2009.

A R1 million contingency fund was set aside to create a strategic fund for these scientists/professors, their laboratories and postgraduate students; some vacant posts will be used to provide for supporting researchers, postgraduate students and post-docs.

In enhancing the current research thrusts and niche areas through partnerships and new staff, the following can be noted: Partnerships developed with the Joburg Centre for Software Engineering (JCSE) in the field of software development (USA, Mexico and India also involved); Conceptual paper produced on local and regional innovation; Department of Science and Technology (DST), Department of Trade and Industry (DTI), Industrial Development Corporation (IDC), Free State Development Corporation (FDC), provincial Department of Tourism, Environmental and Economic Affairs (DTEEA) and Free State Provincial Government (FSPG) becoming major supporters of this initiative; Funding of R500 000 being negotiated with the DST; Partnership has emerged with BioPAD on the Biotechnology Thrust; Proposals on the CUT's Educational Support programme are ready for delivery in 2009.

- **Strategy 10: Enhancing technology-oriented research and innovation**

In developing modules with a technology and innovation focus, plans are afoot to develop a core curriculum module with entrepreneurship, technology and innovation, industrial psychology and project management as core components; this will be approved in 2009 and implemented in 2010.

In an attempt to enhance technology focus and establish links between academic products and business/industry, plans are afoot to establish a commercialisation arm (a trust and a Section 21 company) to cater for our staff and student innovations, the incubation of Small, Medium and Micro Enterprises (SMMEs) and spin-off companies; to be approved by Council in March 2009.

- **Strategy 11: The choice of business and industry as the primary partner**

The CUT, as a technology-oriented institution, wishes to transfer technology to business and industry, as primary partners that will give financial and other support to such developments. As such, the Regional Innovation Hub/Centre and the Commercial arm have been conceptualised and their implementation is being planned; the first

step in this process was for the CUT to produce a Regional Innovation Strategy concept document, which was shared with business/industry (May 2008) and the provincial government (October 2008).

The CUT has produced a number of products ready for mass production and commercialisation like 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.



- **Strategy 12: Government as business partner (doing business with government)**

A symbiotic relationship between the CUT and government and its agencies has been forged, whilst various programmes required to support provincial and local governments have been designed for introduction in 2009.

Several meetings were held with the mayor of Mangaung, the city manager, the premier, some members of the Executive Council

(MECs) and the entire Provincial Executive; a number of programmes designed to provide municipal support have been devised (e.g. National Certificate: Municipal Planning and Development; National Diploma: Infrastructure Planning and Maintenance; National Certificate: Accounting); expectations are that local and provincial governments will provide funding for those enrolling in these strategic programmes.

- **Strategy 13: Internationalisation (internationalising the CUT)**

A presentation was made to a number of Southern African Development Community (SADC) vice-chancellors under the auspices of the Southern African Regional Universities Association (SARUA) on integrated planning and capacity-building and the project was well received; The CUT has partnerships in Germany with Aalen University.

Memorandums of understanding (MoUs) have been signed with the National University of Rwanda and the Kigali Institute of Science and Technology (KIST), with the KIST MoU being planned for implementation in 2009 with at most four master's and doctoral students from there registering; there are ongoing recruitment drives in the SADC countries mentioned, especially Lesotho; some partnerships with the CUT are being explored through the High Commissioner towards setting up UoT programmes in Lesotho; a collaboration with the Organisation for Social Science Research in Eastern and Southern Africa (OSSREA) is being explored.

- **Strategy 14: Transformation (transforming the CUT from a technikon into a university of technology)**

The CUT Transformation Framework has been developed and consulted amongst the various stakeholders; this also refers to achievements under Strategy 2 above; work has started on the production of a CUT qualifications framework to align with the new Higher Education Qualifications Framework (HEQF).

- **Strategy 15: Engagement, strategic partnerships and advancement (making these part of a UoT's core business)**

Strategies to diversify the CUT's support base for the institution – moral, social, financial and otherwise – have to be devised; engaging with various stakeholders and creating strategic partnerships with them should be the focus; increased institutional advancement and better financial sustainability should result from these engagements; reorganisation of our centres and business-oriented units should be pursued.

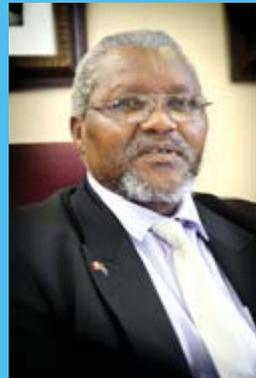
A number of the strategies above talk to this overarching goal; examples are Strategies 10, 11 and 12 on commercialisation, business/industry and government partnerships; community engagement should also be a focus. A number of projects have been introduced in Jacobsdal and other places in the Free State as part of the Poverty Alleviation Strategy of government.

Aspects relating to Management/Administration

This section deals with managerial/administrative aspects of the institution's operations, including new senior executive/administrative appointments.

It was reported in 2007 that Council had decided on an institutional restructuring exercise in 2005, which could only be implemented as from 2007. The focus in 2007 was on Phase 1: Executive Management.

All executive appointments had been made by May 2008. As such the full team consisting of the Vice-Chancellor and Principal, two Deputy Vice-



Chancellors, an Executive Director and a Registrar, was in place throughout most of 2008.

The next phase of the restructuring process, Phase 2: Middle Management Restructuring was initiated through Council's acceptance of Management's proposals in March 2008. A new middle management structure was finally approved in September 2008. Work towards populating the new structure then started immediately. The implementation process was set to proceed at the beginning of 2009.

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 R12 million are expected from 2009 onwards.

An additional allocation of about R10 million (R8 million for academic and research appointments and a 300% increase of R3 million 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 has resulted in the salary budget ratio of academic: support staff improving from 49:51 in 2007 to 55:45 in 2008. In this way, the CUT is beginning to shift resources towards its core business.

Administrative structures and resources

This section deals with achievements in the administrative structures and resources, both personnel and systems, which should be assessed in terms of realistic expectations.

- **Risk management and the internal audit function**

The internal audit function was outsourced to KPMG towards the end of 2007. The year 2008 was the first year of operation for KPMG. As a result, the CUT now has a proper Risk Register and a three-year rolling Audit and Risk Management Plan. Various audits were conducted and reports produced. The KPAs for executive managers have been adjusted to include all the risk issues relating to their divisions.

The intention was stated that after a year of operation, the outsourced internal audit function would be reviewed early in 2009 in order to give the CUT evidence that supports the continuation of the outsourced function or other strategies to deal with this function.

- **Information and Communication Technology (ICT) systems**

ICT systems are one of the most complex systems for most executives in that there is usually not much expertise at executive level to make informed decisions.

Whilst periodic reviews are the norm in academic affairs, for many years administrative systems at the CUT have been running without periodic reviews. The CUT's Institutional Planning Unit has produced a framework for periodic reviews for administrative units. As part of this process, the ICT Unit was reviewed in October/November 2008. Due to the complex nature of such a review and a lack of internal capacity, an external service provider with all the necessary expertise had to be engaged. A commitment was made to monitoring the improvement plan closely during 2009.

- **Financial and Investment Management**

Strict control over finances was exercised throughout the year.

The salary budget has been managed to within 64.5% of the total of subsidy and tuition fees, down from a budgeted 72% in 2007. The 2007 report presented some measures that were taken in 2007 and which resulted in the curbing of salary expenditure to within about 67% at the time.

In the area of investments, the CUT has not performed too poorly, despite the serious global financial problems. The CUT's total investment portfolio stands at about R280 million. Long-term investments have grown from about R106 million as at 31 December 2007 to about R128 million as at 31 December 2008, a 20% increase. Short-term investments of about R151 million consist of about R61 million of the DoE grant for infrastructure development. The long-term investments, unaffected by the DoE grant, remain a testimony to more prudent management of the CUT's investments.

- **Procurement (Supply Chain) Management**

The year 2007 saw the development of a new procurement policy and procedure. This helped to build a strong foundation for the CUT. However, the implementation of this policy has been fraught with problems due to a lack of administrative capacity.

Significant support – both human and financial – has been given to the CUT's Procurement Unit. The Vice-Chancellor and the Executive Director: Vice-Chancellor's Office have spent substantial amounts of time clarifying the criteria and devising formulae to be used in the process of scoring bidders in a fair and scientific manner.

3

Significant Student Data and Relevant Statistics

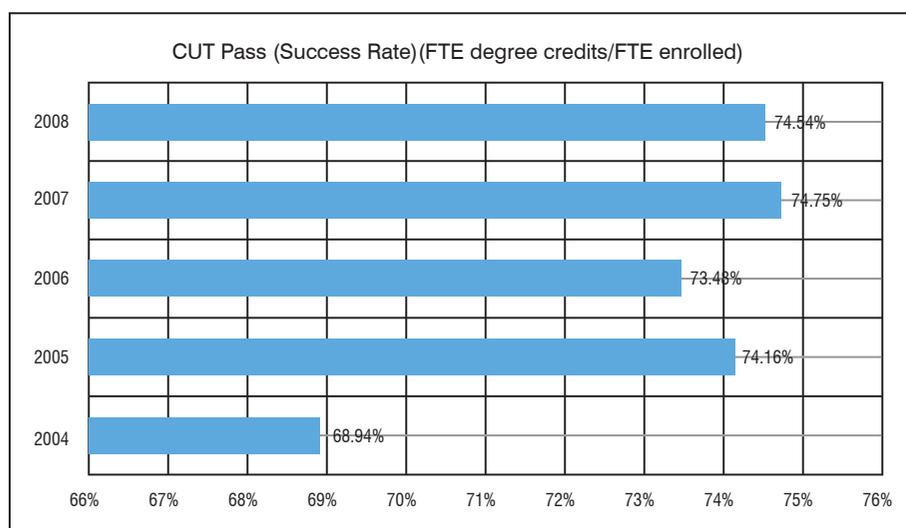


The following paragraphs refer to and contain information on the student headcount in 2008 by field of study. Details on CUT student performance and headcounts and academic

staff statistics, as well as transformation targets realised, are presented for groups defined in terms of Higher Education Management Information Systems (HEMIS).

The following table presents a breakdown of 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	5049	44	605	5	4976	43	901	8	11531
2008	4592	42	666	6	4659	43	978	9	10895
2007	4318	41	773	8	4417	42	970	10	10478
2006	4242	41	762	7	4434	42	1020	10	10458
2005	4278	42	823	8	4151	40	1068	10	10320
2004	4812	42	880	8	4537	40	1118	10	11347



The pass/success rate dropped slightly from 74.75% in 2007 to 74.54% in 2008. The pass/success rate is, however, still higher than that of 2004, 2005 and 2006. The pass rate is calculated by dividing the Full-Time Equivalent (FTE) degree credits with the FTE enrolments.

Postgraduate (M & D) Enrolments per Faculty:	2007	2008	*2009
Management Sciences	128	112	89
Engineering, Information & Communication Technology	63	61	50
Health & Environmental Sciences	80	74	60
Total	271	247	199

The postgraduate enrolment figure decreased from 247 in 2008 to 199 in 2009.

The table below presents the student headcount data for 2008.

Post- and undergraduate enrolments and graduation rates by major area of study

CESM Category	Post-/UnderGrad	2007			2008			2009
		Headcounts	Graduates	GradRate	Headcounts	Graduates	GradRate	Headcounts
BUS/MAN	PostGrad	37	9	24.3%	32	6	18.8%	22
	UnderGrad	3'188	848	26.6%	3'373	905	26.8%	3'508
BUS/MAN Total		3'225	857	26.6%	3'405	911	26.8%	3'530
EDUCATION	PostGrad	330	139	42.1%	316	154	48.7%	336
	UnderGrad	513	163	31.7%	380	165	43.4%	711
EDUCATION Total		842	301	35.8%	696	319	45.8%	1'047
OTHER HUM	PostGrad	46	11	23.4%	35	7	20.0%	28
	UnderGrad	1'558	354	22.7%	1'494	378	25.3%	1'568
OTHER HUM Total		1'603	365	22.8%	1'529	385	25.2%	1'596
SET	PostGrad	130	12	9.0%	128	16	12.5%	99
	UnderGrad	4'675	765	16.4%	5'135	888	17.3%	5'260
SET Total		4'805	776	16.2%	5'263	904	17.2%	5'359
Grand Total		10'477	2315	22.1%	10'893	2520	23.1%	11'531

The CUT's graduation rate improved in each of the four categories from 2007 to 2008, but especially gratifying is the SET rate, which, although lower than the average overall, increased by a full percentage point in an important yet traditionally "difficult" area of study.

The actual CUT graduation rate grew by a full percentage point from 2007 to 2008, and was slightly higher than the rate predicted in the enrolment plan sent to the DoE for the year 2008.



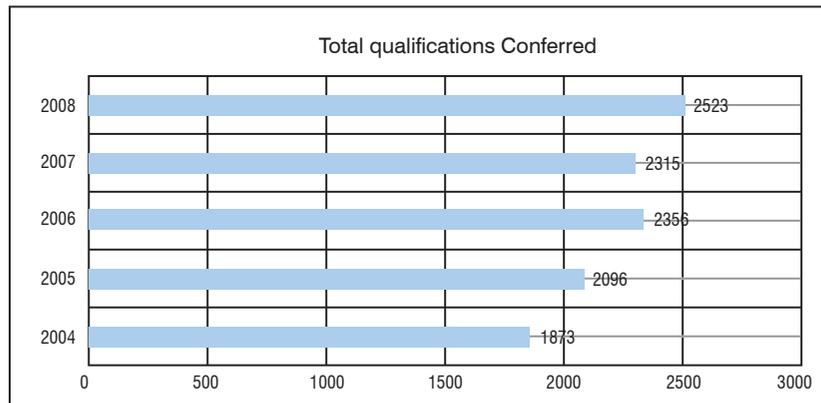
The following table gives a comparison between the 2007 and 2008 student pass rates by gender.

Student pass rates by gender: 2007 – 2008

CESM Category		Female 2007	Male 2007	2007 Total	Female 2008	Male 2008	2008 Total
BUS/MAN	FTE	1,247	904	2,152	1,257	924	2,182
	Success (Pass) Rate	74.8%	69.8%	72.7%	73.2%	69.8%	71.8%
EDUCATION	FTE	344	284	628	365	286	651
	Success (Pass) Rate	82.0%	76.4%	79.5%	81.6%	77.5%	79.8%
OTHER HUM	FTE	1,149	758	1,907	1,167	758	1,925
	Success (Pass) Rate	81.9%	77.4%	80.1%	81.0%	75.8%	79.0%
SET	FTE	1,366	2,059	3,425	1,484	2,268	3,752
	Success (Pass) Rate	76.9%	69.2%	72.3%	76.3%	70.8%	73.0%
Total FTE		4,106	4,006	8,112	4,273	4,237	8,510
Total degree credit success rate		78.1%	71.4%	74.8%	77.1%	71.9%	74.5%

After an increase in the CUT success rate from 2004 to 2005, it dropped slightly in 2006 (73.5%) and improved again in 2007 (74.8%). For 2008 there was a slight drop of 0.3% - i.e. no major improvement.

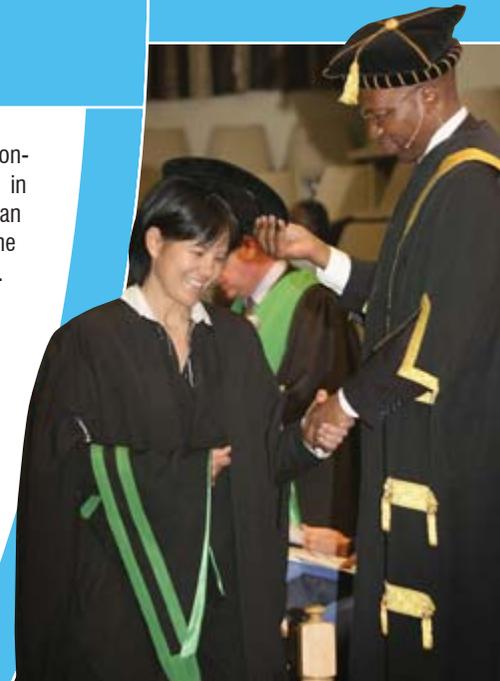
Although the Humanities showed a higher success (pass) rate than the average per year, the CUT's SET pass rates are improving and have reached nearly 73% – an improvement of 2.6% in two years. Our overall 2008 rate of 74.5% is slightly lower than the DoE's contact undergraduate rate of 77% for 2007.



The qualifications conferred by the CUT in 2008 totalled 2523 – an improvement on the previous year's 2315.

An annual fact book on the CUT, "Stats-at-a-Glance", summarises the statistics for 2007 and also provides comparative indicators and information from previous

years. This comprehensive collection is available on the CUT's homepage at www.cut.ac.za, in the "Statistics" section under "About us".



4

Campus Development

Closure of President Brand Street

During the year several attempts were made to arrange meetings between the CUT and the Municipality in an attempt to find a solution to the CUT's proposed closure of President Brand Street. However, not a single meeting was honoured by the Municipality.

In the revision of the Bloemfontein Campus Master Plan the consultants made several recommendations regarding possible safety measures that the CUT can implement to make the crossing of President Brand Street safer for pedestrians. A commitment was made to investigate these measures further during 2009.

Campus Master Plans (Bloemfontein and Welkom Campuses)

A Campus Master Plan for each campus was developed and completed during 2008 and approved at the November 2008 Council meeting.

DoE 140: Academic Infrastructure Project

A project management company, Kwezi V3, was appointed to manage the implementation of all six projects on behalf of the CUT. Consultants for the various projects were appointed to design and cost the buildings to be constructed. Tendering for the projects was envisaged to conclude in the first quarter of 2009, with actual construction shortly thereafter. The construction of the buildings will provide some much-needed capacity and improve the conditions for teaching and learning.



Facilities and Major Capital Works

5

CUT Welkom Campus

The following facilities and major capital works were dealt with at the Welkom Campus in 2008:

- As alluded to in the 2007 annual report, the installation of the new campus security surveillance camera system was completed in 2008. The system is in full operation and has greatly improved security on campus.
- Three new hard courts (tennis, netball and basketball) tendered for in 2007 were constructed. The facilities are now in full use by students and staff.
- There were serious problems with the roof covering on both buildings, causing water leakage and damage to equipment and library material. A decision was made to replace the old roof tiles with new corrugated roof sheeting. A contractor was appointed and the project was completed in 2008.

CUT Bloemfontein Campus

Several upgrading and renovation projects were undertaken during 2008, including the internal and external upgrading of facilities, repairs to water-damaged areas, replacement of carpets with vinyl tiles, and painting.



6

Financial Statements

For 2008 the university was able to generate a surplus of R37.744 million due mainly to savings on operating expenses, including the salary bill, and investment returns of R19.992 million.

Long-term investments grew by R21.145 million to R127.487 million and cash and cash equivalents by R60.919 million to R151.231 million for the year as at 31 December 2008.

The net asset position improved by R113.855 million. Moreover, an unqualified audit report was received from the external auditors. Despite these positive results, there were ongoing concerns about the size of the staff establishment and the effect on the salary bill. Steps were taken to address this, including reducing the salary budget; making revised allocations, setting limits on divisional expenditure based on the revised budget, and devolving decision-making on salary expenditure to other executives.

The total financial aid awarded to students in 2008 amounted to R79 629 662, which included the CUT's own funds, NSFAS grants and externally funded bursaries and scholarships. Financial aid was provided to students based on academic performance and financial need.

Total CUT financial support was R9 927 million.



BALANCE SHEET

at 31 December 2008

	Note	2008 R '000	2007 R '000
ASSETS			
Non-current assets		327 544	306 135
Property, plant and equipment	4	197 987	185 562
Investment property	5	1 368	1 380
Non-current investments	6	127 487	106 342
Non-current receivables	7	702	12 851
Student loans		-	12 101
Other non-current receivables		242	370
Leasehold asset		460	380
Current assets		180 184	102 650
Receivables and prepayments	8	28 953	12 308
Student debtors		9 038	7 560
Other amounts		19 915	4 748
Derivative financial instruments	9	-	30
Cash and cash equivalents	10	151 231	90 312
Total assets		507 728	408 785
FUNDS AND LIABILITIES			
Funds available		308 912	330 699
Property, plant and equipment		159 290	159 290
Restricted use funds reserves			
Other - Education and general		29 535	59 844
Unrestricted use funds reserves - Education and general		120 087	111 565
Non-current liabilities		55 309	52 638
Interest bearing borrowings	11	8 304	12 663
Post retirement obligations	12	47 005	39 975
Current liabilities		143 508	25 448
Accounts payable and accrued liabilities	13	139 655	22 118
Leave accrual	14	449	378
Current portion of interest bearing borrowings	11	3 403	2 952
Total funds and liabilities		507 728	408 785

INCOME STATEMENT

for the year ended 31 December 2008

		2008 R '000					2007 R '000 Restated
	Note	Council Controlled Unrestricted	Specifically Funded Activities Restricted	SUB - TOTAL	Student and staff Accom - modulation Unrestricted	TOTAL	TOTAL
TOTAL INCOME		331 418	27 347	358 765	7 146	365 911	370 181
RECURRENT ITEMS							
State appropriations - subsidies and grants		200 080	6 070	206 150	-	206 150	222 057
Tuition and other fee income		105 752	1 182	106 934	7 146	114 080	103 591
Income from contracts		-	13 568	13 568	-	13 568	16 006
Sales of goods and services		9 200	-	9 200	-	9 200	4 664
Private gifts and grants		1 254	1 667	2 921	-	2 921	4 330
SUBTOTAL		316 286	22 487	338 773	7 146	345 919	350 648
Interest income	17	15 132	4 860	19 992	-	19 992	13 993
NON-RECURRENT ITEMS							
Gain on investments realised	18	-	-	-	-	-	5 540
TOTAL EXPENDITURE		318 705	17 278	335 983	7 096	343 079	295 782
RECURRENT ITEMS							
Personnel	15	197 021	5 624	202 645	3 565	206 210	188 400
Salaries		189 991	5 624	195 615	3 565	199 180	183 976
Post retirement benefits: (Surplus)/Deficit	12	7 030	-	7 030	-	7 030	4 424
Other current operating expenses	16	107 456	11 654	119 110	3 412	122 522	91 178
Depreciation	16	10 810	-	10 810	-	10 810	12 613
SUBTOTAL		315 286	17 278	332 564	6 977	339 542	292 191
Finance costs	19	3 129	-	3 129	119	3 248	3 609
NON-RECURRENT ITEMS							
Loss on disposal of assets		289	-	289	-	289	(18)
NET SURPLUS/(DEFICIT)		12 714	10 069	22 782	50	22 832	74 399

CASH FLOW STATEMENT

for the year ended 31 December 2008

	Note	2008 R '000	2007 R '000
Cash flows from operating activities			
Cash generated from operations	23	95 938	77 016
Gain on investments realised		-	5 540
Net cash generated from operating activities		95 938	82 556
Cash flows from investing activities			
Acquisition of property, plant and equipment		(23 668)	(23 300)
Proceeds on the disposal of assets		157	272
Increase in non-current investments		(20 000)	(15 000)
Realisation of non-current investments		-	4 460
Interest and dividends received		15 649	11 185
Net cash used in investing activities		(27 862)	(22 383)
Cash flows from financing activities			
Repayment of borrowings		(3 908)	1 829
Interest paid		(3 249)	(3 609)
Net cash used in financing activities		(7 157)	(1 780)
Net increase in cash and cash equivalents			
		60 919	58 393
Cash and cash equivalents at beginning of year	10	90 312	31 919
Cash and cash equivalents at end of year	10	151 231	90 312



Research and Development

A major initiative in the CUT's research positioning is its support of the development and promotion of research as a core activity of the university.

A fundamental approach to research at the CUT is directed at the development of a sustained, engaged and responsive research culture. Four activities are associated with the development of research:

- Firstly, a research culture driven by an approved Research and Development Plan (the idea of a stimulated research heartland);
- Secondly, the development of staff as researchers and the appointment of competent researchers (the advantage of a critical mass);
- Thirdly, the training of postgraduate students as future researchers (transformation of the research environment);

- Fourthly, the conceptualisation of a research framework that includes the pillars of discovery (basic research and innovation) and integration (applied research, technology transfer and commercialisation) (transformation of practices).

All these activities are informed by the National Plan on Higher Education (NPHE, 2001), national science and innovation strategies, and the CUT's corporate strategic initiatives.

A research plan to drive research development

To support the development of research at the CUT, a Research and Development Plan was approved for 2005-2010. 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

Ten strategic research programmes were identified. These programmes can be clustered into three research foci, with Biotechnology being integrated in many of

these, and so it can therefore be regarded as a cross-cutting programme. The following table indicates the research foci and strategic research programmes.



Research foci and strategic research programmes

Research Focus	Research Programme
Industrial design	<ul style="list-style-type: none">• New product development and design• Automated material handling and radiofrequency identification• Hydro-informatics• Information and communication technology
Quality of health	<ul style="list-style-type: none">• Applied food sciences and biotechnology• Bio-environmental studies• Applied health technology
People and skills	<ul style="list-style-type: none">• Socio-economic development studies• Education• Research development

Innovation Fund

A valuable support system for staff and postgraduate students is the Innovation Fund. The purpose of this fund is to create a research culture, to empower staff and students to be engaged in research, and to address equity in research.

Ten categories of bursaries are awarded:

- Full-time postgraduate students
- Part-time postgraduate students
- Staff studying for a postgraduate qualification at the CUT
- Post-doctoral fellows
- Research fellows/associates
- Project costs
- Top-up funding for external research projects
- Seed money for a research activity to be developed into a niche area
- Research assistance related to the development of an activity into a niche area
- The development of externally funded projects

Research Education

A Research Education programme was designed to provide all staff and student researchers with the opportunity to develop their research skills. This will

be done, *inter alia*, through research workshops and seminars. The idea of these workshops and seminars is to broaden staff members' and students' knowledge with a variety of topics related to research. On an ongoing basis the programme will explain critical research skills such as writing for publications, research applications for funding, research associates with industry, research and social development, and research methodology in technology as a science. All development will be monitored and progress will be analysed. On the basis of the monitoring and analysis a management model will be designed to guide Management in understanding the challenges of an emerging research culture, how to couple it with the ethos of a UoT, and how to provide critical leadership that will stimulate a sustainable research culture.

External Research Funding

External research funding is not only supportive of institutional research activities, but also serve as benchmark and quality for research. Since 1996 the National Research Foundation (NRF) has been following a strategic development route via its technikon research programmes to enable research at the former technikons and current universities of technology. The importance of this programme is that it develops researchers to compete in the focus areas programme.

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
Total		R 14 057 375

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
Total		R 2 824 425

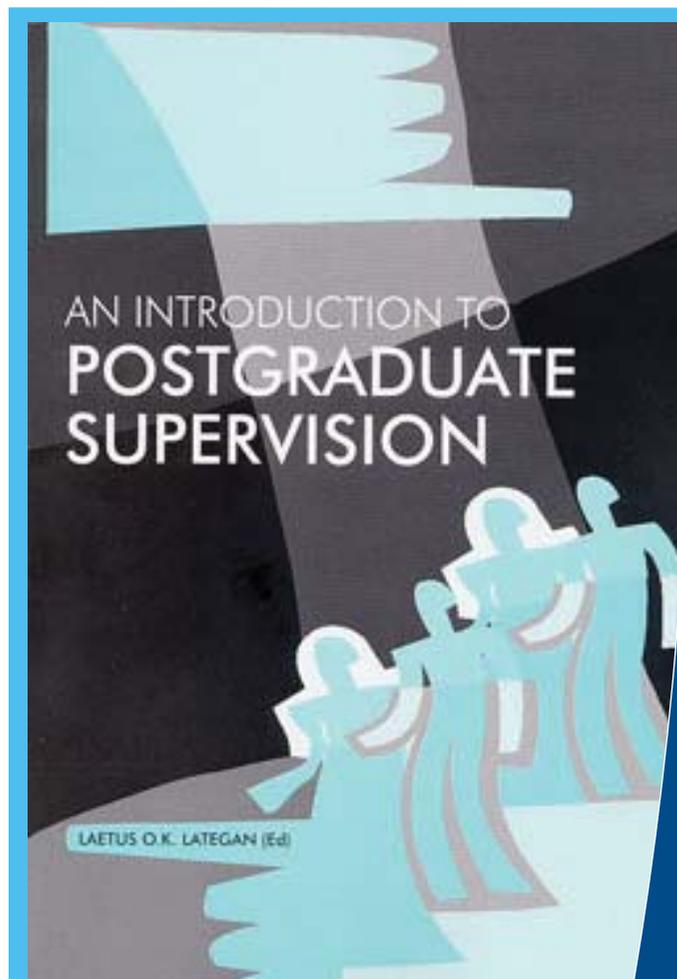
Research articles in accredited research journals are also evidence of research productivity and quality. Three observations can be made: Firstly, the growth in the number of research participants and outputs since 2002; secondly, a sustained number of researchers who contribute on an annual basis and a small number of new participants per annum; and thirdly, a continuous growth in the number of articles in international journals – International Statistical Institute (ISI).

The following table indicates the accredited publication outputs.

Accredited publication outputs

Year	Articles
1998	16
1999	16
2000	13
2001	11
2002	23
2003	27
2004	36
2005	36
2006	42
2007	37
2008	29

Mindful of the fact that it is only in the last 15 years that the CUT has been allowed to offer postgraduate qualifications, it is exceptional that the CUT has performed so remarkably well in this regard in such a short space of time (the following two tables). A specific challenge now is to train more staff to be able to participate in postgraduate supervision and more students to complete their studies in the residency time.



Completed master's degree studies

YEAR of AWARD	Total
1997	7
1998	17
1999	7
2000	10
2001	16
2002	18
2003	19
2004	16
2005	10
2006	21
2007	17
2008	22

Completed doctoral degree studies

YEAR of AWARD	Total
1997	1
1998	1
1999	3
2000	1
2001	2
2002	6
2003	5
2004	7
2005	6
2006	6
2007	11
2008	12

The CUT has always invested in the development of its research. Through its Research Grants Awards (RGA) scheme the CUT has supported research since 2001 with grants to the value of more than R20 million for more than 450 projects in the specified categories. In addition to these awards the RGA scheme also supplements all externally funded research projects.

CUT research grants (previously known as innovation funds) to support staff and postgraduate student research

CATEGORY	NUMBER
Coursework: Master's Degree	28
MTech	303
DTech	91
Post-Docs	18
Equipment	7

CUT research grants (previously known as innovation funds): Total amount awarded to support staff and postgraduate student research

Total 2001	R 1 522 370.00
Total 2002	R 1 002 880.00
Total 2003	R 3 011 788.62
Total 2004	R 2 405 376.07
Total 2005	R 2 928 948.00
Total 2006	R 2 010 257.00
Total 2007	R 2 055 949.19
Total 2008	R 2 972 012.00

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 Grant Awards in 2008

Category	Number	Award
Coursework Master's	3	R 21 000.00
Master's Degree Awards	59	R 1 290 850.00
Doctoral Degree Awards	8	R 233 430.00
Post-Doctoral Fellows	2	R 240 000.00
Equipment	2	R 265 400.00
Supplementation: Thuthuka	10	R 430 000.00
Supplementation: IRDP	12	R 471 332.00
Research Assistant	1	R 20 000.00
Total		R 2 972 012

In view of the progress reported, it can be stated that although there is still much hard work ahead before the CUT can deliver on the desired outputs, many concrete achievements have been accomplished:

- Four programmes approved by the NRF as niche programmes in its Institutional Research Development Programme (IRDP). These niche areas are in new product development and design, automated material handling in a reconfigurable manufacturing environment, hydro-informatics, and applied food safety and biotechnology. In 2008 a total of 12 researchers received funding in the IRDP, which is associated with the niche areas.
- Ten researchers received funding in the Thuthuka programme. The grant holders' research is associated with these strategic research programmes.
- In 2008 more than 30% of academic staff members were involved in the identified research programmes.
- International and national collaboration and partnerships were developed. Active international research partnerships are with the University of Ulm (FHU) for Applied Sciences, the University of Aalen in Germany for Applied Sciences, the University

of Loughborough in the UK, and Indiana University-Purdue University Indianapolis (IUPUI) in the USA. Active national partnerships with the University of Cape Town (UCT), Stellenbosch University (SU), Nelson Mandela Metropolitan University (NMMU), Vaal University of Technology (VUT), Tshwane University of Technology (TUT), University of the Free State (UFS) and University of Johannesburg (UJ) can be identified.

- There has been a gradual increase in FTE staff participation in research: 23.8 FTEs in 2003 compared to 33.8 FTEs in 2007.
- There has been sustainability in the master's and doctoral degree qualifications awarded. During March 2008 seven MTech degrees and nine doctorates were awarded. During September 15 master's degrees and three doctorates were awarded. This is a continuation of the excellent performance in 2007 when five doctorates and 20 MTech degrees were awarded.
- There has been sustainability in publication outputs since 1998, when the CUT published 287 articles to the value 216 credits.



8

Community Engagement

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

The Community Engagement Office is managed from the Office of Technology Management, which falls under the direct management of the Deputy Vice-Chancellor: Academic. She is supported in this assignment by the Institutional Community Engagement Committee.

The following categories of community engagement receive attention by CUT staff and students:

- CE as an element of the 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);
- CE via Student Services and the various residences.

Community engagement at the CUT is seen as a double-tiered system. In one mode, service learning is integrated into the curricula of mainstream academic programmes, while the other consists of extracurricular community service projects. To date, seven service-learning modules have been developed in the faculties, whilst the extracurricular

community service projects are co-ordinated by the Community Engagement Office.

Apart from service learning, the following CE activities received special attention:

- Continuous Professional Development Accreditation Seminars
- Saturday School and Winter School Projects
- Science Park and Commercial Centres
- Centre for Rapid Prototyping and Manufacturing (CRPM)
- Tshumisano Product Development Technology Station (PDTs)
- CUT State Fabrication Laboratory (FabLab)
- Civic Responsibility Support

Matters of Significance considered by Council

9

During 2008 Council attended to and addressed a number of significant matters for the institution, the most important of which were the following: Various policies, plans, constitutions and manuals, such as the CUT Leadership Charter, the Institutional Strategic Priorities, Emergency Electrical Power Management Plan, High-level Operational Plan, identifying KPAs for the various portfolios, and Procurement Policy.

Council also approved the audit report on the HEMIS 2007 student and staff submissions, as well as student fee increases for 2009. These included:

- An 8.5% average increase in tuition fees for 2009, as per policy
- An increase in the registration fee from R455 to R504 for 2009
- An increase in the application fee from R130 (already approved for 2009) to R145 for 2010
- An increase in the late-application fee to R260 for 2009 and R290 for 2010
- An increase in the enrolment deposit from R1 300 to R1 500 for 2009
- An increase in the minimum initial payment towards the total residence fee from R1 200 to R1 300 for 2009
- An 8% increase in residence fees for 2009

Council approved the reorganisation of the Academic Portfolio, the new proposed structures for the Academic Portfolio, academic promotions, as well as new academic positions created as part of the university's strategies to shift resources from support services to the academe.

Council approved the restructuring of middle management and lower levels of staff, as part of strategy one of the Institutional strategy, viz. reorganising the university and make it fit for purpose. In addition, they also approved the proposed institutional structure and the appointment of Prof. Mojalefa Ralekhetho for a fixed period of three

years to manage the restructuring process in consultation with Executive Management for the duration of the process.

A 7% general salary increase for executive managers was approved by Council. This was a deferred salary increase in line with that offered to all other employees for 2008. They also approved a 0.5% increase for all staff, to be implemented 1 July 2008; and a 2% increase for staff at levels P8 to P16, as well as lecturers and junior lecturers, to be implemented 1 July 2008. For 2009 Council approved an 8% remuneration increase for staff on those Peromnes levels within the market and an 8.5% remuneration increase for staff on those Peromnes levels below the market; and for 2010-2011, a 6.5% remuneration increase for staff on the Peromnes levels within the market and a 7% remuneration increase for staff on the Peromnes levels below the market. An 8.5% increase for top management (staff members at levels P1 to P3) with effect from 1 January 2009 was approved.

The year 2008 was also characterised by the appointment of Prof. Talvin Schultz in the position of Executive Director: Vice-Chancellor's Office.



10 Significant Developments and Achievements in Teaching and Learning



Manie

The following are some of the highlights per faculty:

Faculty of Management Sciences

- The CUT achieved fifth position (out of a total of 20 universities) at the 2008 Students in Free Enterprise (SIFE) national competition (School for Entrepreneurship and Business Development students).
- Adv. Manie Moolman, Programme Head: Hospitality Management, was elected as president of Tourism, Hospitality and Sport Education Providers South Africa (THEPSA).
- The Director of the School for Government Management, Prof. Abe Geldenhuys, presented political analyses for SABC news broadcasts on a number of occasions.

Faculty of Health and Environmental Sciences

- The Director of the School of Agriculture and Environmental Sciences, Prof. Carlu van der Westhuizen, was appointed to the South African Council for Natural Scientific Professions.
- Prof. Carlu van der Westhuizen delivered his professorial inaugural address on 14 August 2008. The theme of his address was most appropriate: Measuring farmers' managerial performance: Does it keep pace with environmental changes?
- Dr Sonja Steenkamp, who graduated from the School of Health Technology, was named one of the top 10 rated business plan/innovation entries at the National Innovation Competition awards held at Spier Estates in Stellenbosch. Eighteen universities participated in this competition, with a total of 51 entries.

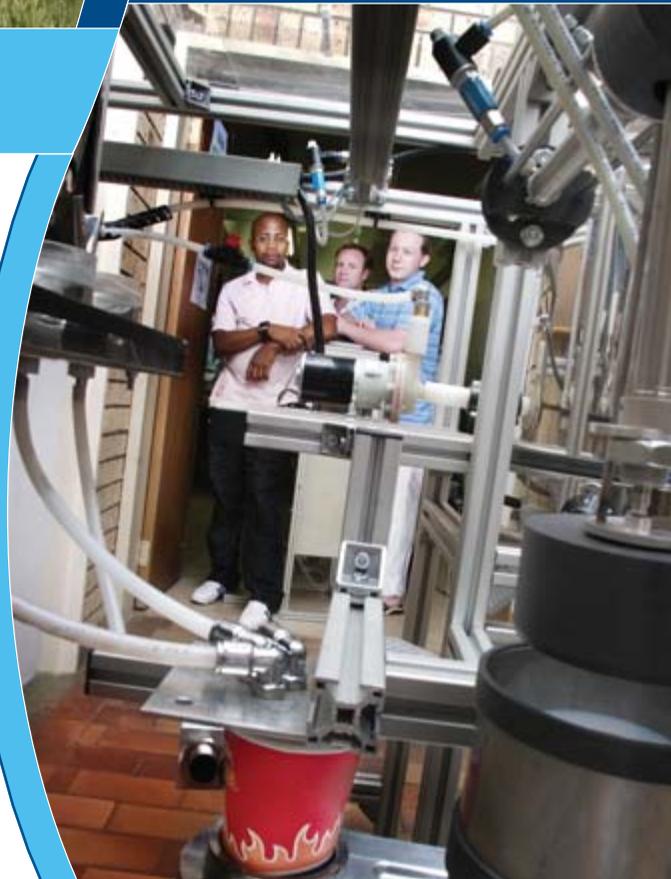
Faculty of Engineering, Information and Communication Technology

- The year 2008 was indeed a successful one for the Saturday School Technology Project (SSTP), as a 100% pass rate was achieved. Four learners managed to obtain an aggregate higher than 80% in the final exam. Five of the learners were in the Top 100 Achievers of the Free State Province.
- The CUT, in conjunction with the Science Park, invested more than R1 million in the development of a state-of-the-art 3D design computer laboratory. This computer laboratory contains the most powerful graphics computers on the campus, equipped with 22" LCD screens. The uniqueness of this laboratory lies in its three-dimensional scanner, haptic devices and free-form 3D software.
- A third-year Graphic Design student received the award for best project in the South African Packaging Institute's annual Gold Pack Awards competition. His work was one of only seven South African designs that were sent to an international competition.
- Three Graphic Design students were judged by Dr Heinz Weiz, President of the SA Banknote Society, and Mr Eddie Foder, as having developed the best design concepts for a new series of banknotes from a security printing firm owned by Mr Johan Uys, a local graphic designer. They presented their ideas at a gala evening, hosted and sponsored by the South African Reserve Bank, at the end of August.
- Students from the School of Mechanical Engineering and Applied Mathematics participated in the annual Baja competition where they achieved third and fourth places overall. They also managed first place for mass production, second place for design report, as well as second place for endurance.

- The Electrical Engineering students secured a well-deserved second position in the annual Junk Yard competition. This is an excellent improvement on the third position of 2007 when they first participated in the event.



- A Rankine-Cyler mini steam-power plant has been purchased for use in the laboratory for Steam Plant III and Thermodynamics II. The CUT is one of three universities in South Africa that has such as unit.



Significant Developments in Academic Support

The Unit for Academic Development (UAD) aspires to support academic staff and students by means of the enhancement of a student-centred teaching and learning approach, the provision of need-directed academic staff development initiatives, leadership in student academic development practices, the initiation of innovative curriculum development processes, the implementation of educational technology strategies, and the provision of quality information literacy and information services.

The UAD continued with its academic development practices during the reporting period and prepared academic staff for the complexities of educating a new generation of students and equipping them with the advanced skills and knowledge they will need for the world of work. Staff members have to cope with, *inter alia*, fundamental curriculum changes due to the promulgation of the HEQF. During 2008 the UAD 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 an Academic Literacy Programme (ALP) for first-year students;
- Empowering academic staff members by means of staff development initiatives (workshops/seminars);
- Co-ordinating the provision of Extended Curriculum programmes;
- Co-ordinating the Extended Curriculum provision training fund;
- Training and supporting academic staff in the development and implementation of course material in electronic mode;
- Establishing institutional curriculum development committees to address the HEQF;
- Redefining the Library and Information Centre mission, structure and services in line with CUT objectives;
- Managing the administrative and academic support services at the Kimberley Regional Learning Centre; and
- Implementing quality assurance practices.

The implementation of the ALP at the CUT deserves special mention. The idea of an ALP was mooted against the backdrop of the widespread findings in research that most of the students entering South African universities in recent years lack the academic language skills required for success at such institutions. The obvious result of this is the negative impact it has on the academic performance of such students and, by implication, the pass and throughput rates. Academic literacy has been interpreted to entail a student's ability to deal successfully with the thinking demands of university study in the language of instruction. In other words, there is a specific set of language and thinking skills that university students

must have if they are to have a chance of success in their studies.

At the beginning of 2008, a total of 1 552 students on the Bloemfontein Campus of the CUT took the Placement Test in English for Educational Purposes (PTEEP). The PTEEP was developed by test-development experts in the Alternative Admissions Research Project (AARP) at UCT and is designed in accordance with what is generally believed to be academic literacy. Put differently, the PTEEP functions to assess all the skills that have been found to constitute the construct of academic literacy. Only 353 of the test-takers managed

to score 50% and above (50% was used as the benchmark for categorising students into those that were academically literate and those that were not). Those that scored lower than this mark were required to start taking classes in academic language development at the beginning of the second term.

Due to the fact that the ALP classes were not compulsory, the CUT Senate resolved in November 2008 that the ALP should become a compulsory programme as from 2009, based on further investigation into the feasibility of it becoming a credit-bearing programme as from 2010.



12

Special Events

Highlights of broader institutional and faculty-based events are presented below:

- Autumn Graduation Ceremony (8, 10-14 March 2008)
- Wellness Approach to Student/Staff Behaviour (WASB) Week (5-9 May 2008)
- Crowning of Mr and Miss CUT (15 May 2008)
- CUT's High-School Quiz (15 May 2008)
- SET Week (15-17 May 2008)
- Annual Prize-Giving Ceremony of the Faculty of Engineering, Information and Communication Technology (16 May 2008)
- Annual Bridge-Building and Water Competition (16-17 May 2008)
- Winter School – School of Teacher Education (30 June-11 July 2008)
- Winter School of Faculty of Engineering, Information and Communication Technology (9-11 July 2008)
- Career Fair (12 & 13 August 2008)
- Ms Wendy Luhabe, Chancellor of the University of Johannesburg, presented the annual prestige lecture on "South Africa is at a crossroad" (28 August 2008)
- Spring Graduation Ceremony (5 September 2008)
- Annual Research Seminar of the Faculty of Health and Environmental Sciences (8 October 2008)
- Annual Research Seminar of the Faculty of Engineering, Information and Communication Technology (17 October 2008)
- First South African Geophagia Conference, hosted by die Faculty of Health and Environmental Sciences (19 October 2008)
- Prestige Research Seminar of the Faculty of Management Sciences (24 October 2008).
- First National Entrepreneurial Conference, hosted by the School for Entrepreneurship and Business Development (11 and 12 November 2008).



13

Student Life and Services

The Student Services Section was involved in a variety of activities on both the Bloemfontein and Welkom campuses. A number of services were rendered through a variety of student services operational units and offices consisting of: Student Wellness and Wellbeing; Dean of Student Services; Counselling and Social Services; Medical Services; Operational Sport; Student Administration; Workforce Development Centre; Student Governance; Student Life; Residence Life; and Student Leadership Development.

Student Development

With regard to Leadership Training, 10 leadership programmes were presented to students. A total of 60 students registered for this programme. Other similar workshops and training sessions were held for, amongst others, the Carnival Committee and the editorial staff of the student newspaper, *Speculum*.

Committee functioning: To ensure that students are prepared to function effectively in leadership positions, several students were exposed to different workshops and training sessions. Training was held for, amongst others, committees of affiliated organisations, the editorial staff of the student newspaper, and the Carnival Committee.

Student Governance

The Students' Representative Council (SRC) elections for 2008/2009 were held on 20 August 2008 at the Gymnasium, and the counting of votes was on 22 August 2008. The voting percentage for the Bloemfontein Campus was 23.06% and 34.05% for the Welkom Campus. The elections were conducted by PricewaterhouseCoopers.

The outcome of the election results was marked by serious tension as a result of different interpretations of the SRC constitution on how the SRC president should be elected. The final outcome was based on the legal interpretation of an attorney from outside the university.

Extracurricular Activities

The Bloemfontein and Welkom Campus choirs performed exceptionally well. The choir attended vocal production workshops to enhance their voices and participated in several competitions and at other special events. They received several awards for their achievements.

By means of various fundraising efforts, the Mr and Miss CUT competition and the efforts of the Carnival Committee, R70 000 could be donated to 15 charity organisations.

To ensure an excellent product, the editorial staff of the *Speculum* was trained by staff from Media 24. Six editions were published.

Provision was made for students who did not actively participate in formal sport codes. Several activities were organised to assist students to be active during their free time. Activities like beach-volleyball matches, wall-climbing, mountain-hiking, river-rafting, informal sport leagues and fun days were organised.

Latin-American and Ballroom dancers participated in several national competitions and performed very well. One of the couples won first place in their category.

The Chess Club participated in a tournament organised by the Free State Chess Club, and they also organised their own tournament on campus that was well supported by high schools in the region.

A total of 42 other organisations were affiliated during 2008. Student Life oversaw the effective functioning of these organisations.



Residence Life

A total of 34 House Committee (HC) members were appointed in 2008 to manage the six CUT residences in co-operation with the residence managers. Sixty students were appointed as receptionists during the April, June, September and December holidays to assist delegates of groups making use of residence accommodation. They performed well and delivered excellent customer service. One receptionist was appointed during the September holidays to manage those students who remained in the Loggies residence to prepare themselves for the final assessment.

Three men's residences and three ladies' residences provided accommodation to 720 students in a clean and safe environment that was conducive to learning. The residences were 99% full in 2008, and a list of private accommodation options was also available for students.

In January 2008 the HC members and residence managers received training in interpersonal relations and teambuilding (high and low ropes), as well as leadership skills. A training session on disciplinary processes in residences for HC members and eight staff members took place in the second quarter of 2008. A one-day hand-over session was held for 12 wardens during the fourth quarter.

The Centre for Counselling and Social Services offered the following programmes to first-year students: Workshops on study skills and motivation, peer pressure, balancing social and academic life, and living together in harmony as a hostel. There was a presentation on awareness of women and child abuse, as well as a workshop titled "The story of HIV/AIDS and I: Sexual awareness". An event to celebrate the residence with the best academic performance in 2007 took place during the second quarter. The Welgemoed residence was awarded the Vodacom-sponsored trophy for best performing residence with an average of 64%. Fire evacuation drills and general information on health and safety were provided in all residences by the Protection Services Department.

The six residences were involved in an array of community service projects, ranging from visits to homes for the aged to the handing out of food and toys to street children.

Residence Life promotes and supports the development of staff members on all levels. As such, a workshop on disciplinary processes was held with seven staff members, whilst 13 staff members underwent a workshop on financial management.

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

- African National Congress Youth League (ANCYL) – April holidays: Income R299 964-00.
- ANC Women's League – July holidays: Income R256 680-00.
- Dental Assistant Conference – September holidays: Income R22 680-00.
- Ethiopian Church of Africa Conference – December holidays: Income R147 540-00.

Student Services

Careers Office

This office conducts career development sessions throughout the academic year to equip students and graduates with the necessary skills and competencies to successfully compete in the growing and highly competitive labour market and to connect them with employers in the different sectors of the economy. 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 tuition periods, as well as outside the academic programmes on both the Bloemfontein and Welkom campuses.

In partnership with the School for Entrepreneurship and Business Development (SEBD), the Careers Office runs a mock interview programme in which BTEch: Human Resources Management students act as human resources practitioners. These students are given an opportunity to participate in a practical recruitment and selection process in which they compile a job



advertisement, draw up an application form, advertise the job, decide on a panel, draw an interview matrix, invite those who qualify, conduct interviews and give feedback to others on their performance while also getting feedback on their management of the process from the Careers Officer and the participating academic staff members. This is a win-win programme where both parties have the opportunity to improve on their interview skills. The programme counts as a practical assignment for Human Resources Management students and contributes to their final year mark.

A comprehensive database of students' CVs is kept in the Careers Office and these are circulated daily to employers on request for permanent or part-time positions. Several employers – especially provincial government departments – make use of this opportunity instead of advertising their vacancies in newspapers or working through personnel agencies. All students are encouraged to commence with career development as early as their first year.

The Careers Office is further involved in a graduate recruitment programme that includes on-campus career talks during lunch breaks, on-campus interviews and an annual Career Fair. These provide students with the opportunity to meet and interact with employers and broaden their vision and thoughts beyond the boundaries of a specific qualification. It also gives employers the opportunity to market their companies and to recruit future employees from the CUT's student population. The first Career Fair took place in 2006 with 16 companies, growing to 32 companies in 2008.

Work-Integrated Learning

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. This unit is primarily responsible for the following:

- Promoting Work-Integrated Learning by negotiating suitable placement positions for students with companies and institutions;
- Providing industry information and preparing students for the world of work through information sessions;
- Assisting employers to understand the real costs of Work-Integrated Learning against financial Sector Education and Training Authority (SETA) benefits, along with the Income Tax Act provisions and different tax deductions relating to learnerships and apprenticeships (learning activities of the two fulfil academic requirements of Work-Integrated Learning in most cases), and how to verify Work-Integrated Learning placements for SETA;
- Drafting and maintaining policies and procedures regarding Work-Integrated Learning at the CUT;
- Assisting with the development of methods and processes for the monitoring and assessment of student progress (visiting students and companies to negotiate opportunities for Work-Integrated Learning and making telephone calls) during these periods;
- Administering Work-Integrated Learning by setting up and maintaining databases of potential placement positions and students in such placements positions;
- Assisting with the drafting of Work-Integrated Learning guidelines and programmes (logbooks);
- Liaising with the various faculties and schools on an ongoing basis in order to develop effective systems of Work-Integrated Learning.

In the Faculty of Management Sciences, formal arrangements for Work-Integrated Learning 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 to recruit students for Work-Integrated Learning at their prestigious establishments.

In the Faculty of Health and Environmental Sciences, Biomedical Technology students can complete their Work-Integrated Learning at the following accredited laboratories: NHLS Universitas and Pelonomi Hospitals, PathCare, Van Rensburg Pathology Laboratory and the South African National Blood Transfusion Service. Students also have the opportunity to work in Kimberley, Welkom, Kroonstad and Bethlehem.

In the Faculty of Engineering, Information and Communication Technology, there is close and effective contact with a number of companies and organisations for the placement of students for Work-Integrated Learning, with representatives serving on our Advisory Board. Meetings in general were well attended and valuable inputs were made with regard to shortcomings and ways of improving on these. Most of the students had at least one evaluation visit.

In addition to faculty and school-based placements, this unit was directly responsible for the placement of 847 students for Work-Integrated Learning, which generated an estimated R10 million to these students in the form of stipends by employers.

Reading Development and Academic Study Courses

As students generally struggle with the volume of academic reading work, 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 the CUT.

Testing students individually can identify reading problems, which can then be eliminated by certain exercises done on computer programs. Students worked independently according to their own ability and as far as

possible solved any problems themselves. The Reading Development Officer served as facilitator and was always available to encourage students to work quickly and accurately.

The Reading Development programme is structured in the academic timetable via the academic departmental heads and the Centre for Counselling. A decision has been made to make Reading Development compulsory for all first-year students. In 2008 ±1 966 students were accommodated in the programme.

Learners could also complete study programmes to improve their memory and retrieval strategies. The courses were learning-centred and students were motivated to visit the laboratory regularly. Such programmes are also presented after hours to the students in the residences.

The results of a pilot study pointed to the fact that the reading rate of first-year students was far below an acceptable level for such students. The results of that same pilot study showed that students enrolled in the Reading Development programme progressively perform better than those who have not followed the programme. Lecturers reported that students who had participated in the programme had improved insight and comprehension into learning material. Subsequently Senate decided that this programme would be phased in for all first-year students as from 2008. The impact of this intervention will be carefully monitored, in particular in terms of how it influences throughput rates and the overall academic performance of students. The reading classes will be integrated in the academic timetable.

Admission Testing

The CUT used three different admission tests. The General Scholastic Aptitude Test (GSAT) and English Proficiency Test were used to evaluate all students not meeting the minimum admission requirements at the 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 minimum requirements

were selected. A total of 1 724 prospective students were tested for the 2009 intake.

Student Counselling

The Centre for Counselling and Social Services rendered a wide variety of services to the students of the CUT. Emotional and social wellbeing was at 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. Support is given to students on an individual level where psychological and therapeutic interventions are made. In the year under review, a number of group sessions and workshops were offered in areas where numerous students reported the same problems. Since it is clear from literature that emotional and social problems can hinder students or learners in achieving their full potential, various life skills programmes were offered in the residences and to groups after hours.

Supplemental Instruction (SI)

The purpose of the SI programme is to assist learners in subjects with a high degree of difficulty. The programme is aimed at first-year students and presented by senior students specifically trained for this purpose. 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. In 2008, courses in study techniques, stress management and communication skills further contributed to the establishment of a learning-centred approach at the CUT. Although SI was mainly replaced by tutorials in the Faculty of Engineering, Information and Communication Technology, SI was still offered in certain subjects. During 2008 SI was offered in 68 subjects in all three faculties, as well as at the distance campus in Kimberley. A small research project in the Faculty of Management Sciences in the subjects Entrepreneurial Skills I (± 600 students) and Business Management

I (± 800 students) proved that SI is working. An average of 46% of Business Management I and 30% of Entrepreneurial Skills I students attended SI sessions on a voluntary basis. Their assignment/test averages were on average 5.3% (Business Management I) and 8.7% (Entrepreneurial Skills I) higher than the normal class average. In 2008 the pilot project for second- and third-year subjects continued. SI was offered in eight second-year and two third-year subjects. The results of this project will shortly be analysed, although initial results are positive. A total of 19 422 attendees were registered for 2008 in the 68 subjects.

SI is an academic assistance programme that improves student performance and retention. Through this programme, a student who has demonstrated proficiency in a targeted course undergoes SI training and then attends the course to model effective student practices and attitudes. During these sessions the SI leaders use interactive learning strategies that encourage involvement, comprehension and synthesis of course content.

When this programme was taken over in 1999 by the Centre for Counselling and Social Services it consisted of nine subjects. Over the next 10 years it expanded to 74 subjects and 85 SI leaders. This programme is closely monitored and regular feedback is given to the relevant lecturers. The SI programme is very well attended, as can be seen by the vast number of students attending SI sessions. In 2008 the attendance record was approximately 14 000 students. Feedback given by the students attending the SI sessions was extremely positive.

Students were also subject to reading development intervention and admission testing.

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Working with Industry

Working with industry is presented here from the point of view of both centralised student services and various faculty-based initiatives relating to research niches and the programmes they offer. Thus, not all collaboration with industry could be centrally driven.

Faculty of Management Sciences

Co-operation with Microsoft and its Gold-Certified Partner, Praxis:

Co-operation was established with the well-renowned Microsoft and its Gold-Certified Partner, Praxis, to improve the programme National Higher Certificate: Financial Information Systems. This co-operation included the embodiment of a long-term commitment from all the parties involved. Microsoft and Praxis install and maintain the Plains Business Solution software (and all future updates) and participate in an advisory committee in order to inform the CUT on changes in industry affecting the programme. This agreement includes the provision that Microsoft and Praxis will accommodate CUT students in gaining practical experience through co-operative education and assist with the placement of students after successful completion of their BTech degrees.

Co-operation with Namibia Tourist Authority:

A lecturer in Tourism Management was approached by the Namibia Tourist Authority to initiate research on price competitiveness.

Co-operation with Kruger National Park:

A lecturer in Tourism Management was approached by the Kruger National Park to initiate research on price competitiveness.

The joint programme between the Faculty of Management Sciences and the Careers Office of the CUT is ongoing and has grown into an institutional project. Career development training sessions were presented to final-year students in all faculties of the CUT with the aim of enhancing the marketability of CUT students for the labour market.

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 are held on a regular basis with industry.

Faculty of Health and Environmental Sciences

An agreement was signed with the National Health Laboratory Service (NHLS) to facilitate the placement of students for Work-Integrated Learning in the NHLS environment and to optimally utilise research opportunities.

Two Advisory Committee meetings for each programme were held during 2008 (Biomedical Technology, Clinical Technology, Dental Assisting, Emergency Medical Care, Radiography [Diagnostic], Radiography [Therapy], Somatology, Agricultural Management, Environmental Health and Fire Technology).

The CUT hosted the inaugural meeting of the Radiography Educator Discussion (RED) Group on 17 November 2008. Colleagues in attendance were involved in Radiography training at the following institutions: University of Pretoria (UP), University of Johannesburg (UJ), Nelson Mandela Metropolitan University (NMMU), University of Limpopo (UL), Durban University of Technology (DUT) and Cape Peninsula University of Technology (CPUT).

Emergency Medical Care (EMC) hosted an EMC Higher Education Institution Forum on 9 June 2008 at the CUT. EMC stakeholders from the CPUT, DUT, UJ and CUT attended this forum. The main discussion was a memorandum of understanding between these higher education institutions and the actual structure of the degree in EMC.

The CUT's Environmental Health programme, in conjunction with the Free State branch of the South African Institute of Environmental Health (SAIEH), presented a BTech: Environmental Health day and a seminar on 29 and 30 October 2008. Various projects of BTech students and external environmental health practitioners were presented.

Dr Joe Molete, chief executive officer of BioPAD, paid the CUT a visit on Tuesday, 14 October 2008 and toured some of the CUT's laboratories and research facilities. During the lunch break he held a talk on biotechnology developments, which is a cross-cutting programme and one of the research niche areas at the CUT.

The faculty's Somatology programme was privileged to have taken part in the Look Good...Feel Better (LGFB) campaign dedicated to teaching cancer patients techniques to help them restore their self-image and appearance after surgery, chemotherapy and radiation. The campaign was launched in South Africa in 2004, when only three hospitals nationwide were involved. The initiative has since grown into an extensive campaign and was launched in Bloemfontein two years ago. Six-weekly workshops were held at the Rosepark, Medi-Clinic and National hospitals during the year.



Thirty second-year students in Environmental Health removed rubbish on and around the campus as part of their subject Environment Pollution: Water and Waste. The Mangaung Local Municipality issued them with green rubbish bags, whilst T-shirts were donated by the Mangaung Solid Waste Department. By cleaning up the campus and surrounding areas, these students truly lived up to the CUT's positioning statement of "Thinking Beyond" and the Municipality's statement of "Keeping Mangaung clean is everybody's responsibility".



On Tuesday, 2 September 2008 the Radiography programme in the School of Health Technology welcomed four students from the Netherlands who would be undergoing experiential learning in Bloemfontein for 20 weeks.

Prof. Joyce MacKinnon, interim dean in the School of Health and Rehabilitation Sciences of the Indiana University in Indianapolis, USA, was able to spend time at the CUT from 14 to 27 August 2008 after being awarded the prestigious Fulbright Senior Specialists Grant in Education. On 20 August 2008, the South African Association of Health Educationalists (SAAHE), Free State Branch, presented an academic lecture on "What to expect from your postgraduate

supervisor and postgraduate student”, with MacKinnon as guest speaker.

& Partners (Rosepark Hospital, Bloemfontein), and Dr von Bezing & Partners (MediClinic, Kimberley).



Faculty of Engineering, Information and Communication Technology

The Centre for Rapid Prototyping and Manufacturing (CRPM) and the Product Development Technology Station (PDTS) jointly participated in an industrial exhibition in Port Elizabeth in a further attempt to penetrate the automotive sector.

A substantial amount of work has been done for General Motors South Africa by the CRPM subsequent to successful penetration of this company during late 2007.

Mr Malcolm Anderson of Ramsay Engineers, a Pietermaritzburg-based engineering company, paid an exploratory visit to the CRPM. This proved to be an excellent opportunity to identify opportunities for collaboration and may also contribute to the Kwazulu-Natal Midlands becoming a major employment destination for Engineering students.

The Agricultural Management programme constructed two greenhouses on campus to broaden students' agronomic skills and enhance their practical ability and employability.

Co-operation between the faculty and the Free State Department of Health (DoH) was established in order to support Intermediate Life Support (ILS) training to ILS level. Seminars accredited with Continuing Education Units (CEUs) were held for dentists, dental assistants and radiographers.

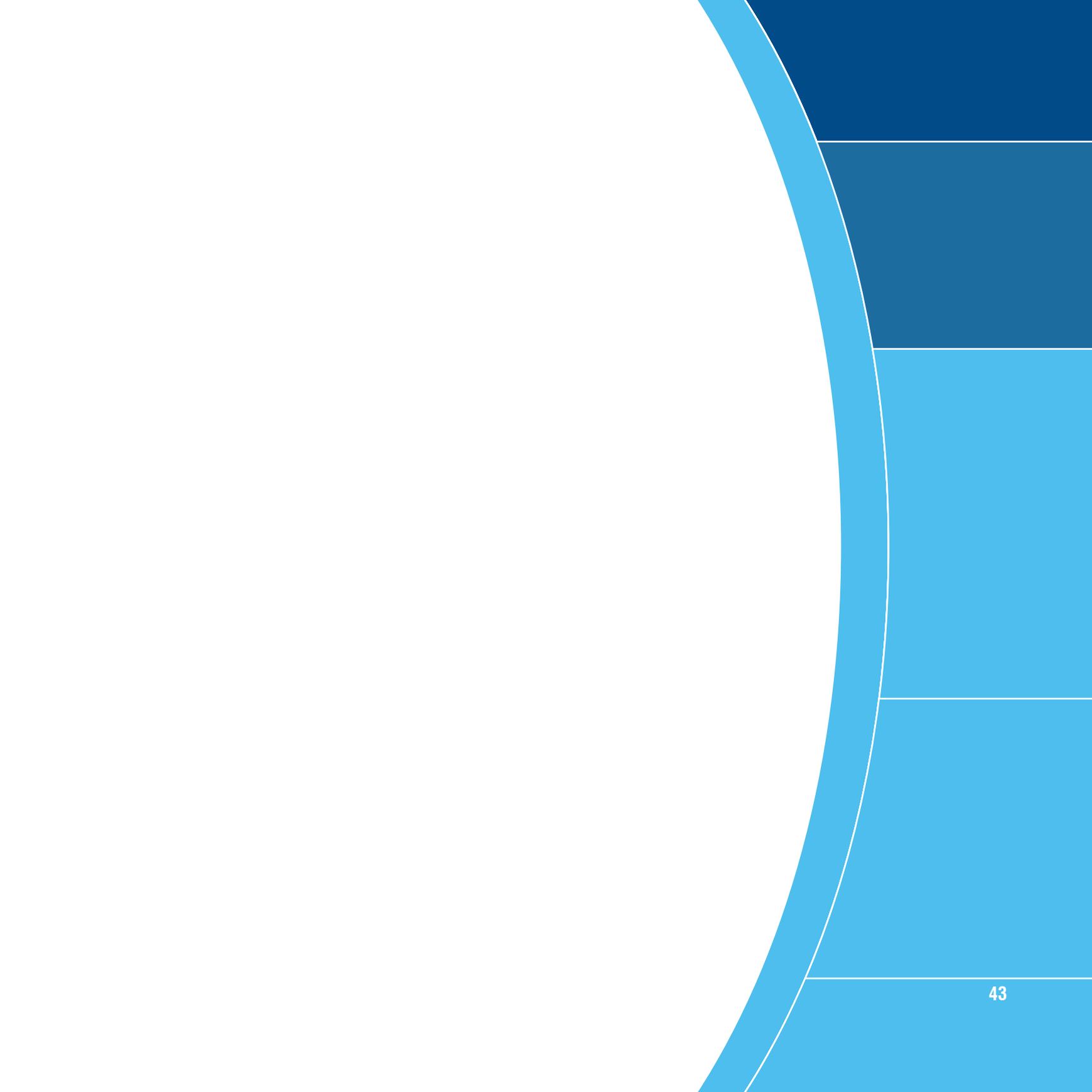
The Radiography programme enjoys co-operation agreements with the DoH Free State, the DoH Northern Cape and the following radiology private practices in view of placing students for Work-Integrated Learning: Dr van Dyk & Partners (MediClinic, Bloemfontein), Dr Spies

The Bloemfontein/regional branch of Business Partners Limited visited the CRPM/PDTS to explore collaborative opportunities.

Six members of staff visited Columbus Steel in Middelburg in 2008 where several of our students are undergoing their experiential learning.

Two staff members visited National Instruments in Midrand, as well as Vertex and Inventec in Pretoria, between 28 and 30 May 2008.

The School of Electrical and Computer Systems Engineering enhanced and strengthened its relationship with RFID Technologies CC and Trolley Scan (Pty) Ltd in Johannesburg in respect of the niche research area of "Automated Material Handling and Radiofrequency Identification".



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