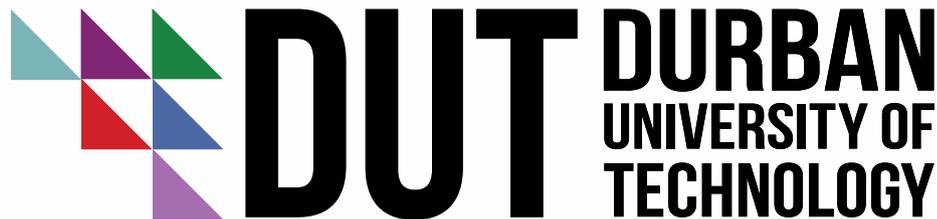
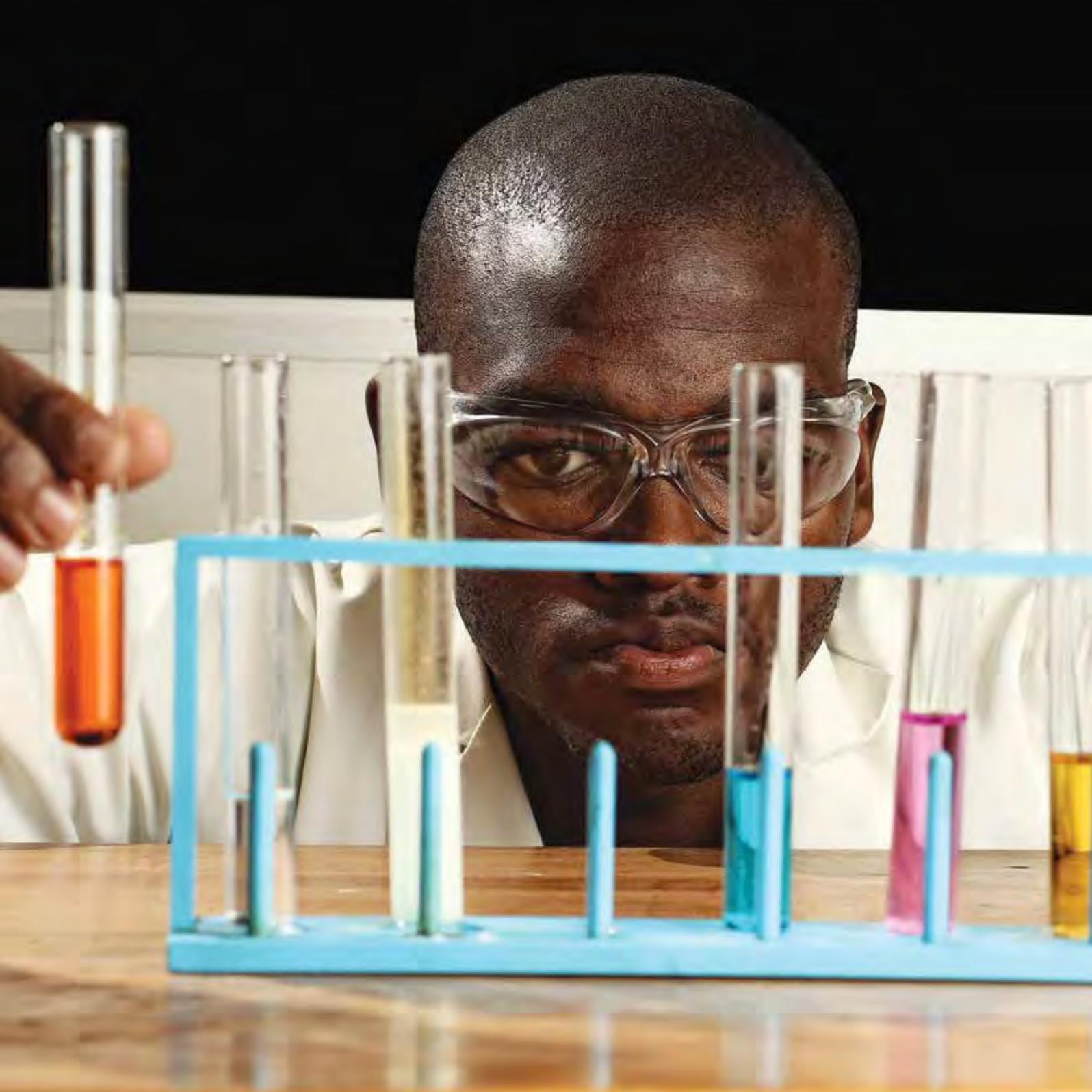




ANNUAL REPORT

TWENTY ELEVEN





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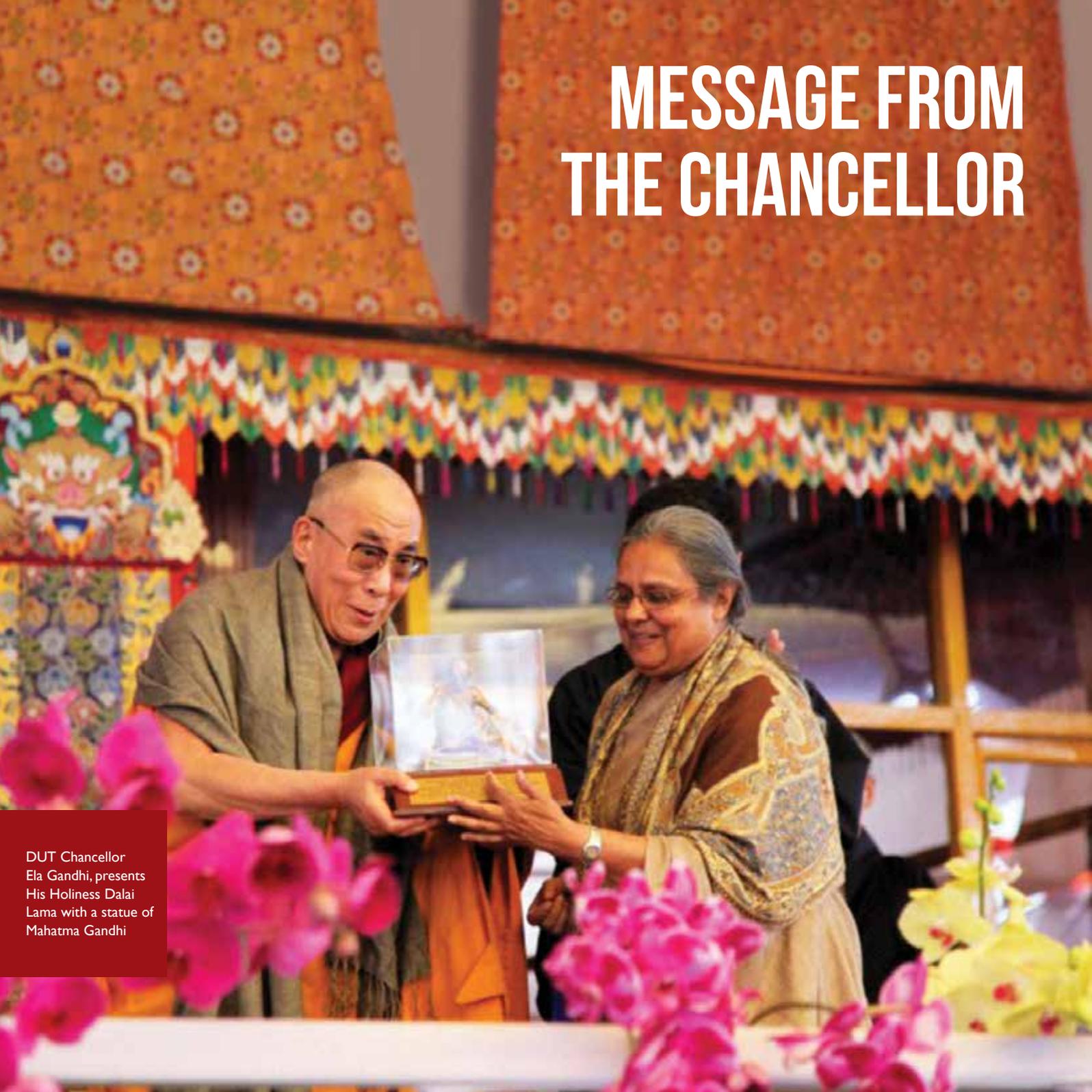


Front Cover (from left to right)
Professor Suren Singh - Head of Department
Biotechnology and Food Technology
Nokuthula Mchunu - Lecturer and Doctoral
student in Biotechnology
Professor Kugen Permaul - Professor in the
Biotechnology and Food Technology

Mchunu, under the co-supervision of Professor Permaul and Professor Maqsudal Alam, has completed ground-breaking research in the sequencing of an industrially important thermophilic fungal genome.

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MESSAGE FROM THE CHANCELLOR

A photograph showing DUT Chancellor Ela Gandhi on the right, wearing a brown and gold patterned shawl, presenting a small statue of Mahatma Gandhi to His Holiness the Dalai Lama on the left. The Dalai Lama is wearing a green shawl and glasses. They are standing in front of a colorful, patterned backdrop. In the foreground, there are pink and yellow flowers.

DUT Chancellor
Ela Gandhi, presents
His Holiness Dalai
Lama with a statue of
Mahatma Gandhi

“there was an amazing resurgence of views on climate change; what we can do about it, and seeing young people going out there and getting things done.”

Ela Gandhi – Chancellor



I write this message with pride about an Institution with which I have been associated for many years; initially in the 1960's as a student of "dress making" as it was known then, and later as a parent of a student, then as a member of an NGO that was given space to operate on this campus, and recently as the Chancellor. I have just come to the end of the chancellorship.

For me, among its many other achievements, this institution depicts an institution that is making strides towards building a culture of peace and non-violence on its campus. There certainly is willingness and eagerness in senior management to move in this direction, and that is an important step towards achieving the goal.

The year 2011 was amazing. Apart from the academic achievements about which others will be writing, there was an amazing resurgence of views on climate change; what we can do about it and how young people could go out there and get things done.

Many DUT lecturers and students were actively engaged in the cleanup of the Umgeni Estuary campaign as part of the contribution to Mandela Day service organised by the Gandhi Development Trust in partnership with DUT. It was good to see the diverse crowd descending on the Blue Lagoon, picking up the garbage and leaving the beach beautifully clean.

Some amazing articles were produced by DUT students in a bid to encourage recycling. In a competition on the issue of climate change, students came up with innovative ideas and portrayed them in posters and displays in creative styles. This ensured that while not actively being involved in the COP 17, DUT was nevertheless able to express its concerns.

Indeed a time comes in every aspect of life when it becomes necessary to change, progress and achieve. A time has come for change at DUT as well. As I step out, I do not feel in the least bit apprehensive as I know you have a very competent new Chancellor who will ensure that values necessary for a just society are upheld.

During the past year it was a wonderful experience for me to be in close contact with all the different arms of this vast institution; interacting with some of the most brilliant minds, learning about the extensive research done and looking at the tremendous potential of this magnificent University. In bidding farewell, I can only say keep up the good work, build on the positive, deal with the negatives constructively, but always remember to conserve scarce resources as we owe it to the next generation.

Like the rest of our country, we too have had problems and have had crises, but the will to overcome these spans across the spectrum from students to the academic fraternity to management. The determination to accept the new order and to make the necessary adjustments in order to grow and transform the University is seen in the corridors of the institution. While no doubt there are rumblings and dissatisfactions, these are not unsurpassable if there is a positive will.

For me it has been a beautiful experience to feel the warmth and goodwill around. I have been amazed at the eagerness among so many, to embrace values on which our new democracy has been built and to begin to grapple with the past and embrace the future. These are the building blocks. It is for us to put them together so that our youth can become the torch bearers of the future.

It is indeed gratifying to see the effort made to ensure that our students are given employment opportunities by industry and that these students are making strides in the vocations they choose. DUT, despite all the shortfalls, has produced alumni who have excelled in their fields. It is these factors that enable us to confidently say that this University will be an important cog in the machinery of the future!

Ela Gandhi
Chancellor





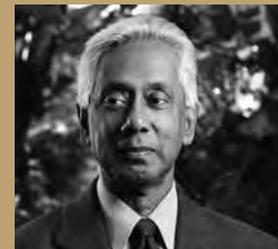
Fashion Design
Alumni and
lecturer -
Terrence Bray

REPORT OF THE CHAIR OF COUNCIL



“A five-year Information Technology strategic plan has been developed to ensure that the University is well placed to meet the requirements of its staff and students.”

Dr Jairam Reddy – Chair of Council



The year 2011 has been stable, active and productive for the Durban University of Technology. A record number of admissions and graduates, the Vice-Chancellor exploring new directions and perspectives and staff and students winning accolades for their academic, research and community work were some of the highlights of the year.

COUNCIL MATTERS

A Council workshop held on 12 March was attended by members of Council and invited senior staff members. Arising from the report of Professor Njabulo Ndebele, the external evaluator of Council, a quality improvement plan was formulated. It was pleasing that the overall impression of the external evaluator's report noted that the University "enjoys strong and successful Council governance oversight".

Also at the workshop an overarching vision and new directions for teaching and learning, research and innovation for DUT were presented by the Vice-Chancellor and senior management. In particular, a student-centred institution, a curriculum renewal project, building a research culture and increasing research capacity and the establishment of a Centre for Continuing and Professional Education were noted.

The revised DUT Statute which was approved by Council in early 2011 has now been promulgated in the Government Gazette by the Minister of Higher Education and Training.

Council has introduced a lecture series on the evening preceding each Council meeting in order to apprise members of recent developments in the higher education sector and related matters. At the June meeting, Dr Mark Hay, Executive Director of the Higher Education Quality Committee addressed "International Trends in Quality Assurance: Prospects and Cautions". At the September Council meeting, Professor Gerard Maré of UKZN spoke on "Race Thinking and Thinking about Race" in the new democratic South Africa.

Constituency presentations at each Council meeting continued as in previous years. In 2011, the following presentations were made:

- Bachelor of Nursing Sciences Programme - Professor N Gwele
DVC: Academic.
- Institute for Water and Waste Water Technology - Institute
Director; Professor F Bux.

The following Council members were elected for the next four-year term: Senate, Dr L Samuels; Academic Staff, Mr P M Naidoo; Institutional Forum, Mr M Estrice; eThekweni Municipality, Cllr W L Mapena; Council appointees, Mr R Harichunder; Ms T Louw, Dr V Reddy, Mr B Singh and Ms M Mogodi-Dikgetsi; Convocation, Mr W Z Madinane and Mr S H Vezi. In addition Mr N Luthuli was elected as Vice Chairperson of Council for the next two years.

STAFF MATTERS

The review and evaluation of all levels of staff in the administrative and academic sectors at DUT is now being undertaken. The objective is to rationalise staff grading and align salary levels both to the sector and region as well as meeting the benchmark of the Department of Higher Education and Training. A Remuneration Technical Committee has been established for this purpose under the chairmanship of the Senior Director: Human Resources.

The Labour Management Consultative Forum has been reconstituted. It will meet on a quarterly basis with senior management to discuss staff matters.

STUDENT AFFAIRS

While the quantum of financial aid through NSFAS has been steadily increasing over the years, it is still inadequate to meet the needs of all students at DUT. In particular, the failure of the DHET to provide funds for BTech students has caused serious student financial problems. These are students who have completed a three-year diploma and whose success would be guaranteed should funds be forthcoming. Furthermore, the kind of applied scientific skills so sorely needed by the economy is an integral part of BTech education and training. The Vice-Chancellor is taking up this matter with the DHET at a national level with the other universities of technology.

There is a growing need for student accommodation. DUT provides beds for 25% of its students and while the DHET requires student residences to be self-funding, there is an increasing annual deficit because of the inability of students to meet the costs. Council has requested senior management to move in a direction of balancing the budget for student residences. The tender for the planning of a student village project to increase student accommodation on campus has been awarded.

The University has embarked on a student registration project aimed at streamlining processes in the areas of academic registration and the allocation of student financial aid and housing.

SENATE MATTERS

Council approved the recommendation of Senate for the establishment of a DUT Industrial Advisory Board as a formal interface for high level advice to the University by leaders of industry. The Vice-Chancellor will chair the board at its bi-annual meetings and will comprise representatives of key industries from KZN and other parts of the country. It will meet with Council once a year and the report of its meetings will serve before Senate and Council.

AWARDS OF HONORARY PROFESSORSHIPS AND HONORARY DEGREES

The University awarded honorary research professorships to the following distinguished academics:

Prof J F McKenzie (Faculty of Applied Sciences) in physics; Professor D Ramjugemath (Faculty of Engineering) in chemical engineering; Professor M W Getz (Technology, Innovation and Partnerships) in research collaboration; Professor T Dobbeistein (Faculty of Management Sciences) in marketing; Professor K Bharuth-Ram (Faculty of Engineering and Built Environment) in physics.

Council approved the award of honorary degrees to the following distinguished citizens who will receive these at the 2012 graduation ceremonies: Professor L Nkosi in Arts and Design (a posthumous award); Ms W Y N Luhabe in Management Sciences; Vice-Admiral Mudimu in Maritime Studies and Professor N S Ndebele in Arts and Design.

FINANCIAL STATUS

While the University had prudently budgeted for a modest surplus in 2011, the provision of loans for BTech students led to a small budget

DUT staff and students attended a three-day workshop on oral tradition in HIV education conducted by staff of the University of Michigan. The international office secured a place for a DUT staff member to participate in the MACAIDS Leadership Initiative, a prestigious HIV programme run by Columbia University and the HSRC in South Africa. A visit from the Deputy Vice-Chancellor from Curtin University, Perth, Australia and from a delegation of parliamentarians from Western Australia has cemented DUT's partnership with Curtin University with a strong focus in the areas of Fine Arts and Jewellery Design.

The Semester Abroad Programme which included students from University of Baden-Wurtemberg, Germany and Leeds Metropolitan University has resulted in more than 100 students visiting DUT in 2011. In addition, 100 Zimbabwean students on the Presidential Scholarship Programme enrolled in 2011. The semester abroad students as well as the increase in the numbers of full-time international students have significantly enriched the classroom experience for DUT students.

CONCLUDING REMARKS

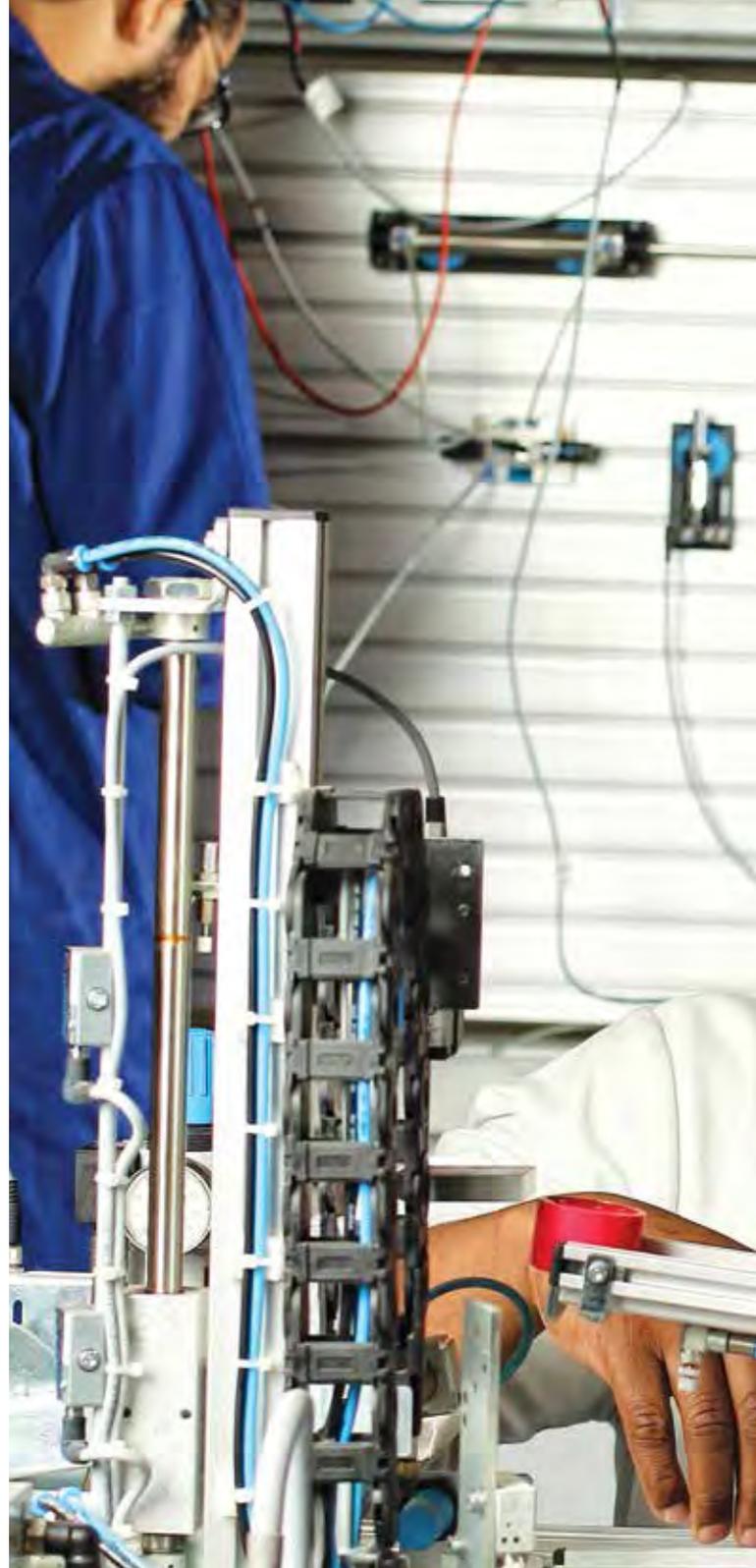
This review of varied activities in 2011 is indicative of DUT making a solid contribution to middle and high level personnel training so sorely needed for the socio-economic development of the country. The healthy enrolment and graduation figures, the curriculum renewal project, the establishment of the Industrial Advisory Council and the Centre for Continuing and Professional Education, prudent financial management under difficult circumstances, consolidation of its research focus and the steady growth of its international activities and partnerships are collectively indicative of the Durban University of Technology establishing itself as an important tertiary institution in the region, country and continent.

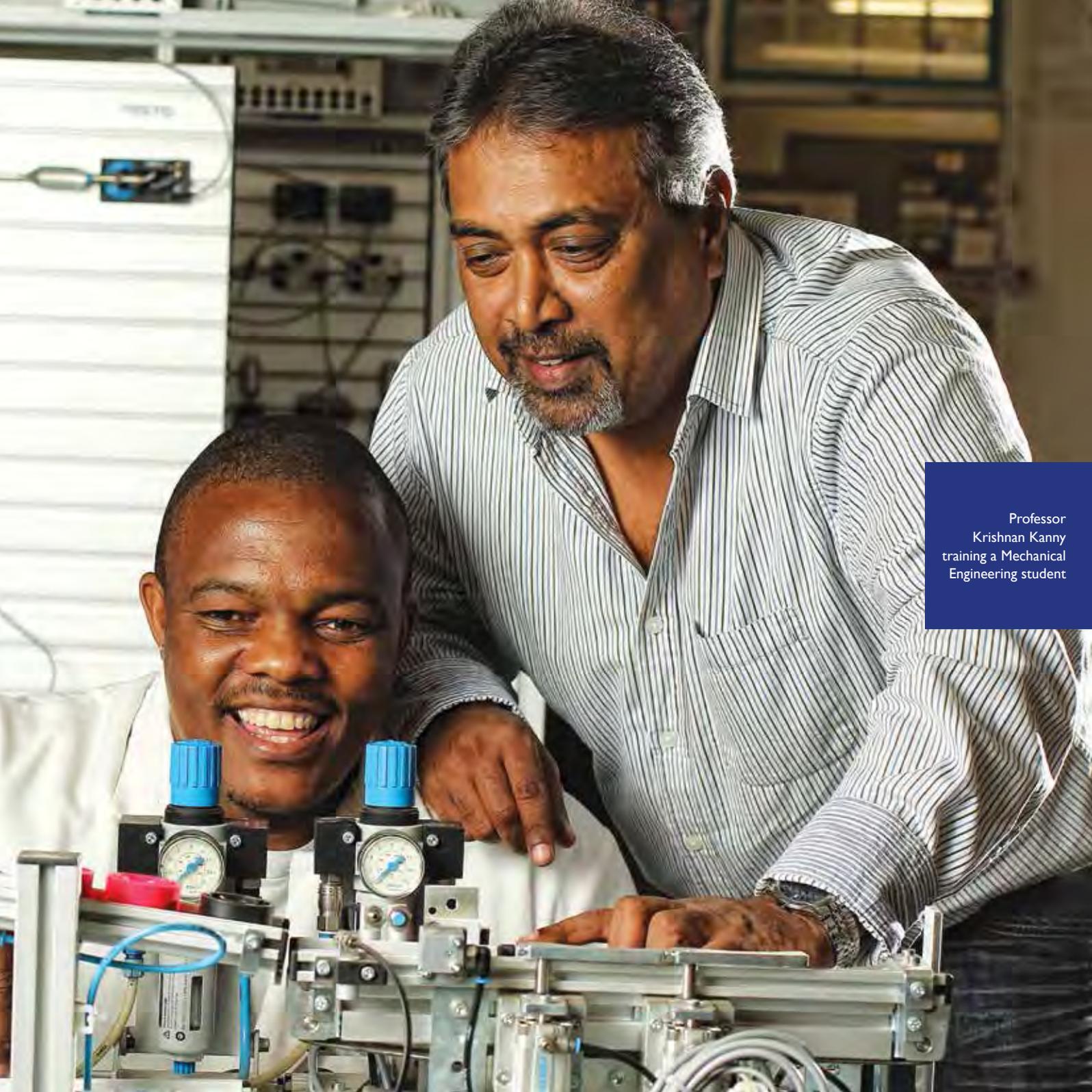


Dr Jairam Reddy

Chair of Council

February 2012





Professor
Krishnan Kanny
training a Mechanical
Engineering student

COUNCIL AND COMMITTEES OF COUNCIL

MEETINGS AND ATTENDANCE: 2011

NAME OF COUNCIL MEMBER	COUNCIL COMMITTEES					
	COUNCIL	AUDIT	JOINT AUDIT & FINANCE	FINANCE	EXCO	HUMAN RESOURCES & REMUNERATION
NO. OF MEETINGS IN 2011						
	4	4	1	4	6	4
NO. OF MEETINGS ATTENDED BY INDIVIDUAL COUNCIL MEMBERS IN 2011						
Mr B Barry	3	1 (1 mtg attended as an Interim member)		2 (1 mtg attended as an Interim member) (1 mtg held since subsequent appt to Committee)		
Prof A C Bawa	4	Advisory	1	4	6	4
Ms M Buchler	3					4
Ms CT Duba	1 (2 mtgs held before end of term on Council)					2 (2 mtgs held before end of term on Council)
Mr M Estrice	2 (2 mtgs held since appt to Council)					1 (1 mtg held since appt to Committee)
Prof N Gawe	2	Advisory	Advisory	Advisory		2
Prof N Gwele	3	Advisory	Advisory	Advisory		
Mr K Hoosain	2 (2 mtgs held before end of term on Council)	2 (2 mtgs held before end of term on Council)	1	2 (2 mtgs held before end of term on Council)	1 (4 mtgs held before end of term on Council)	
Mr R Harichunder	2 (2 mtgs held since appt to Council)	1 (1 mtg held since appt to Committee)		2 (1 mtg attended as an Interim member) (1 mtg held since subsequent appt to Committee)	1 (1 mtg held since appt to Committee)	
Mr S Johaar	4		1	3		
Mr A Khan	1 (1 mtg held before resig from Council)		0	1 (2 mtgs held before resig from Council)		
Dr F Kitchin	2 (2 mtgs held before end of term on Council)					
Mr M Z Khanyile	1 (1 mtg held since appt to Council)					
Ms G Lincoln	4					Non-voting

continue next page

Key: Not applicable

COUNCIL AND COMMITTEES OF COUNCIL

MEETINGS AND ATTENDANCE: 2011

NAME OF COUNCIL MEMBER	COUNCIL COMMITTEES					
	COUNCIL	AUDIT	JOINT AUDIT & FINANCE	FINANCE	EXCO	HUMAN RESOURCES & REMUNERATION
	NO. OF MEETINGS IN 2011					
	4	4	1	4	6	4
	NO. OF MEETINGS ATTENDED BY INDIVIDUAL COUNCIL MEMBERS IN 2011					
Ms T Louw	4	1 (1 mtg held since appt to Committee)	1	3 (2 mtgs held before end of term on Council) (1 mtg attended as an Interim member)		4 (1 mtg attended as an Interim member)
Mr N Luthuli	4	2 (1 mtg attended as an Interim member) (1 mtg held since subsequent appt to Committee)	1	1 (1 mtg held since appt to Committee)	1 (1 mtg held since appt to Committee)	1 (1 mtg held since appt to Committee)
Mr W Z Madinane	1 (1 mtg held since appt to Council)					
Cllr W L Mapena	3	1 (1 mtg attended as an Interim member)				2 (2 mtgs held before end of term on Council) (1 mtg attended as an Interim member)
Mr L K T Mehta	3	3	1		1 (1 mtg attended as an Interim member)	
Ms M Mogodi-Dikgetsi	1 (2 mtgs held before end of term on Council)	0 (2 mtgs held before end of term on Council)	0	1 (2 mtgs held before end of term on Council)	1 (4 mtgs held before end of term on Council)	2 (2 mtgs held before end of term on Council)
Mr K S Moodley	2 (2 mtgs held before end of term on Council)					
Mr O Mooki	2					
Ms A Moonasar	4					
Ms M Motumi	3				4	
Mr N G Munsamy	4		1	3		1 (1 mtg attended as an Interim member)
Mr P M Naidoo	1 (2 mtgs held since appt to Council)					
Mr T A Nene	1 (1 mtg held before end of term on Council)					

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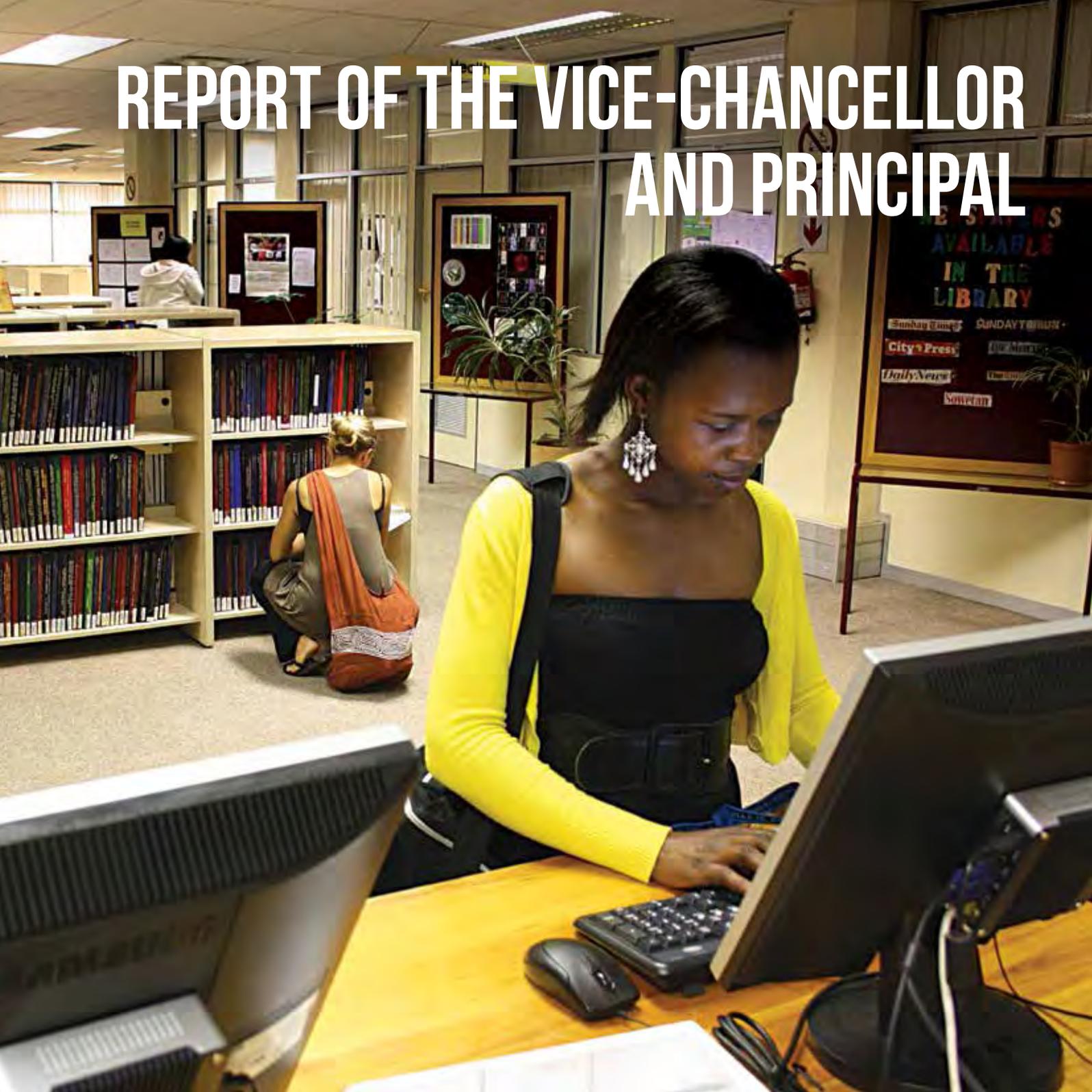
COUNCIL AND COMMITTEES OF COUNCIL

MEETINGS AND ATTENDANCE: 2011

NAME OF COUNCIL MEMBER	COUNCIL COMMITTEES					
	COUNCIL	AUDIT	JOINT AUDIT & FINANCE	FINANCE	EXCO	HUMAN RESOURCES & REMUNERATION
	NO. OF MEETINGS IN 2011					
	4	4	1	4	6	4
	NO. OF MEETINGS ATTENDED BY INDIVIDUAL COUNCIL MEMBERS IN 2011					
Mr M Ngcobo	1 (2 mtgs held before end of term on Council)		0	3 (3 mtgs held before end of term on Council)	4 (5 mtgs held before end of term on Council)	
Ms P Nkonyeni	1					
Mr N Ntshangase	1 (1 mtg held before end of term on Council)					
Mr Z Nyuswa	1 (2 mtgs held before end of term on Council)	1 (2 mtgs held before end of term on Council)	1			
Dr J Reddy	4	2 (3 mtgs held before a Council decision that Chair of Council would no longer serve on the Audit Committee)	1	3	6	3
Dr V Reddy	2				1 (1 mtg attended as an Interim member)	
Dr L Samuels	4				6	Non-voting
Ms Z K Seedat	3				6	2 (1 mtg attended as an Interim member) (1 mtg held since subsequent appt to Committee)
Mr B Singh	2 (2 mtgs held since appt to Council)	1 (1 mtg held since appt to Committee)		2 (1 mtg attended as an Interim member) (1 mtg held since subsequent appt to Committee)		
Mr M Siphamla	1 (2 mtgs held before end of term on Council)					
Mr S H Vezi	1 (1 mtg held since appt to Council)					
Dr J Volmink	1					
Average Percentage of Attendance	80%	82%	75%	87%	83%	91%



REPORT OF THE VICE-CHANCELLOR AND PRINCIPAL



“The graduating class of 2011 was 5 587 strong and of these, 3 701 completed National Certificates and diplomas, 1 790 completed Bachelor degrees and 96 completed masters and doctoral degrees.”

Professor Ahmed C Bawa – Vice-Chancellor and Principal



The year 2011 was another year of successful education and research development at the Durban University of Technology and the seeds have been sown for the emergence of the institution as an important university of technology in the South African higher education landscape.

A five-year strategic plan, synergistic with the existing one, was submitted to the Council and approved. This strategic plan focuses on five key elements that address the fundamental challenges that face the University as it transforms from a technikon into a university of technology and as it addresses a sustained period of student upheaval by addressing itself to particular challenges of the students who choose to study here:

The Construction of a student-centred University. In 2011, many projects were initiated to address this key strategic initiative including the reconfiguration of the processes of the student administration and student service systems to facilitate better service to students. This will continue as a key programme of activity for the foreseeable future.

Getting Back to Basics. This strategic initiative is aimed at building a better, stronger and more responsive administration to bolster the academic enterprise at DUT. The key focuses of this will be to review the functioning, staffing and efficiencies of each of the administrative divisions, to improve the quality of service to students and staff as well as to create a more conducive learning environment.

Building a Sustainable University. This strategic initiative is aimed at identifying the developmental challenges facing DUT to ensure its sustainability over the next 20 years. The key issues to be addressed are strategic growth in student numbers, the creation of new income streams and the development of a long-term green infrastructure and maintenance strategy.

The Curriculum Renewal Strategy. This is a defining project for DUT as it interrogates existing curricula and designs new ones as it shifts the emphasis from teaching to learning, enhances the curriculum to include general education elements and develops theoretical and conceptual learning. The project will also address the more effective use of technology in learning and teaching.

Building DUT's Research and Innovation. This is also a defining project for DUT as it navigates towards the building of a research enterprise. The institution begins on a very small base and its challenge is to understand how to do this in a sustainable, bottom-up fashion. There are two broad programmes of activities: building a research culture at DUT and building the research capacity. A key strategic objective is to increase the number of doctorates among the academic staff.

These elements of the five-year strategic plan will be reported upon on an annual basis.

There are some encouraging signs in terms of research capacity building. The number of staff with doctoral qualifications has grown from 11% in 2010 to 12% in 2011. Perhaps more importantly, approximately 44% of the faculty members now hold masters level qualifications and the majority of these are currently busy with doctoral qualifications.

A large number of seminars, symposia and conferences were held this year. In partnership with Higher Education South Africa, DUT hosted the Academic Forum of the India-Brazil-South Africa protocol in 2011. Later in the year, DUT, in partnership with the National Research Foundation hosted a very substantial Biotechnology Conference as part of the China-South Africa bilateral.

In 2011, we again saw a consolidation of the usage of the DUT library system as a place of learning. To give effect to the notion of a student-centred library, the library has introduced new strategies to enhance holistic learning at our University. Traditional programmes like information literacy are being mainstreamed with web-based learning activities to be rolled out in June 2012. In preparation for this subject, librarians participated in the Blackboard and Podcasting training initiatives in 2011.

The highlight of 2011 was the purchase of a search engine that is mobile compliant. This means students and staff can access the library database from their cell phones. The Reading Club introduced in 2011 has seen significant interest from students and events such as book launches and poetry sessions are planned for 2012. Writing Centres located in each of the main libraries will be set up in 2012 to encourage academic writing. The Office of the DVC:Academic and the library will manage the Writing Centres jointly.

The use of the JB Patel Research Commons at the ML Sultan Campus and the Research Commons at the Alan Pittenrigh Library has seen a great take-up by postgraduate students.

Tremendous progress has been made in 2011 on the Curriculum Renewal Project under the able leadership of Professor N Gwele, DVC:Academic. As was pointed out in the report for 2010, the project was formally launched at a two-day workshop in March 2011. It has a number of objectives and these will focus on the nature of the curriculum and the philosophy that underpins it. This will be accompanied by an interrogation of the nature of the learning and teaching that is undertaken at DUT and how these may be enhanced. The Project will address the challenges that relate to the employability of graduates, and at the same time address the issue of broadening the curriculum to include general education elements.

The Curriculum Renewal Project will also find ways to enhance the influence of the industry advisory boards that serve all programmes offered by the faculties at DUT. These are extremely important to ensure that the programmes are current in terms of industry standards, that they reflect local and global changes in industrial practices, and that there can be a fruitful collaboration between academia and industry in the education process. Building experiential learning as an integral part of the curriculum is of vital importance in developing the preparedness of our graduates to engage the world of work. The role of Co-operative Education at DUT in the development of partnerships with industry is fundamental to this process.

The Centre for Quality Promotion and Assurance (CQPA) gives effect to its role in quality promotion and assurance through the development, implementation and monitoring of relevant systems and processes across the University. In this regard, the CQPA has a key role as the interface between DUT and relevant national agencies.

The CQPA conducts an average of 12 programmes and departmental reviews per year. In 2011, an audit of the assessment system was conducted; the quality and standard of provision of communication (a serviced subject) across the Midlands and Durban campuses was

evaluated and programme reviews in Architectural Technology, Maritime Studies, Dental Assisting, Journalism and Translation & Interpreting Practice were conducted. These review reports served before Senate. Mid-term reviews of two new programmes: Bachelor of Technology Nursing Science and Bachelor of Technology Video Technology were also completed. The reviews for three programmes in Education, Sport Studies and Postgraduate Nursing respectively, were deferred to 2012.

The CQPA also works with academic departments as they prepare for external accreditation of existing programmes. In 2011, the Architectural Technology Programme was fully accredited by the South African Council for the Architectural Professions; Maritime Studies Programme was accredited by the South African Maritime Safety Authority; and the Environmental Health Programme was granted full accreditation by the Health Professions Council of South Africa. The CQPA supports academic departments with the development and accreditation of new programmes. Six applications for new programmes were sent to the Department of Higher Education and Training in 2011 for clearance to submit these programmes to the CHE for accreditation. Additional information on the work of the CQPA is available elsewhere in this report.

Our sports stars have done DUT proud this year. With very little resources, they have attained wonderful achievements. The department offers 18 codes of sport on a recreational and competitive basis. Students have the opportunity to participate in USSA competition

(University Sport South Africa) or for the various National Federations. A number of DUT students represented national squads and performed exceptionally. Among these, athletes Shane Victor, Puseletso Dladla and Thubalethu Phaku were outstanding. Bongjwe Msomi, Captain of the DUT Netball Team, represented South Africa in Singapore and Australia. Jamaïne Naidoo represented the national women's volleyball squad. I congratulate these outstanding sports performers.

The committed support of our external partners – industry, government and the non-profit sector are critically important for the success of the University. DUT sees itself as an embedded institution – one that has a specific focus, and to achieve this it has developed a number of strategic partnerships in 2011.

It gives me pleasure to present this report. I wish to thank the academic and support staff of the University for their unwavering commitment to the students and in taking up the many challenges that we face. DUT is often not an easy environment to work in, and so I am grateful for the effort, commitment and dedication of the staff.

The last word has to be about the students who choose to be at DUT. They make this enterprise exciting and challenging. They help us to focus on the right things, the important things. Our challenge is to ensure that they are provided with an excellent education and are given the opportunity to grow intellectually and emotionally over the three to four years that they spend at DUT.



Prof Ahmed C Bawa
Vice-Chancellor and Principal



DUT Alumni
Doctor Dawn
Stephens in a
Biotechnology
laboratory



REPORT ON INTERNAL ADMINISTRATION/OPERATIONAL STRUCTURES AND CONTROLS

The Durban University of Technology maintains systems of internal control over financial reporting and safeguarding of assets against unauthorised acquisition, use or disposition of such assets. Such systems are designed to provide reasonable assurance to the University and Council regarding the operational environment that promotes the safeguarding of the University's assets and the preparation and communication of reliable financial and other information.

This includes a well documented organisational structure and division of responsibilities, established policies and procedures including a code of ethics that is communicated throughout the organisation to foster a strong ethical climate and the careful selection, training and development of people.

Information systems utilising modern information technology are in use throughout the organisation. All have been developed and implemented according to defined and documented standards to achieve efficiency, effectiveness, reliability and security. Accepted standards are applied to protect privacy and ensure control over all data, including disaster recovery and "back-up" procedures. Systems are designed to promote ease of access for all users. The development, maintenance and operation of all systems are under the control of competently trained staff.

In utilising electronic technology to conduct transactions with staff and with third parties, control aspects receive close scrutiny and procedures are designed and implemented to minimise the risk of fraud or error.

Internal Auditors monitor the operation of the internal control systems and report findings and recommendations to Executive Management and the Council. Corrective actions are taken to address control deficiencies and other opportunities for improving the system when identified. The Council, operating through its Audit Committee, provides oversight of the financial reporting process.

There are inherent limitations in the effectiveness of any systems of internal control including the possibility of human error and the circumvention or overriding of controls. Accordingly, even an effective internal control system can provide only reasonable assurance with respect to financial statement preparation and the safeguarding of assets. Furthermore, the effectiveness of an internal control system can change with circumstances.

The Durban University of Technology assessed its internal control as at 31 December 2011 in relation to the criteria for effective internal control over financial reporting described in its internal Control Manual. Based on this assessment, the University believes that as of 31 December 2011, its system of internal control over its operational environment, information reporting and safeguarding of assets against unauthorised acquisition, use or disposition met these criteria.



Prof Ahmed C Bawa
Vice-Chancellor and Principal



Mr L. K. T Mehta
Chair of Audit Committee

MANAGEMENT AND CONTROLS OF THE CONSEQUENCE OF RISK

The Risk Committee consists of all senior managers of the University and reports to the Audit Committee, which in turn reports to the Council of the University. The Risk Committee is chaired by the Vice-Chancellor, Professor Ahmed C. Bawa.

The process for the identification of risks is objective-driven and assesses the impact that these would have on the achievement of the objectives of the University. Furthermore, the Risk Management Committee identifies the key mitigating strategies, risk owners and timelines for the risks identified. The process further applies a rating based on the quality of controls, thereby ranking risks and setting priorities. The top risks are addressed through action plans put in place with responsibilities assigned to the relevant risk owners.

The University also maintains a risk register which is updated annually. The roles and responsibilities of the Risk Committee include the following:

- Coordinates all risk matters of DUT.
- It ensures consistency of risk management practices and reporting throughout DUT to enable consolidation of results.
- Assists the Executive Leadership with the discharging of its responsibility to comply with any statutory or regulatory requirements by facilitating the development, establishment and maintenance of an efficient and effective risk management process.
- Liaising with Internal Audit to facilitate the generation of a risk-based internal audit plan.

- Performs financial quantification of losses or potential losses as a result of risk events.
- Where gaps in the risk management process are observed, the Risk Management Committee will facilitate the process to ensure that management action plans are sufficient and adequate to close the gaps, thereby ensuring the effectiveness of risk management processes.
- Ensures that risk management is aligned throughout DUT to ensure that no duplication occurs and all risk management silos are pervious and integrated.
- Risk management reporting from all environments will be done through the Risk Committee.
- It undertakes training (through the Risk Committee Chairperson) within the University regarding risk management, as and when required.

The University recognises that identifying and managing risks is critical to ensuring that its strategic and operational goals and objectives are met.

During the period under review, the Risk Committee identified, amongst other things, the following significant risks to which action plans and mitigating controls have been put in place:

- 1 Cash flow problems. Potential large student debt write off's
- 2 Inadequate facilities management which includes the maintenance of buildings



3. Student unrest
4. Integrity of Management Information Data
5. Inadequate student accommodation
6. Lack of management of enrolment targets
7. Poor public image of the University
8. Stagnation due to lack of fundraising
9. Sub-optimal research output
10. Over reliance on government grants and subsidies

FINANCIAL RISKS

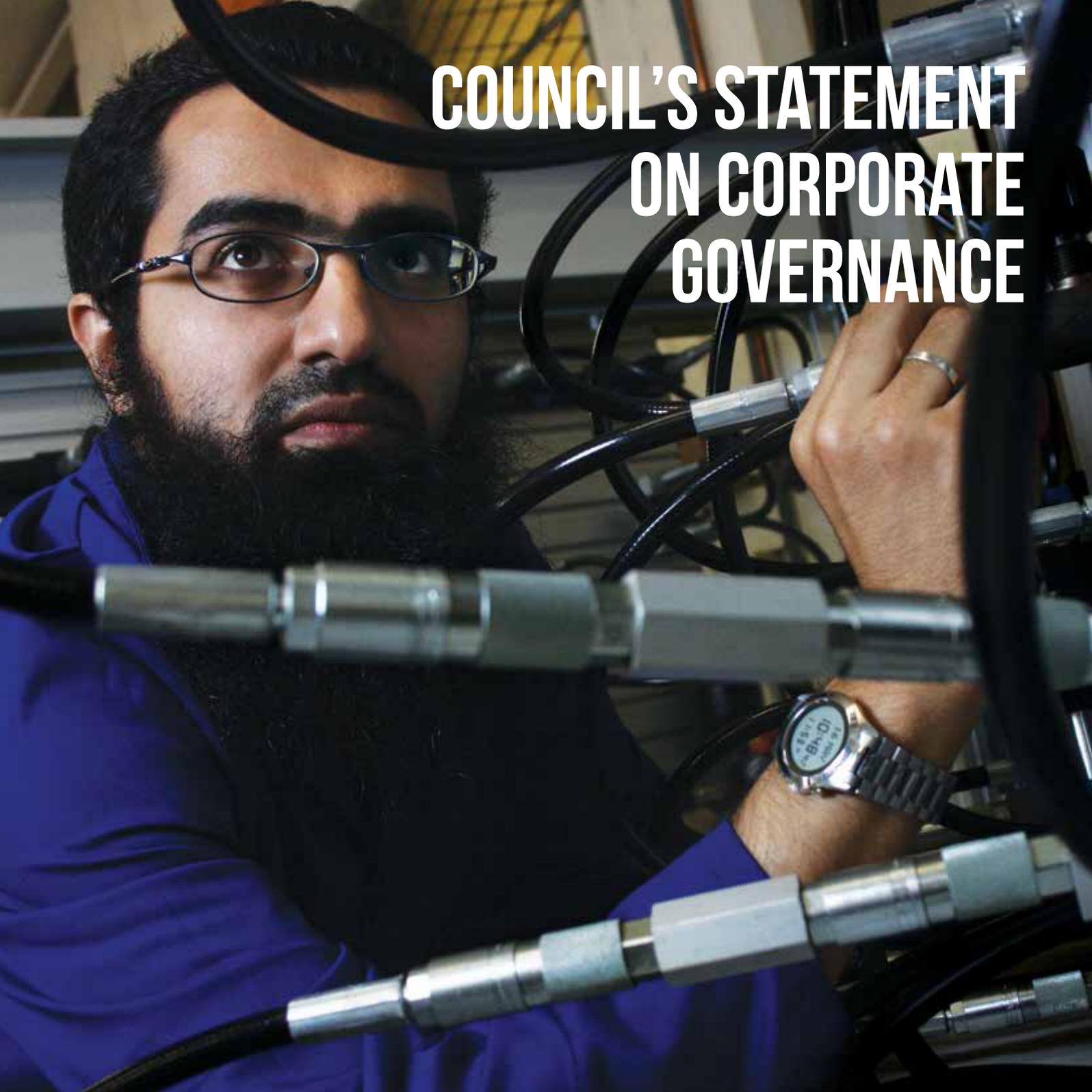
The University is adequately covered in terms of its insurance policy against fire and allied perils, business disruption, theft, money, fidelity,

public liability, accidental damage and employer's liability.

A detailed breakdown of the University's financial risk exposure is reflected in the notes to the Consolidated Financial Statements.

Professor Ahmed C Bawa
Chair of the Risk Committee

Mr L. K. T Mehta
Chair of Audit Committee

A close-up photograph of a man with a dark beard and glasses, wearing a blue shirt, working on a complex network of fiber optic cables. He is looking directly at the camera with a focused expression. His right hand is visible, holding a cable, and he is wearing a silver watch and a ring. The background is slightly blurred, showing more of the cable infrastructure.

COUNCIL'S STATEMENT ON CORPORATE GOVERNANCE

“The Durban University of Technology uses a variety of participating structures for issues which affect employees and students directly and materially. ”

David Hellinger – Secretary to Council



The composition, powers and responsibilities of the Council are in accordance with the Higher Education Act No 101 of 1997 (as amended), the Durban University of Technology's Statute, Code of Ethics and Code of Conduct for Council members. Their responsibilities include the ongoing strategic direction of the University, approval of the budget, major developments and policies and the receipt of regular reports from executive management on the day-to-day operations of the University. Council comprises of 30 members, 19 of whom (63%) are external members, and are neither employees nor students. The role of the Chairperson of the Council is clearly separated from that of the University's Chief Executive, the Vice-Chancellor.

The Council met four times in 2011. In addition, the Council held a workshop at which a Council improvement plan was developed arising from the external evaluation of Council conducted in 2010. Here, the Vice-Chancellor and Principal, Professor A C Bawa, who had been in office for just over five months shared his vision for the University. Professor Ian Bunting (Director of the Council for Higher Education and Transformation's Differentiation Project) gave a presentation on the Differentiation in Higher Education and Opportunities for the Durban University of Technology.

During the course of the year, elections were held and appointments made by relevant constituencies in respect of members whose terms

of office expired on 20 July 2011. Council also elected Mr N Luthuli as Vice-Chairperson of Council for the next two years.

Council approved the revision of the DUT Statute which is awaiting promulgation by the Minister of Higher Education and Training in early 2012.

COUNCIL COMMITTEES

All Council Committees are formally constituted with terms of reference and comprise mainly external members of Council. One external Council member serves on each of the University's Senate, Student Services Board and the Vice-Chancellor's Risk Management Committee. Two external Council members serve on the Institutional Forum and Professorial Appeals Committee respectively and the Chairperson of Council and four other external Council members serve on the Electoral College for Chancellor.

Details of the Council Committees are as follows:

Executive Committee which, *inter alia*:

- (a) acts on behalf of the Council in urgent matters with subsequent reporting to Council;
- (b) considers and makes recommendations to the Council on matters referred to the Council by committees of the Council, the Senate and its committees, Executive Management, and joint committees

- (h) recommending to Council the appointment of the internal and external auditors;
- (i) ensuring compliance with all areas of risk and the management thereof. The Vice-Chancellor's Risk Committee reports to the Audit Committee.

Both the internal and external auditors have unrestricted access to the Audit Committee, which ensures unimpaired independence. They attend Audit Committee meetings and are also afforded separate opportunities to meet with the Committee. The Chairperson of Council is not a member of the Audit Committee.

Joint Audit and Finance Committee which:

- (a) recommends the Annual Financial Statements for the preceding year to Council for approval;
- (b) such other matters stipulated by Council from time to time or as stipulated by the Finance or Audit Committee from time to time.

Human Resources and Remuneration Committee which, inter alia:

- (a) formulates the conditions of service for University employees in accordance with the Higher Education Act (Act No. 101 of 1997) for approval by the Council;
- (b) recommends to Council the amendment of conditions of service in accordance with the Basic Condition of Employment Act, the Labour Relations Act and related legislation;
- (c) ensures compliance with all labour related legislation;
- (d) develops, creates, reviews and amends all policy relating to conditions of employment at the University for approval by Council;
- (e) ensures that there is a mechanism developed to allow for all statistics and data to do with human resources which reflect the current situation and remuneration matters, and that a report on these is submitted at each meeting;
- (f) ensures that the best practice, as appropriate for the University, is established and operating efficiently within the University, including

- job grading systems and performance management systems;
- (g) develops and submits to Council a remuneration policy appropriate for the University;
- (h) considers and recommends to Council on matters relating to, inter alia, general remuneration policy, actual and benchmarked remuneration for the higher education sector; remuneration of members of Council, performance management incentives and bonuses, executive remuneration and general staff remuneration;
- (i) recommends to Council on mandates for annual salary reviews.

Selection Committee for Senior Management which is constituted on an ad hoc basis whenever it is necessary to fill the position of Vice-Chancellor and Principal or that of any Deputy Vice-Chancellor.

STAFF AND STUDENT PARTICIPATION

The Durban University of Technology uses a variety of participating structures for issues which affect employees and students directly and materially.

Insofar as staff members are concerned, three trade unions enjoy organisational rights, namely the National Tertiary Education Union (NTEU), the National Educational Health and Allied Workers Union (NEHAWU) and the Tertiary Education National Union of South Africa (TENUSA).

Each trade union elects one academic staff member to sit on Senate, one staff member to sit on the Safety/Health and Environmental Committee, Employment Equity Committee and the Skills and Professional Development Committee, two staff members to sit on the Institutional Forum and five staff members to sit on the Labour Management Consultative Forum respectively. The Unions also have observer status on the Selection Committees for all staff and have membership of the Selection Committee for senior management and on the Professorial Committee.

In addition three seats on Council, one on each of the Finance Committee and the Human Resources and Remuneration Committee of Council and four on the Institutional Forum are reserved for elected staff members.

The participation by students in decision-making is ensured by the membership afforded to the Student Representative Council (SRC) of various formal and working committees.

In terms of the highest decision-making bodies, the SRC appoints two members on the Council, three members on the Senate, four members on the Institutional Forum, one member on each of the Executive Committees of Council and Senate, one member on the Finance Committee of Council, one member on the Safety/Health and Environmental Committee and four members on the Student Services Board. In addition one student representative from each Faculty and two student members on the Central Housing Council from the Durban and Midlands Campuses respectively sit on the Student Services Board.

Furthermore, one SRC member sits on each of the Tender Committee, the Library Committee, the Selection Committees for Executive

Managers, the Student Disciplinary Tribunal and the Vice-Chancellor's Student Appeals Tribunal. They also serve on the HIV/AIDS, Financial Aid, Fees and House Committees. Students also have representation on all Faculty Boards.

STATEMENT ON ETHICS

The University's Code of Ethics, as approved by Council, is a statement of the ethical principles, values and behaviours expected of the staff and individuals associated with the University. Such persons are required to be careful, honest, responsible and efficient and to avoid impropriety or the appearance of impropriety in order to preserve the resources and assets of the University for the public good. The Code also seeks to promote the highest standards of scientific and professional integrity and to give due consideration to the ethical issues arising from the activities of the University.



Mr D Hellinger

Secretary to Council

Approved by Council on 10 March 2012



REPORT OF THE SENATE TO COUNCIL



DVC: ACADEMIC REPORT

Professor N S Gwele – DVC:Academic



VISION

A preferred university for developing leadership in technology and productive citizenship

MISSION STATEMENT

The University's mission is to excel through:

- A teaching and learning environment that values and supports the University community.
- Promoting excellence in learning and teaching, technology transfer and applied research.
- External engagement that promotes innovation and entrepreneurship through collaboration and partnership.

THE ACADEMIC AMBIT

The academic ambit at DUT consists of the Centre for Excellence in Learning and Teaching (CELT), the Library as well as six faculties; namely faculties of Accounting and Informatics, Applied Sciences, Arts and Design, Engineering and the Built Environment, Health Sciences and Management Sciences. Individual reports from each of these academic units appear separately in this report, as do reports from the faculties, CELT and the library.

A number of academic support units located outside the academic ambit; including the Centre for Quality Promotion and Assurance,

Co-operative Learning, International Education and Partnerships, Research Management and Development and Postgraduate Development and Support form an integral part of the work of the academic ambit.

HIGHLIGHTS

The year 2011 was invigorating for DUT's academic project; two strategic initiatives especially come to mind. These are the curriculum renewal project and community engagement.

Curriculum Renewal

The curriculum renewal project which was conceptualised in 2010 took off in earnest; beginning with a launch in February 2011. Participants included all academic heads of department, curriculum renewal champions and directors of academic support divisions.

DUT sees itself as a student-centred and locally embedded institution within a global context. For this reason, discussions surrounding the nature of a DUT graduate became central to the work on the curriculum renewal project. We believe the DUT graduate should evidence proficiency in basic skills and competencies, innovation, social responsibility, personal development and a broad understanding of their chosen discipline and/or profession's approach to knowledge production. These attributes helped shape the work on the guiding

principles for curriculum renewal, especially as this relates to the general education component of the academic programmes offered at DUT.

Community Engagement

DUT is a member of the South African Higher Education Community Engagement Forum (SAHECEF) and participates in national discussions as part of the working groups dealing with the following aspects of Community Engagement: Research, Teaching and Learning, Partnerships, Governance and Volunteerism. SAHECEF includes membership of all the Public Higher Education Institutions in South Africa as well as one Private Higher Education Institution. DUT's Prof Lortan is an executive board member and is the treasurer.

The second meeting of the SAHECEF/KZN chapter was hosted by DUT on 13 June 2011 and attended by representatives from MUT, UKZN, UNISA and UniZulu. The chapter meetings in the region are to promote collaboration and co-operation amongst the institutions around community engagement.

The first DUT/SAHECEF Mandela Day College Lecture speaker was Prof Jack Whitehead from Liverpool Hope University and University of Bath- UK. Approximately 100 people attended on 18 July 2011. A copy of the presentation is available at: <http://www.actionresearch.net/writings/jack/jwmandeladay2011.pdf>.

As part of embedding community engagement in DUT, staff and students are actively engaged in research activities, service-learning projects, and volunteerism activities which are presented in the booklet "Community Engagement @ DUT- A Snapshot of staff and students transforming lives, transforming society", October 2011. This booklet was included in the SAHECEF Biennial Conference held from 8-10 November 2011 at which DUT staff made a symposium presentation.

Planning for a number of projects aimed at facilitating student learning and attainment of the goal of becoming a student-centred University began in 2011. It is envisaged that increased use of e-learning, writing centres and revitalisation of teaching/learning spaces will begin in 2012. These projects, together with the focus on curriculum renewal and community engagement are seen as central to DUT's commitment to place teaching and learning at the centre of the University's academic project.

ENROLMENT

Headcount enrolment decreased by 2.1% from 25183 in 2010 to 24660 in 2011. Although these figures might be bringing the institution closer to the 22 801 headcount enrolment approved by DHET for this period, a concern is warranted as further reduction in enrolment figures might not augur well for the institution's planning processes and/or outcomes. Only 371 (2%) of the 24 660 students enrolled at DUT in 2011, were enrolled in postgraduate programmes. Gender representation continues to be split at 50% between males and females. Breakdown in headcount enrolment by race appears in Figure 1.

Perusal of Figure 1 below reveals that DUT has achieved and exceeded national targets on African students' enrolment. Whereas the national target for African student enrolment is 60% of the overall institutional headcount enrolment, DUT is at 78%.

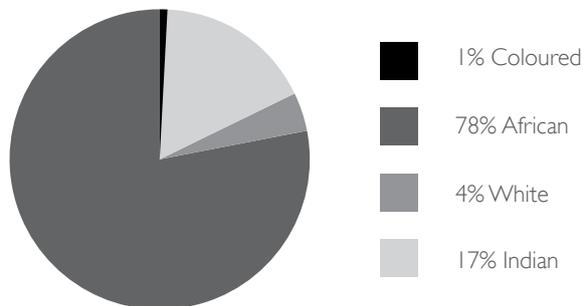


Figure 1: 2011 Enrolment by Race

A more detailed picture on headcount enrolment is presented in Faculty reports.

SHAPE

Enrolment by FTE for SET showed a slight downturn from 45% in 2010 to 44% in 2011. A percentage increase in humanities enrolment is attributed to the reversal in SET enrolment figures in 2011. A more vigilant enrolment management process is required. Figure 2 below depicts the institution's shape by fulltime equivalent enrolment.

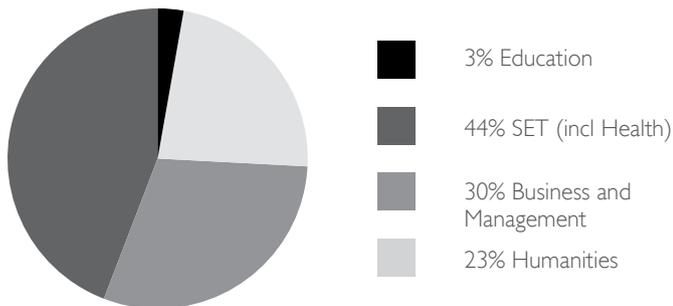


Figure 2: 2011 Enrolment by FTE

STUDENT PERFORMANCE

The target pass rate for 2011 at DUT was set at 76.5%. Data on pass rates per Faculty appear in Figure 3 below. There was a slight improvement in enrolled pass rate from 73% in 2010 to 78% in 2011, indicative of the effort made by staff and students to facilitate student access with success.

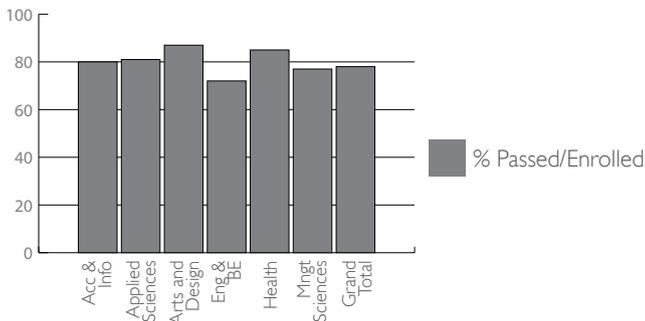


Figure 3: 2011 Passrates per Faculty

GRADUATE EMPLOYMENT

The graduate survey carried out by the Centre for Quality Promotion and Assurance reported a positive turn for the employment of DUT graduates, showing that 56% of those who attended the 2011 graduation ceremonies indicated that they were employed. This figure was at 53% in 2010. Importantly however, only 12.7% of those who graduated in 2011 were considering a career change, most of whom were in Management Sciences and Applied Sciences at 18.4% and 18.2% respectively.

Reports on self-employment improved slightly from 2.3% in 2010 to 2.5% in 2011. See Figure 4 below. For the most part, 55% of those who reported that they were unemployed were enrolled for further studies; 37% at DUT and 18% elsewhere (CQPA, 2011).

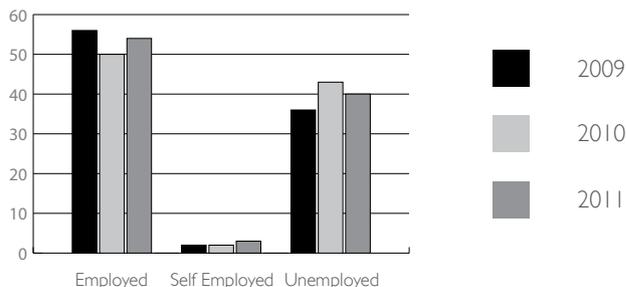


Figure 4: Trends in Graduate Employment 2009-2011

CONCLUSION

The year 2011 was indeed a time to redefine our work as a higher education institution. The impetus gained in placing student learning in the centre can only augur well for DUT as we continue to work towards fulfilling our mission as a student-centred and locally embedded institution.

Professor N S Gwele
DVC: Academic

REPORT OF THE SENATE TO COUNCIL

2011 STATISTICS

Graduates by Faculty per Level of Study for 2011

LEVEL	ACCOUNTING AND INFORMATICS	APPLIED SCIENCES	ARTS AND DESIGN	ENGINEERING AND THE BUILT ENVIRONMENT	HEALTH SCIENCES	MANAGEMENT SCIENCES	TOTAL
National Certificate					56		56
National Higher Certificate	150						150
National Diploma	999	253	298	724	305	916	3495
Bachelor of Technology	268	75	89	364	209	672	1677
Bachelor of Education			113				113
Master of Technology	3	16	8	5	37	14	83
Doctor of Technology			7		2	4	13
Grand Total	1420	344	515	1093	609	1606	5587

Graduates by Faculty per Race and Gender for 2011

FACULTY	FEMALE					FEMALE TOTAL	MALE					MALE TOTAL	GRAND TOTAL
	AFRICAN	COLOURED	INDIAN	WHITE	OTHER		AFRICAN	COLOURED	INDIAN	WHITE	OTHER		
Accounting and Informatics	731	4	78	6	1	820	493	3	103		1	600	1420
Applied Sciences	137	3	70	6		216	296	2	25	5		128	344
Arts and Design	207	8	29	66		310	150	5	12	38		205	515
Engineering and the Built Environment	188	6	80	7		281	462	15	257	78		812	1093
Health Sciences	241	14	132	45		432	89	2	50	36		177	609
Management Sciences	766	15	129	8	24	942	483	10	102	25	44	664	1606
Grand Total	2270	50	518	138	25	3001	1773	37	549	182	45	2586	5587

NB: As at 2nd Hemis submission - 10 April 2012

REPORT OF THE SENATE TO COUNCIL

COMPOSITION OF SENATE IN TERMS OF THE UNIVERSITY STATUTE

VOTING

- 1 Vice-Chancellor (Chairperson of Senate)
- 2 Deputy Vice-Chancellors
- 3 Executive Directors
- 4 Senior Directors
- 5 Executive Deans of Faculties
- 6 Deputy Deans of Faculties
- 7 Dean of Students
- 8 Heads of Academic Schools where appointed
- 9 Heads of Academic Departments
- 10 All Academic Staff at the level of Senior Director who are not already represented on Senate
- 11 All Academic Staff at the level of Director who are not already represented on Senate
- 12 All Academic Staff at the level of Associate Director who are not already represented on Senate
- 13 All Professors who are not already represented on Senate
- 14 All Associate Professors who are not already represented on Senate
- 15 All Adjunct Professors who are not already represented on Senate
- 16 Director: Research Capacity Development

- 17 Director: Postgraduate Development and Support
- 18 Director: Technology Transfer and Innovation
- 19 Director of Library Services
- 20 Director: Centre for Equity, Change & Diversity Management
- 21 Director: Centre for Excellence in Learning and Teaching
- 22 Director: International Education & Partnerships
- 23 Director: Co-Operative Education
- 24 Director: Centre for Quality Promotion and Assurance
- 25 Director: Enterprise Development Unit
- 26 One Academic Staff Member of each Trade Union elected respectively by each Trade Union
- 27 Three students appointed by the SRC, at least one of whom must be a postgraduate student, and at least one of whom must be a member of the SRC
- 28 One member of the Council elected by the Council who is not staff or a student of the institution

NON-VOTING

- 29 Special Assistant to the Vice-Chancellor
- 30 Registrar (Secretary to Senate)

REPORT OF THE SENATE TO COUNCIL

FINANCIAL AID TO STUDENTS 2011

The Department of Financial Aid and Scholarships administers funding in terms of donor criteria in respect of the National Student Financial Aid Scheme (NSFAS), NSFAS Loans and Bursaries, NGO Bursaries as well as DUT Bursaries and Scholarships.

Table 1: Breakdown of Financial Aid Applicants (Excluding DUT administered bursaries and scholarships)

Successful NSFAS applicants (Loans and Bursaries)	13 424
Successful applicants for NGO financial aid	38
Successful applicants for DUT Loans 100%	421
Sub-Total : Successful applicants	13 883
Unsuccessful NSFAS	1 269
Total applicants (successful and unsuccessful)	15 152

Table 2: Breakdown of Allocation of Financial Aid Funds

NSFAS, LOANS, BURSARIES AND NGO BURSARIES:	
Total amount allocated	R264 113 120
Total number of students funded	13 462
DUT ADMINISTERED BURSARIES	
Total amount allocated	R2 050 875
Total number of students funded	126
DUT LOANS 100%	
Total amount allocated	R9 049 015
Total number of students funded	421
DUT SCHOLARSHIPS (UNDERGRADUATES):	
Total amount allocated	R9 006 791
Total number of students funded	1 218
GRAND TOTAL OF FUNDS ALLOCATED	R284 219 801
GRAND TOTAL OF STUDENTS FUNDED	15 227

Mr Colin Thakur,
Associate Director
Technology Innovation
and Partnerships



REPORT OF THE SENATE TO COUNCIL

CENTRE FOR EXCELLENCE IN LEARNING AND TEACHING (CELT)

Professor T H Ngwenya – Centre for Excellence in Learning and Teaching (CELT)



ACADEMIC DEVELOPMENT AT DUT

The vision of **CELT (Centre for Excellence in Learning and Teaching)** is to unleash the full potential of students and academics of the Durban University of Technology through academic development strategies. This vision can only be realised through strategic collaboration with faculties and other support units of the University.

The Centre subscribes to the HEQC's conception of Academic Development (AD), which is defined as:

A field of research and practice that aims to enhance the quality and effectiveness of teaching and learning in higher education, and to enable institutions and the higher education system to meet key educational goals, particularly in relation to equity of access and outcomes. Academic development encompasses four interlinked areas of work: student development (particularly foundational and skills oriented provision), staff development, curriculum development and institutional development (HEQC Institutional Audits Manual. Pretoria : Council on Higher Education, p.74).

ORGANISATIONAL STRUCTURE

The **Centre for Excellence in Learning and Teaching** has four relatively distinct but interrelated sub-units, namely the:

- 1 Learning, Teaching and Assessment;
- 2 Educational Technology;
- 3 Student Access and Support; and the
- 4 Audio-Visual.

1 LEARNING, TEACHING AND ASSESSMENT (LTA)

This sub-unit is primarily responsible for facilitating and promoting the development of innovative and transformative learning, teaching and assessment strategies at DUT. Apart from providing ongoing professional development opportunities for all academic staff, the sub-unit seeks to engage academics in debates about the scholarship of teaching and learning. The sub-unit offers a series of workshops on a variety of topics relating to learning, teaching and assessment to new and experienced academic staff. The workshops are aimed at engaging staff in scholarly conversations around their classroom practices. During the 2011 academic year the workshops facilitated by this sub-unit focused mainly on curriculum design in response to the institution-wide Curriculum Renewal Project and to the requirements of the Higher Education Qualifications Framework (2007). This is an ongoing project which will culminate in the submission of new qualifications and learning programmes to the Council on Higher Education (CHE) for approval in 2014.

The induction programme offered by the LTA sub-unit during the first and second semesters serves to introduce academic staff to key aspects of learning, teaching and assessment policies, approaches and practices in higher education. During the 2011 academic year a total of thirty one (31) new academics participated in the workshops organised by the LTA sub-unit. New staff attended the week-long workshops in January

and July respectively. In both instances the workshops were followed by fortnightly sessions which lasted for the duration of the semester.

The LTA sub-unit also organised and facilitated workshops for academic staff on the compilation of teaching portfolios. This was done in compliance with the requirements of the Academic Staff Promotions Policy and the Vice-Chancellor's Teaching Excellence Awards.

2 THE EDUCATIONAL TECHNOLOGY (ED TECH)

The Educational Technology sub-unit has established itself as a key player in the teaching and learning innovations at DUT. Through its short courses and projects, the sub-unit promotes and implements e-learning in the various academic programmes offered by the University.

Pioneers e-learning Project

The online learning and teaching short-course (dubbed Pioneers) is structured to take volunteer staff members through the process of learning to facilitate online learning through experiencing themselves as:

- a) Online Learners: experiencing the challenges and triumphs of using online learning tools and collaborating in a non-face-to-face environment (asynchronous learning) as well as face-to-face (synchronous learning).
- b) Online Designers of learning: Designing their learning spaces to encourage student engagement.
- c) Online Assessors: designing assessment tools to facilitate student learning.
- d) Online Researchers: Inquiring into their practice as educators using aspects of online course delivery in a blended learning environment.

Achievements

- A total of 27 DUT academics and professional support staff were trained in the various aspects of e-learning outlined above.

- The Ed Tech sub-unit successfully hosted an e-learning festival featuring international and national speakers. The webinar format of the e-learning festival afforded CELT the opportunity to invite keynote speakers from Leicester University and UKZN.
- Ed Tech continued its active participation in the activities of the SATN Teaching, Learning and Technology Committee where experts from the five Universities of Technology share expertise and resources. In 2011 this committee developed the guidelines for organising and hosting webinars.

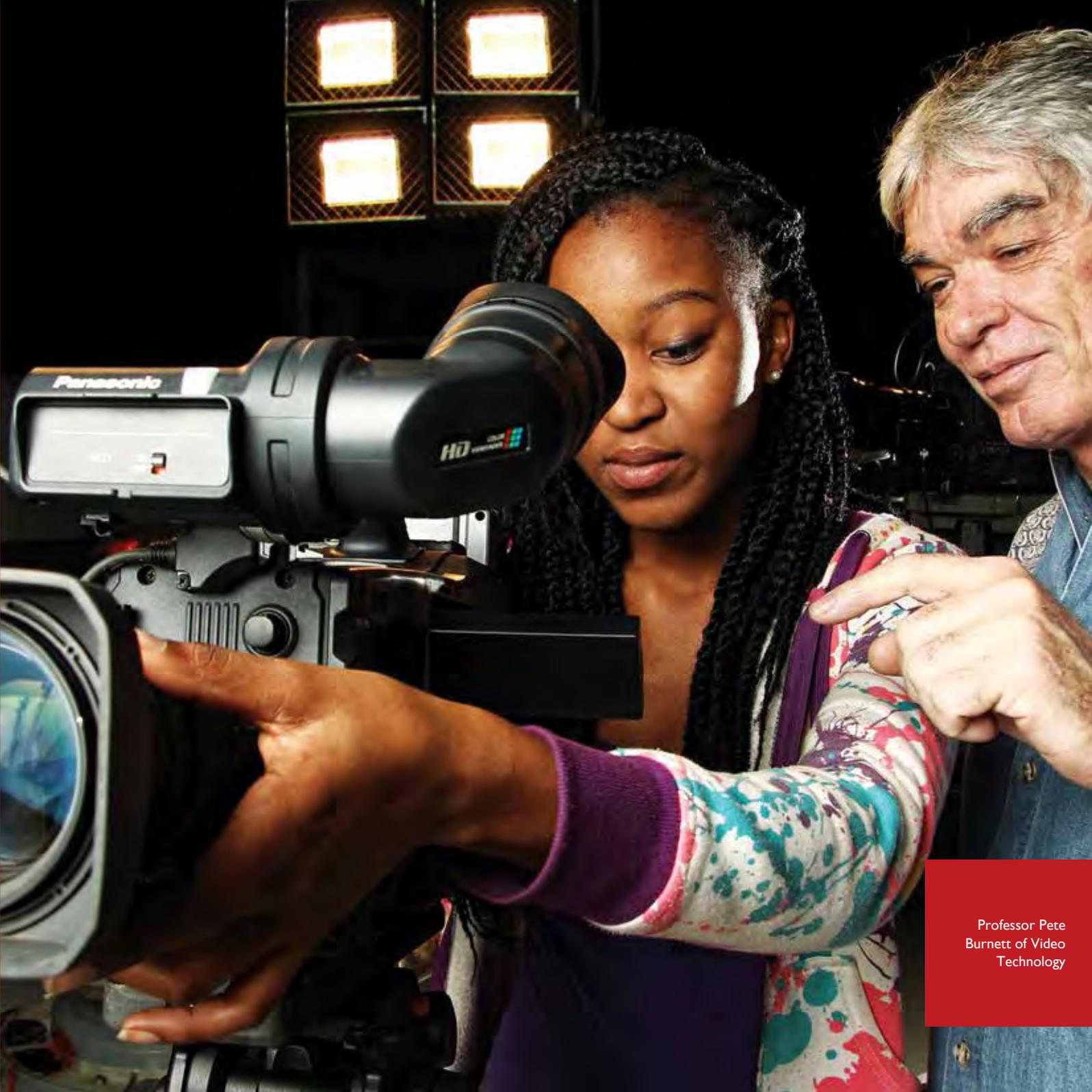
3 STUDENT ACCESS AND SUPPORT (SAS)

The projects in the SAS sub-unit range from student testing (for admission and placement) to the training of senior students who play the roles of tutors, mentors and advisors to first-year students. The main projects of the SAS sub-unit in 2011 included:

Extended Curriculum Programmes (ECPs).

CELT is responsible for the central co-ordination of ECPs. It is also responsible for compiling and submitting a consolidated report to the Department of Higher Education and Training on ECPs at DUT. For the 2011 academic year DUT received R 2, 753 million for its sixteen extended curriculum programmes. The University also received R1 10 000 for foundation staff training and development. This funding was used for:

- o Workshop on SASSE and the curriculum.
- o Living Theories and Living Standards of Judgement workshop facilitated by Professor Jack Whitehead.
- o Mentoring Training workshops facilitated by Professor Joan Whitehead.
- o ECP showcase at which Professors Jack and Joan Whitehead were discussants.
- o The National Benchmark Tests Project Seminar.
- o Workshop facilitated by Professor Joan Connolly: "How do we learn, teach and assess for a future we cannot predict?"



Professor Pete
Burnett of Video
Technology

Access Testing in 2011

- o Having started towards the end of 2010, the student selection and placement testing cycle continued from early January 2011.
- o Certain departments wrote the tests for diagnostic information only once they had registered their students.
- o Prospective students were tested in Language (English), Numeracy (Quantitative Literacy), Science and Mathematics.
- o For the 2011 academic year a total of 3 500 students were tested using the Standardised Assessment Tests for Access and Placement (SATAP).

The First-Year Student Experience (F-YSE) Project

The project is designed to assist first-year students to deal with various factors of the University environment which may impede their academic success. The main aim of the project is to provide psycho-social support and subject-specific academic support to first-year students in order to help them cope with the adaptation to the University environment. In 2011, the F-YSE was successfully implemented in residences at the Durban campus. A total of 156 students benefited from this intensive tutorial programme. The focus was on both the academic skills and subject specific content in subjects such as **Financial Accounting, Economics, and Electronic Engineering.**

Tutor training for academic departments

CELT trained 123 tutors across the six faculties in 2011. Tutorials offered in academic departments seek to combine generic academic skills and subject-specific content.

Recognition of Prior Learning (RPL)

As outlined in the institutional RPL Policy, CELT is responsible for the administration of the RPL process as well as advising applicants and academic departments on RPL procedures. The SAS sub-unit also assists applicants with the compilation of portfolios of evidence required by faculty-based academics who evaluate applications. In 2011 a total of 133 RPL applications were processed by CELT.

4 AUDIO VISUAL (AV)

At the recommendation of the Vice-Chancellor and Executive Management the AV sub-unit merged with CELT last year. In line with the philosophy of CELT as an Academic Development unit the audio visual staff will provide support to teaching and learning. The main responsibilities of AV staff are:

- 1 Ensuring that teaching equipment is made available to lecturing staff and that academics are trained to use the equipment correctly and appropriately.
- 2 Recording academic functions such as lectures by visiting academics, workshops, symposia, graduation ceremonies and conferences.
- 3 Participation in the current CELT projects including capacity building workshops for the Curriculum Renewal Project.
- 4 Providing support to and collaborating with Educational Technologists currently based in CELT in e-learning projects.

REPORT OF THE SENATE TO COUNCIL

CENTRE FOR QUALITY PROMOTION AND ASSURANCE

Mrs K Sattar – Director: Centre for Quality Promotion and Assurance



The Centre for Quality Promotion and Assurance (CQPA) gives effect to its role in quality promotion and assurance through the development, implementation and monitoring of relevant systems and processes across the University. Whilst the role of the CQPA remains constant, its staff strive to ensure that the operational functions of the centre align both with the strategic goals and objectives of the University and with the prevailing national context. To support University staff with the implementation of the Quality Assurance Policy, the Handbook of guidelines and procedures, developed by the CQPA, is updated annually.

STAFF PROFILE

At the beginning of 2011 the CQPA staff complement comprised seven permanent staff in the central office and two permanent Quality Promotion Officers (QPO) providing support mainly to the Faculties of Arts and Design and Management Sciences respectively. One academic was seconded to the position of a QPO to provide support in the Faculties of Health Sciences and Applied Sciences. The provision of support at faculty level is a challenge as there are six faculties and only four QPO posts.

ANNUAL QUALITY MONITORING

Annual quality monitoring processes were reviewed and faculties will

henceforth submit their annual reports to Senate in the third term. The consolidated faculty quality improvement plans highlight that resources are required for the establishment of writing centres, renovation and upgrading of computer labs, maintenance and upgrading of venues and strengthening research capacity in faculties.

REVIEWS AND ACCREDITATION

Architectural Technology, Maritime Studies and Environmental Health are programmes that were subjected to external accreditation processes. The Architectural Technology programme was fully accredited by the South African Council for the Architectural Professions; the Maritime Studies programme was accredited by the South African Maritime Safety Authority and the Environmental Health programme was granted full accreditation by the Health Professions Council of South Africa.

Seven internal programme reviews and an audit of the assessment system were conducted by the CQPA. The internal review panel for the Maritime Studies programme was chaired by an international expert, Captain R Short, who is the Director of the AustralAsian Maritime Education Services Ltd, on behalf of the Singapore Maritime Academy. The key issues that emerged from the reviews and the assessment audit were reported to relevant committees for action.

The CQPA had responsibility for managing the budget for quality improvement in academic programmes in response to recommendations that were made in the respective review reports. Funds were allocated to 10 departments in alignment with the findings of the programme reviews to facilitate the implementation of the relevant quality improvement plans.

Through the review of academic programmes, highlights that were identified include the:

- good reputation of the Maritime Studies department with regard to the calibre of students produced, especially for the shore-based industry
- excellent library information literacy programme to support information retrieval, referencing and general research
- efficient and reliable systems and procedures in the Examinations Department
- promotion of the discourse of community engagement in the Architecture Department, through some of the students' projects on sustainable design and green technology, for example, the solar heating and water heating integrated projects by the first and some second year students. Students have participated in industry competitions and have achieved excellent results
- provision of dental care to disadvantaged communities at subsidised rates by the students in Dental Assisting
- participation of Journalism students in events both on and off campus which allow for exposure to national and international experts.

ACADEMIC (PROGRAMME) PLANNING

Two staff from the CQPA attended a workshop held by the CHE on 25 January for representatives from all public and private higher education institutions. The purpose of the workshop was to outline the process for the submission of all programmes that an institution intends to offer that will be aligned with the Higher Education Qualification

Framework (HEQF). The submissions, in the form of templates with comprehensive information, were made through the HEQF online electronic system. Workshops were held with each of the six faculties to facilitate the completion of the templates. The CQPA provided support and guidance throughout the process. The CHE set two deadlines for the submission, namely November 2011 and January 2012. All the submissions for DUT were made by the first deadline.

Concomitantly, the University launched the Curriculum Renewal Project in March. The initiatives associated with the Curriculum Renewal Project, coupled with the implementation of the HEQF, have helped to foster the development of new programmes. Six applications for new programmes were sent to the Department of Higher Education and Training for clearance to submit these programmes to the CHE for accreditation.

ELECTRONIC PROGRAMME MANAGEMENT SYSTEM

In 2011, the process of loading all subject/module and programme information onto the DUT SharePoint portal was completed. Utilisation of the portal increased significantly primarily due to the HEQF alignment process and the Curriculum Renewal Project. In certain cases, workshops with academic departments were held to further discuss the utility and meaning of the various subject/module and programme documents stored on the site. In addition, special folders were also created for storing all CQPA Lecturer and Student Surveys and Programme Review reports. These special folders were available on a limited access to senior academic managers to protect the confidentiality of relevant reports. Preliminary design work also commenced on the next generation of the PeTALS portal system. The new design will incorporate aspects of the new HEQF and other associated legislation.

USER SURVEYS

The CQPA continued to implement a range of user surveys at the

University. By the end of 2011, 667 subject evaluations had been conducted and a total of 23 817 student responses had been analysed. With regard to lecturer evaluations, 754 evaluations were conducted with 24 746 responses subsequently being analysed. Online completion of evaluations was made available to students in 2011. Of the subject and lecturer evaluations, 5837 were completed online.

The 2011 DUT composites for both subject and lecturer evaluation outcomes per item are similar to those for 2010 and are positive overall. It should be noted that each item shows a minority of students who recorded negative responses, suggesting that despite composite positive results, further investigation is needed at faculty and departmental level. Whilst staff may implement subject and lecturer evaluation questionnaires, there needs to be a more systematic approach to using evaluations, especially for reporting back to students on issues raised and improvements made. Subject and lecturer evaluations are important tools in annual quality monitoring processes in departments and faculties.

A survey of graduate experiences was conducted at both graduation ceremonies and the outcomes reported to senior management. The overall response rate for the April graduation ceremonies was 84%, slightly lower than for 2010 and 2009. The outcomes of the analyses for the spring graduation ceremony were generally positive, similar to those for the autumn graduation ceremonies. Responses to two items on the graduate survey explicitly indicate the value that graduates attach to their learning experience and its quality, and the DUT as a preferred university of technology. For these items:

- 80.1% of the autumn graduation, and 74.2% of the spring graduation respondents agreed that: "If I had my time again, I would still choose this institution"; and
- 80.6% of the autumn and 81.3% of spring respondents agreed that: "If I had my time again, I would still choose this programme".

For both the autumn and spring graduate surveys, the only institutional item to be coded "yellow"¹ was the item: "The academic department helped me to find work placement for in-service training/WIL/co-operative education". Placement for WIL should be regarded as an area of risk after respondents identified it as inadequate at the last three graduations.

The April graduation survey results showed a small increase in the number of students who indicated that they were employed, from 53% in 2010 to 56.1% in 2011. Of those graduates reporting as unemployed, 58.1% were studying further, either at DUT or at another institution. Employment and related issues need to be further explored at programme level.

There is a need for coherent planning and resource allocation that takes cognisance of outcomes of user surveys.

STAFF DEVELOPMENT

- J Vooght received a certificate on completion of the Mobile Learning course run by CELT, DUT 2011.
- CQPA Report writing workshop, 17 March 2011, DUT Hotel School facilitated by Bev Hawthorne (The Writing School – Cape Town).

PARTICIPATION IN WORKSHOPS/REFERENCE GROUPS/ NATIONAL MEETINGS

- SATN nominated the Director of the CQPA to serve on the Qualifications Committee of the Quality Council for Trades and Occupations
- Work-Integrated Learning Resource Workshop, 11 March 2011, Council on Higher Education, Cape Peninsula University of Technology, Cape Town

¹ This area needs improvement and there is a need to guard against slippage

- Curriculum Renewal at DUT: Project Launch and Capacity Development, 17 – 18 March 2011, Blue Waters Hotel, Durban
- Mangosuthu University of Technology, Mock audit in preparation for HEQC Institutional Audit, 23-24 March 2011
- Colloquium on the internationalisation of the curriculum: A teaching laboratory, 5-6 May 2011, Internationalisation Advisory Management Group (IMAG), University of Cape Town
- CHE/HEQC HEQF Online Category A Working Group
- CHE/HEQC Quality Assurance Forum, 23 August 2011, CHE offices, Pretoria
- SATN Programme and Qualifications Committee meetings (face-to-face and online)
- The South African Association for Institutional Research (SAAIR) Quality Assurance and Institutional Research Joint Institute 2011, 17-19 August 2011, Monash South Africa, Gauteng
- Curriculum Renewal at DUT: General Education, 18 October 2011, Suncoast Conference Centre, Durban

CONFERENCES ATTENDED

- International Education Association of South Africa (IEASA) Conference, 02 September 2011, Greyville, Durban
- The South African Association for Institutional Research (SAAIR) Forum, 11-13 October 2011, Lagoon Beach Hotel, Cape Town.
- South African Technology Network (SATN) conference. 'Curriculum Transformation at Universities of Technology: Towards the Development of New Generation Universities'. 27 - 29 November 2011, Central University of Technology, Free State.

CONFERENCE PAPERS/PROCEEDINGS

- Sattar, K and Cooke, L.A. A conceptual framework for the quality assurance of programme design at the Durban University of Technology. 27–29 November 2011. SATN Conference, Bloemfontein. (Submitted to the South African Journal of Higher Education)
- Vooght, J and Govender, S. Conversations on quality: lessons learnt from quality review processes for academic programmes and support departments. The South African Association for Institutional Research (SAAIR) Forum, 11-13 October 2011, Lagoon Beach Hotel, Cape Town.

PUBLICATIONS

- Vooght, J. Contributor to Work Integrated Learning: Good Practice Guide, HE Monitor no.12, August 2011. Council on Higher Education.



Mrs. K Sattar

Director: Centre for Quality Promotion and Assurance

REPORT OF THE SENATE TO COUNCIL

LIBRARY REPORT

Mr Roy Raju – Director: Library



INTRODUCTION

Many of the Library's endeavours in 2011 were geared towards creating a positive learning environment that would provide conditions in which independent learning could flourish. This is associated with the concepts of life-long learning, independent study, cooperative learning and personal development.

Strong working partnerships between the Centre for Excellence in Learning and Teaching (CELT) and the Subject Librarians, and the continued development of social learning spaces presented opportunities to work alongside students to enhance their engagement with learning.

MEASURING QUALITY

The Library management and staff conducted a SWOT analysis in preparation for the annual audit in 2012. A renewed strategy was developed to reflect the Library's role and interventions in teaching, learning and research at the University. The new vision, mission and strategic directions are as follows:

Vision

To be the most enduring yet flexible learning institution that provides self-paced and self-selected transmission of knowledge.

Mission

A student-centered library that enhances learning, teaching and research through the provision of information services, access policies and instruction programmes in search of the objectives of the university.

Goals

- Embed library activities within teaching, learning and research
- Develop information skills for life-long learning
- Provide equitable access to information facilities
- Engage in flexible delivery modes
- Improve quality of library services in accordance with best practises

TEACHING AND LEARNING

The Library views itself as a proactive partner in enhancing teaching, learning and research.

Collaborative instruction

The Library has made significant strides in its endeavour to promote teaching, learning and research in 2011. The highlights are:

- The review of the Library Strategic Plan was realigned to give effect to the University's new vision and mission. The concept of becoming student centred was mirrored in the library goals.
- The Research Commons at both the BM Patel and Alan Pittendrigh sites were actively used by both the Postgraduate and Research Office and postgraduates for research workshops and training.
- The appointment of the Postgraduate Librarian at the Alan Pittendrigh Library means greater support for library users engaged in postgraduate programmes.
- The Inter-library Loans service is under review to ensure that the service becomes student-centered.
- Online learning for Information Literacy was enhanced by the

updated Research it Right, iLink interactive tutorials as well as Site Library virtual tours uploaded on the webpage.

- The Information Literacy (IL) module was evaluated and reviewed at a workshop facilitated by CELT and Subject Librarians. The “demand” for referencing information with a “point of need” approach highlights a focus for IL interventions for all levels of undergraduate students.

Enhanced Learning

The Information Services Team aims to promote academic success via information literacy, managing and promoting library resources and providing information access and services to the University community. Subject Librarians teach information literacy to both undergraduates and postgraduates, effectively providing students with bibliographic information skills, critical and analytical thinking skills in the use and presentation of information.

The Library plays a pivotal role in academic preparedness and student success. In spite of DUT Academics having recognised and acknowledged the positive impact that information literacy classes have on student performance, there continues to be a wide disparity between academics who accord importance to information literacy and use the Library, versus those who do not value the Library.

HIGHLIGHTS

IL presentations were redesigned and standardised across sites of delivery to establish an equitable quality of instructional service. The Walk-in training presentation script is being translated into Zulu to optimise learning for our Zulu speaking students. The Library hosted a lively presentation for the German exchange students in February.

Impact on student learning: DUT Academics indicated that there was a better quality of assignments, research projects and academic preparedness from students who attended the IL classes. Academics also noted an awareness of plagiarism among students who attended IL.

Challenges: DUT student unrest posed the biggest challenge in the

teaching of IL. Other challenges encountered included unstable internet connectivity in particular at the Midlands Campus; computer illiterate students and diverse and varying levels of students in a group.

Subject librarians’ observations: Students need help with computers in their first level of study regardless of whether they are cellphone savvy. Some of them have not been exposed to academic assignments and projects and referencing techniques at school and so they are unprepared for University level performance.

New trends: Some academics are communicating with their students via Facebook and Twitter. The Library has also incorporated social networking tools in communicating with students.

Subject guides: Interactive online subject guides are a feature of the new Library webpage designed to facilitate student access to information 24/7 for study and research.

Reaching out to academics. An information literacy (IL) training session was held at the Indumiso Campus for academics in the Departments of Education and Nursing and the Faculty of Engineering and the Built Environment to demonstrate the role that the Library can play in enhancing teaching, learning and research at DUT. The Faculty of Engineering and the Built Environment Dean also requested an IL intervention for academics at the Steve Biko Campus. This was a fruitful and lively IL session.

Blended learning. The Library continues its attempts to create a powerful teaching and learning environment at the University. The following are examples of the Library’s promotion of blended learning at DUT:

- Research-it-right online tutorial is available on the Library’s webpage for self-paced learning

- An interactive iLink tutorial is hosted on the webpage for students to teach themselves how to optimise the search and retrieval of information resources available in the Library for study and research
- A crossword puzzle on IL was designed to promote interactive teaching and make learning fun
- Google Scholar Citations video was used by subject librarians to create awareness of Google Scholar Citations for research purposes
- Learning Management Module - the Library will be utilising Blackboard to develop an online classroom for IL and will seek opportunities for collaborative teaching and learning in online classrooms in 2012.

COLLECTION DEVELOPMENT

The Information Resources Policy Working Group revised the Information Resources Policy which was tabled at the Library Committee meeting in November 2011.

e-resources usage

- Increased usage of 14% in the number of searches conducted in 2011 compared to the same period the previous year. A total of 179 644 searches were performed (compared to the 157 837 searches for the same period in 2010).
- Some databases still have a high cost per search:
 - o Compendex cost per search is R155.83
 - o DAAI cost per search is R35.77
 - o Art Fulltext cost per search is R30.80
- Most popular database: EBSCO with 48 203 searches performed at a cost of R4.77 per search.

New Acquisitions

e-brary Academic Complete:

Records for more than 50 000 titles in the e-brary Academic Complete collection were uploaded to the catalogue during the second week of August. Although this database of electronic books was only introduced relatively late in the year, the take-up of this new database has been

dramatic. It is hoped that usage will continue to increase once dedicated computers for accessing this valuable e-resource are introduced across all campuses in January 2012.

Discovery tool Summon:

After much research and deliberation, Summon has been selected as the discovery tool of choice for DUT. Implementation started in November 2011 and this product will be accessible from 2012 onwards. Summon is a tool that allows one to cross-search library resources, including full-text e-resources, from a single search box to find relevant ranked articles, books, conference proceedings, reports, reviews, etc. The biggest selling point for Summon is that it is as easy to use as the ever popular Google.

Web of Science:

In order to optimise the special SANLiC deal, which included the back-files from 2003-2012 and a three-year licence (2011-2013), Web of Science was purchased. This database from Thomson and Reuters is an invaluable tool for the Institutional Research Department to track and rate researchers. Web of Science is essentially an online academic citation index. It is designed to provide access to multiple databases, cross-disciplinary research and in-depth examination of specialised fields within an academic or scientific discipline. As a citation index, any cited paper will lead to any other literature be it from a book, journal or a conference proceeding which cited a work. In this way, current trends, patterns and emerging fields of research can be assessed. Web of Science is available on the library webpage.

OPEN ACCESS

Over the past few years, the Durban University of Technology has entered the Open Access arena with initiatives such as the Institutional Repository (IR). This ensured that some of the University's research output is available to the global research community. The Institutional Repository, which is regulated by the Institutional Repository Policy

(2009) has 486 Theses and Dissertations and 64 research publications, and is our single biggest contribution to the open access movement. During Open Access Week in 2010, Eve Gray delivered the 'Open Access' college lecture themed "Renew your thinking on scholarship!" This lecture has been the catalyst for the following:

- a 'discussion paper on Open Access' which is being tabled for discussion at Senate
- an Author Publisher Addendum to ensure DUT authors retain their rights when signing publisher agreements.

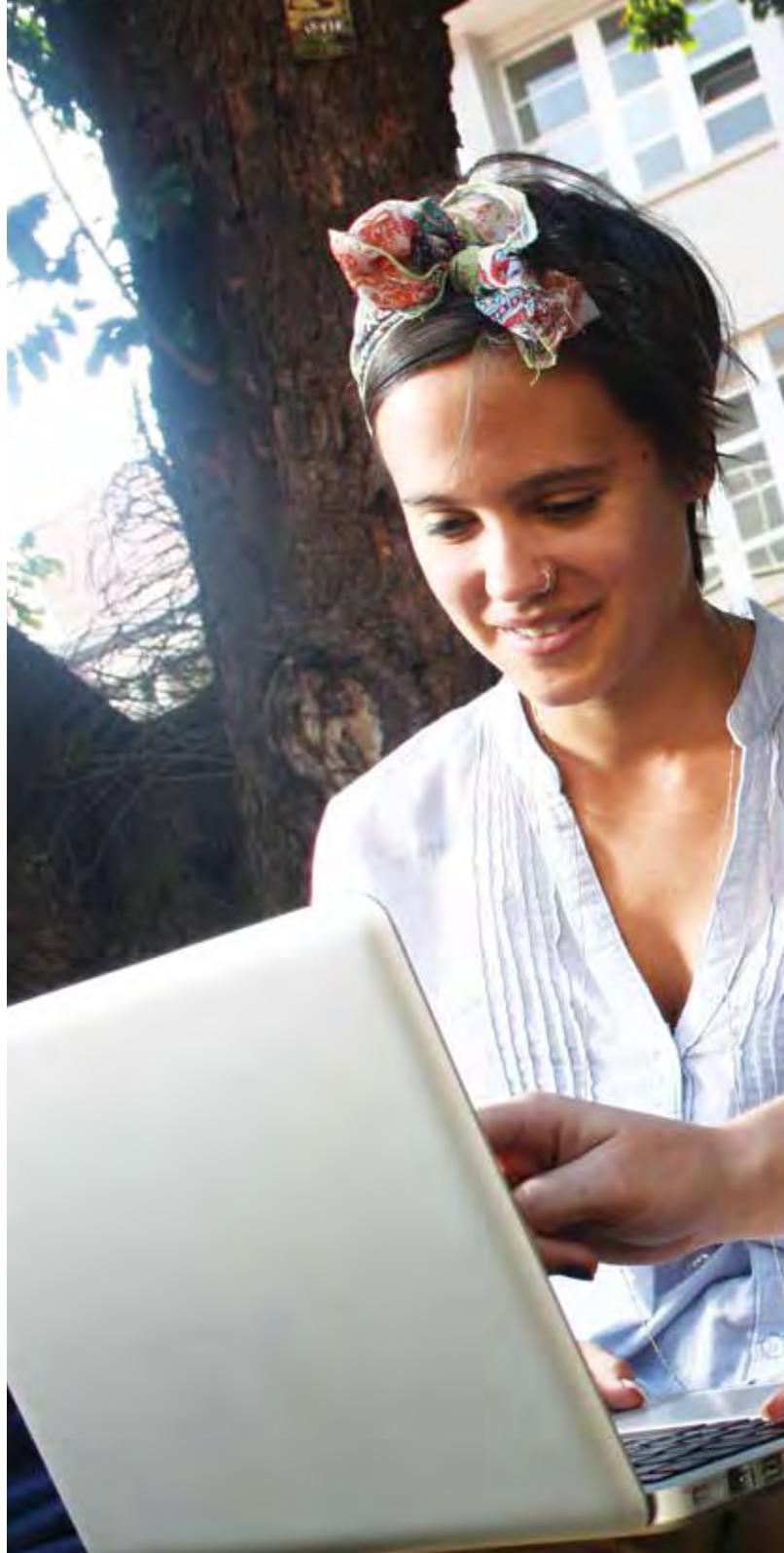
However, from general interactions and subsequent discussions at a few forums, much more has to be done to create a common understanding and acceptance of Open Access. Concerns among academics and researchers regarding making their research available in the Open Access environment need to be addressed. With this in mind, the library gathered a panel of advocates and detractors to debate these challenging issues in terms of Open Access in scholarship on 2 November 2011. Panelists included Professor Bawa (DUT), Dr Hussein Suleman (UCT), Dr David Spurrett (UKZN), Mr Nico Fassen (PASA) and DUT academics.

Open Access Week is a global event which is now in its fourth year. Not only does it provide the academic and research community with the opportunity to continue to learn about the potential benefits of Open Access, it also helps to inspire wider participation which assists in making Open Access a new norm in scholarship and research.

SPACE

City Campus Library and the Department of Fine Art and Design have collaborated in agreeing to share the new computer laboratory. The project was completed in 2011 and will be jointly used at selected times.

Brickfield Library is very small and the only Library without group room facilities. There is a great demand for this and unfortunately budget





constraints and actual space makes this virtually impossible at present. Alan Pittendrigh Library has severe space constraints. This is especially noticeable during examination periods and core periods when students are working on assignments and projects. The media area is always full and staff have often had to intervene and request students to leave the area once their laptops have been charged.

ML Sultan Campus baggage counter no longer provides a solution for the BM Patel Library services. The installation of lockers would be an ideal solution.

CONFERENCES, WORKSHOPS AND PROFESSIONAL CONTRIBUTIONS

Trish Gierke presented two papers at the ISASA School Librarians' Conference in Grahamstown in July:

- Feet on the ground, apps in the cloud and a library in your pocket, and
- Yesterday, today and tomorrow: cataloguing AV & e-resources.

Three staff presented papers at the Library and Information Association of South Africa (LIASA) 13th annual conference in East London in October:

- Roy Raju presented a paper entitled "Share and share alike: a case study of the Legal Aid Board".
- Shirlene Neerpath and Lucille Webster jointly presented a paper entitled "IL integration into curricula at DUT".
- Segarani Naidoo presented a paper entitled "The impact of the digital divide on IL training in a higher education context".
- Ms Bongekile Mngadi and Dr Rishi Balkaran presented a paper entitled "Communities of Practice as a means to advancing curriculum renewal in Higher Education Institutions: Faculty of

Management Sciences in Durban University of Technology: a case study" at the Conference of Higher Education in South Africa held in Regent Hotel, East London, South Africa.

- Karin Herbert gave a presentation to the Higher Education Interest Group AGM, titled "Out of the Box: some critical issues on collection development & management in South African libraries".
- Karin Herbert presented a research paper based on the introduction of e-Learning into Information Literacy at Riverside Campus - for the e-Learning webinar hosted by CELT on 23-24 November and has been asked to both prepare this research for publication and consider presenting it at some national conference. Karin graduated with top marks in the WebCt Pioneers 2010/2011 class.
- David Thomas designed an IL poster on the pilot study that he conducted in the Industrial Engineering department in 2010. The poster was accepted for presentation at the Metrolina 6th Annual Information Literacy conference in North Carolina (USA) as well as at the Higher Education Learning and Teaching Association of Southern Africa (HELTASA) Conference at the Nelson Mandela Metropolitan University in Port Elizabeth.

OTHER ACHIEVEMENTS

- Lucille Webster was nominated as the LIASA KZN Librarian of the Year 2011/12.

CONCLUSION

The year 2011 presented extraordinary opportunities for the library to promote teaching, learning and research at the University. It signalled an ambitious year ahead for the library to embrace cutting edge technology and resources with the highlight of the Summon discovery tool to deliver on a platform the library user desires.

REPORT OF THE SENATE TO COUNCIL

TECHNOLOGY, INNOVATION AND PARTNERSHIPS (TIP)



Professor FAO Otieno – DVC: Technology, Innovation and Partnerships

INTRODUCTION

The TIP ambit engaged in a strategic planning process during 2011 which resulted in the confirmation of its mission: "Making knowledge useful by promoting and supporting research, innovation, technology transfer and partnerships". This brief overview will show how the ambit promotes and supports these endeavours in the University.

It is clear that the many interventions, systems and processes put in place in 2010 are beginning to bear fruit. Across the board there has been an increase in the uptake of partnerships, funding and mobility opportunities and industry engagement. The focus on building a research culture at the University, as well as on internationalisation endeavours, is producing results. It is heartening to know that we have exemplars of best practice at the University, gaining national and international recognition. We have a body of eager young researchers who will learn well from our professorial body and experienced researchers, particularly as we strive to make our research relevant to our local and national context.

Despite the progress, there are still challenges. Funding for research remains a critical factor, success and throughput of our postgraduate students need to be improved and third stream income must be increased. Information technology platforms need to be updated continually to face changing user patterns and requirements. However,

we are confident that these challenges can and will be met. For a comprehensive review of the impact of the activities of the TIP ambit, the TIP Annual Review and the Research Report (both to be published separately) should be read in conjunction with this short report.

INTERNATIONAL EDUCATION AND PARTNERSHIPS (IEP) (DR L SAMUELS, DIRECTOR)

The year was marked by an exponential growth in the activities of the International Education and Partnerships Directorate. These activities had a concomitant increase in the uptake of internationalisation opportunities by departments across the University. The nature of the international projects ranged from internationalisation of the curriculum, visits by international scholars, extensive collaborations in the three core functions of the university, an increase in the number of full time international students as well as international semester students, amongst other activities.

Highlights of the year were the hosting of two **major international events**. The University hosted the 15th International Education Association of South Africa (IEASA) conference. This successful event helped profile the University as a significant role player in international education in South Africa. The second event, hosted by in conjunction with Higher Education South Africa (HESA) and the Department of Higher Education and Training was the India-Brazil-South Africa

(IBSA) Academic Forum. This forum brought together academics and academic managers from universities in India, Brazil and South Africa and provided a platform to discuss ways of collaborating in the core business of higher education at a number of levels.

Many of the **flagship programmes and projects** of the International Office continued successfully in 2011. These include the collaboration with the US Consulate in the *Fulbright Programme*. The US Community College Programme yet again yielded excellent results for DUT, with the University once more having the highest number of successful applicants. Professor Kathy Nokes, an esteemed academic in the field of Nursing and HIV/AIDS from the Hunter College, City University of New York, spent time at the University as a Fulbright scholar under the Fulbright Senior Scholars programme. The annual programme of activities with the *University of Michigan* continued, with a focus on using the oral tradition in HIV education. The international office also managed to secure a place for a DUT staff member to participate in the highly prestigious HIV programme run by Columbia University and the HSRC in South Africa, namely the MACAIDS Leadership Initiative. The School of Education, *Georgia State University* conducted workshops and seminars in the area of School Management and Leadership, Mathematics Education, Deaf Education as well as reading and writing skills. This collaboration is a strong and growing partnership and has the potential to grow into a flagship project for DUT. A Principals' Leadership Academy has been established as a community engagement project that will involve DUT, Georgia State University and leaders and managers in education in KwaZulu-Natal. A visit from the Deputy Vice-Chancellor: Academic from *Curtin University*, Perth Australia, followed by a visit from a delegation of parliamentarians from Western Australia has cemented our partnership with Curtin University. This partnership straddles a number of areas but is particularly strong in the areas of Fine Art and Jewellery Design. A vibrant exchange programme involving staff

and joint exhibitions has emerged from this project.

A number of **visiting scholars** contributed significantly to the enhancement of the quality of academic activities at DUT. Particularly significant was the visit of three prominent *German professors* to the Department of Marketing, Retail and Public Relations. Professors Dobbelstein (who has been awarded an honorary DUT professorship), Klaiber and Asche contributed to the academic activities of this department. A new partnership with the World Learning Academy entails the utilisation of mobile learning technologies and is a community outreach project with the Department of Language and Translation. Also significant was the visit of the delegation from *KIA University* in Denmark, where an MOU for collaboration in the field of Child and Youth Development was discussed. This collaboration will include a community outreach project, a staff exchange programme and benchmarking and sharing of exemplary teaching and learning.

The number of full time **international students** continues to grow and this was augmented by the arrival of 100 Zimbabwean students on the Presidential Scholarship Programme. The Semester Abroad Programme saw more than 100 students visiting DUT in 2011. The University has received commendations for the projects emerging from these visits in the Department of Human Resource Management with students from University Baden-Wurtemberg, Germany, and the Child and Youth programme with Leeds Metropolitan University, UK. These semester abroad students as well as the full-time international students are significantly enriching the classroom experience of our students.

The approval of the International Admissions **Policy** will play an important role in helping internationalise the University by increasing the number of international students and thus enriching the fabric of the University. It promises to imbue in our University the notion of universality that is alluded to in the word university. We move forward towards a University that is truly a repository of global knowledge.

RESEARCH AND POSTGRADUATE SUPPORT DIRECTORATE (PROFESSOR S MOYO, ACTING DIRECTOR)

This brief overview is supplemented fully by the 2011 Research Report. Research is one of the central activities of the University with the intent of enhancing, inspiring and informing the University's purpose of teaching, learning and community engagement embedded in its local context. These facets come together in 2011 with some productivity groups producing ground breaking research, despite severe cutbacks in research funding.

In taking the research agenda of the University forward strategically, the need to focus on its recruitment and retention strategy, as well as **increasing its research base** from within was identified as a priority. To this end, the University applied for four Chairs in the South African Research Chairs Initiative (SARChI), in the fields of Development of Wastewater Treatment Technology for developing economies, Biotechnology, Systems Science (natural and social systems) and Nanotechnology. We await the outcome. Four retired professors were appointed on fixed term performance contracts.

Another identified priority is the creation of **competitive and prestigious research** focus areas, sponsored by public and private funding sources, aiming to make the University a place of choice for competitive and excellent staff and students both nationally and internationally. The University has identified research focus areas that it will grow and invest in. Two of these areas, in water and wastewater management and systems science (natural and social systems) were given institute status based on a three-year self-sustainable plan.

Research performance indicators for Masters and Doctoral students' graduation as well as research publications are reported in detail in the Research Report. There is a small growth in the research publications output. A total of R13 955 786 was generated from the total of 116,95 units produced in 2010 and reported to the Department of Higher

Education and Training in 2011. However, substantially decreased funding from the Research Development Grant has largely affected the support of postgraduate students and the University's endeavour to support staff who are undertaking postgraduate study. This is an area that has potential to improve with the appropriate supervision, resources and interventions for postgraduate programmes.

In addition to the accredited outcomes, 39 non-accredited units comprising creative works and other publications were produced.

PERFORMANCE INDICATORS 2011		
ITEM	DUT	DHET TARGET
Staff with Doctoral Qualifications	13%	40%
Staff with Masters Qualifications	44%	60%
Postgraduates as a % of total enrolments	2%	7%
Ratio of Research Output Units to Instruction & Research	74 units 0.12	74 units 0.5

HEADCOUNT OF POSTGRADUATE STUDENTS PER FACULTY 2011					
FACULTY	FORMAL		NON-FORMAL		GRAND TOTAL
	M	D	M	D	
	T	T	T	T	
Accounting and Informatics	21	7	13		41
Applied Sciences	60	16	15	5	96
Arts and Design	25	18	24		67
Engineering and the Built Environment	33	8	20	5	66
Health Sciences	123	6	28	1	158
Management Sciences	41	14	49	21	125
Grand Total	303	69	149	32	553

(Data as at 27 October 2011 from Oracle database)

A total of 83 Masters students and 13 Doctoral students graduated in 2011. This marks an increase in the number of Doctoral students who graduated in comparison to 2010.

Building research capacity amongst staff and students has been given high priority in the year under review. A programme of 25 workshops, seminars and training sessions was hosted with presentations and facilitation by local, national and international academics. The highlight of the year was the successful Institutional Research Day held in November, when postgraduate students and researchers were able to showcase their work to the University community.

Policy development is an important mechanism in formalising the research environment at the University, and a number of policies were drafted, in process of approval or approved. These include the review of the Research Policy to include sabbatical leave; the Policy on the Establishment of Research Focus Areas, Research Centres and Research Institutes; the Policy and Procedures on Sabbatical Leave; the Policy on Postdoctoral Fellows; the Policy on Doctorates by Publication; the Research Ethics Policy and Terms of Reference, and the Higher Degrees Assessment Policy.

The University is a member of the Research Information Management System (RIMS) consortium and is in the process of implementing the InfoEd system to manage and report on research activity. Finally, the Research Management and Development Directorate and the Postgraduate Development and Support Directorate merged to form the Research and Postgraduate Support Directorate.

TECHNOLOGY TRANSFER AND INNOVATION (PROFESSOR G PRINSLOO, DIRECTOR)

This department has been the key driver of the *Eskom Energy Board Savings Project*, which aims to identify areas of energy and electricity that can be saved on the University's campuses and residences, as well as identifying and supporting research initiatives and projects in this regard. This ongoing project could result in considerable fiscal savings for the University. This project is awaiting the signing of the DSM funding

agreements by the Eskom head office. TTI facilitated the submission of a proposal to the Department of Science and Technology for the design and manufacture of *hybrid renewable energy systems* for rural communities which resulted in a R10 million grant. The University was the host institution for the annual *South African Research and Innovation Managers Association (SARIMA)* conference, held in Umhlanga in June. DUT, together with Mangosuthu University of Technology, SmartXchange and the eThekweni Municipality, secured funding from the Technology Innovation Agency (TIA) for an *Energy Technology Innovation Centre (KZN ETIC)*. TIA has committed more than R5.4 million over the first three-year cycle for staff and operational costs. The establishment of the KZN ETIC is a strategic opportunity that can address many objectives, including promoting the development of SMMEs in the region, developing the skills base in the energy sector in Durban, promoting linkages with the ICT sector and creating an Energy Office space that is accessible and visible to the public.

The staff of the Mechanical Engineering department embarked on a multipronged programme to take Engineering to the schools to encourage scholars to consider engineering as a career. This '*Vision 2000: engineers and scientists for the future*' project envisages taking a fully equipped bus or truck with demonstration equipment, audio-visual displays and hands-on experiments relating to renewable energy to schools and rural communities. The Caltex Group of Companies is funding this to the value of R525 000 and Chevron has committed additional funding in the form of fuel sponsorship. This project should be in operation after March 2012, depending on sponsorship for a suitable vehicle. The *National Innovation Competition (NIC)*, hosted by TIA, was held at the Moses Mabhida Stadium. DUT was amongst the winners, with Mechanical Engineering's Festus Maina Mwangi and his colleague Avinash Ramsaroop winning the award for the Best Stand. Their entry was titled '*An Impact Energy Management System*'. TTI is in the process of conducting novelty searches in order to proceed with the filing of an international PCT Patent application for this technology.

TTI facilitated a meeting whereby five researchers presented their research projects to the Venture Capitalist: Projects of the *Industrial Development Corporation* (IDC). There is considerable interest in two of the projects and novelty searches are being conducted as a pre-requisite for IDC investment. TTI is also engaged in revising the Intellectual Property and Copyright **Policies** of DUT. These are in the process of being scrutinised by the Department of Science and Technology's NIPMO (National Intellectual Property Management Office) office prior to DUT stakeholder involvement.

RESEARCH INSTITUTES

(PROFESSOR F BUX, DIRECTOR: IWWT;

PROFESSOR K DUFFY, DIRECTOR: ISS)

Two research focus areas have been awarded the status of Research Institute, namely the Institute for Water and Wastewater Technology (IWWT) and the Institute of Systems Science (ISS). Both Institutes are multidisciplinary, drawing on expertise and staffing from various faculties of the University. Operational challenges aside, the Institutes have begun consolidating their research activities and industry engagement.

The **Institute for Water and Wastewater Technology** (IWWT) has had an active year of research projects, industry engagement and publications. There are three postdoctoral fellows attached to the Institute and one research associate. Student research includes thirteen doctoral and seven masters students. Broadening its footprint, the IWWT engaged in two bilateral partnerships, namely, SA-India and SA-Egypt. The IWWT's performance indicators are impressive. In 2011, four Masters students graduated and one Doctoral student. Nine journal articles were published, one accepted for publication and one submitted. One book chapter was published, with three still in press. National and international conferences were attended, with twelve conference presentations made. Funding and grants received from external sources amounted to R2 746 666.

For the **Institute of Systems Science** (ISS), 2011 saw the consolidation of various faculty staff members doing research in the ISS. Applications were submitted for a research chair from the DST and for funding from the African Union. The latter has been approved with funding allocation awaited. A highlight of the year was that Professor Wayne Getz was offered and accepted as an honorary research fellowship in the ISS. He is a senior bio-mathematician at the University of California and is a world renowned researcher in his field. Staff attached to the ISS include six professors and two doctors from the University establishment. There are also one postdoctoral fellow, two Doctoral and 12 Masters students presently involved in research at the ISS. Two doctorate and seven masters students graduated in 2011. A total of 22 journal articles were published by these staff and students, with one submitted for publication.

CO-OPERATIVE EDUCATION UNIT(MR S ORI, DIRECTOR)

Minister of Higher Education & Training, Dr Blade Nzimande, set the tone for the activities of the Co-operative Education Unit in his opening address at the launch of the new Governing Board of the Southern African Society for Co-operative Education (SASCE). He stated that Work-Integrated Learning (WIL) is crucial to skills development in South Africa and must remain a mission of the universities of Technology. The Co-operative Education Department has continued to deliver on this mandate by attempting to place all students that require WIL, even though hamstrung by a shortage of staff. The number of companies and businesses participating in the **WIL programme** has increased and stronger ties have been forged with various SETAs to support this. Funds received from the CHIETA SETA to the value of R1 million were used to pay student stipends where companies could not afford this. The Transport SETA (TETA) also made an award of R960 000 to assist with payment of maritime WIL students. Engagement is continuing with other SETAs.

Two successful activities were co-ordinated by the Unit. Sixty companies participated in the annual **World of Work Careers Fair** (WOW) which saw over 10 000 students pass through its doors during two days. Feedback on this event has shown the success and the benefit of the Fair to students and industry partners alike. Secondly, an **Industry Indaba** was held at the Docklands Hotel. This gave the Vice-Chancellor a chance to interact with several industry players and also saw the launch of the OLUMS learner tracking system, an online intelligent system created by DUT's head of Electronic Engineering, Mr Kris Moodley. Moodley and Ori were invited to Thailand to make a presentation on the system to the Thailand Association for Co-operative Education. During this visit, a Memorandum of Understanding was signed with *Suranaree University of Technology*.

Staff in the Co-operative Education Unit have attended and delivered papers at various international and national conferences.

BUSINESS STUDIES UNIT (BSU)(DR K BEEMSEN, DIRECTOR)

Given the uncertain start to the year and faced with both regularisation and implementation of operational systems, the need to be financially self-sustaining and the expectation and commitment to generate third stream income for the University, the Business Studies Unit has fared exceptionally well. With the disengagement of the franchise business relationship and its associated course provider delivery structure, the Academic Office was mobilised as the course provider as well as being the centralised academic service provider. This resulted in the BSU Durban office being set up in its own premises. The BSU Pietermaritzburg office, wholly owned by the University and situated on the Riverside Campus, expanded the DUT footprint. Furthermore, the franchisee from Polokwane was permitted to set up BSU operations in Pretoria, Gauteng. One of the foremost achievements is that the Unit has been able to sustain itself financially as well as demonstrating positive returns for the University in terms of FTEs and retained earnings. Other achievements include regularising operational

systems which realised the set-up of registration procedures and systems operating via the Faculty Office, realigning financial systems in accordance with DUT requirements and developing an academic record keeping system which will be implemented in 2012.

The BSU graduated 1 040 students from learning programmes ranging from the BTech Management to short learning programmes and short courses and workshops. A successful BSU stakeholders' breakfast was hosted in September with some very promising spin-offs, which should yield dividends in 2012.

While the BSU still faces considerable challenges in stabilising its structures and systems, it has demonstrated its potential and inherent goodwill as well as the intention to harness and leverage the BSU potential, as signalled by the Vice-Chancellor's inclusion of the BSU as a strategic component in his growth plan for the University.

ENTERPRISE DEVELOPMENT UNIT (EDU)(MR C THAKUR, HEAD)

The Enterprise Development Unit had another challenging and busy year. Activities of the EDU fall into SETA projects, the IT Academy, Professional Bodies programmes and community initiatives. A number of projects are being used to lever the DUT brand locally and nationally.

SETA projects: The EDU inherited a number of SETA projects which are in varying stages of progress. EDU initiated one SETA project in 2011 with the Local Government SETA, which is a training programme on Occupationally Directed Education Training and Development Practices (ODETD). A total of 135 registered delegates were trained in KwaZulu-Natal.

IT Academy: To overcome space and equipment challenges, laptops are used for training, resulting in flexibility in physical location, utilising empty boardrooms and meeting rooms as training venues. Teaching materials, user manuals (on CDs) and customised courses were

developed, offering a professional product. The IT Academy trained approximately 560 delegates in 2011.

EDU community projects: The *Soshanguve Manufacturing and Technology Development Centre (SMTDC)* Project engaged the EDU to teach entrepreneurial skills to unemployed people in the Soshanguve area as a means of empowerment and social upliftment. The *Red Cap Foundation project*, which saw the installation of 150 computers in five schools in 2011 as well as teacher training, is now in its fifth year of collaboration with EDU and is a considerable brand building and entrenching opportunity for the University. EDU not only trains the teachers but also conceptualises and adjudicates an inter-school competition, instilling purpose and a competitive spirit.

Lego Mindstorms Competition: A number of schools participate in this robotics project, with the school mentored by EDU staff achieving the first three places in the KwaZulu-Natal competition, as well as winning the Lego robotics portion of the national First Lego League completion. The University is currently investigating the possibility of developing a South African mechatronic with a South African innovator. *The Connected Schools Project* aims to install ICT and internet capability in 100 schools in eThekweni's broadband network footprint. This will be enabled by the donation of at least 40 tablets per school. Partners in this project include the eThekweni Municipality, Technology Innovation Agency (TIA), the KZN Department of Education and international tablets and camera manufacturing company MATLA. DUT's contribution to this project was to set up an Android tablet testing facility which involves five postgraduate ICT students.

Professional Bodies Unit: The Unit introduced three new programmes as well as remodelled the Diploma in Marketing. The Unit had a challenging year faced with space, logistics, fees defaulting and staffing issues, but plans are being actioned to remedy these for 2012.

A highlight of the year was the launch of **InvoTech**, an innovation technology business incubator. This is an initiative driven by the EDU

in partnership with the Small Enterprise Development Agency (SEDA), who provided the funding. InvoTech proposes to attract and assist SMME businesses and industry with ideas for new innovations and technologies to set up their business operations, utilising the offices of InvoTech and the broader skills base of the University.

EDU head, Mr Colin Thakur, was commissioned to investigate electronic voting (e-voting) by the Independent Electoral Commission (IEC) to report on international good and bad experiences in e-voting. He was invited as an International Expert and Observer to the Zambian 2011 elections and presented papers on these issues at conferences in Ghana and Kenya.

INFORMATION TECHNOLOGY SUPPORT SERVICES (ITSS) (MR V SINGH, ACTING DIRECTOR)

Significant progress on many fronts has been made in terms of IT support to the University, contributing positively to the student and staff centred drive of the Vice-Chancellor. The department faced some major challenges, including being selected as the ITS Beta site for the ITS Integrator suite of applications. This recognition places DUT as the leading university in the country for the deployment of ITS applications. A focus on **planning and governance** resulted in the IT strategic plan which gives the framework for the roll out of IT platforms, new technologies and support services for the next five years. These are detailed in 22 key strategic indicators. Key projects around IT governance at the University included the assessment of business continuity management, the readiness of DUT regarding the Personal Information Act and the assessment of control objectives in IT. All these will ensure that there is greater accountability for decision-making around the use of IT in the best interest of all stakeholders.

In its student focus, the department engaged in three key projects. The first of these, the ITS web project has as its main objective to enable online student registration via the Web. A growing number

of departments are migrating the back office registration of their courses to the Web. The DUT4Life project went live in August; this student email system is provided by Microsoft Live@edu, and it offers free hosted, co-branded communication and collaboration services for students, faculty and alumni. A major benefit to the University is reduced IT infrastructure and maintenance costs.

This is the first cloud-based application for DUT. The student laptop initiative which was finalised during the year enables both staff and students to buy laptops at competitive prices, via a scheme which was negotiated with ASAUDIT and PURCO. In providing **services to staff**, the ITS Beta upgrade project was undertaken, with extensive workshops and testing of the product by users.

The success of this project can be measured by completing on schedule, within budget, meeting user requirements and by the significant saving of R465 000 by participating in the Beta testing programme. The HEAT service desk system, whereby logs are called for support with the ITSS department was upgraded and HEAT self-service system was installed and implemented. This means that users will be able to track the status of their service calls logged as well as experience improved turnaround time and productivity.

A number of **infrastructure projects** were undertaken during the year. A new state of the art data centre has been built and new IBM servers replaced outdated and maintenance heavy equipment and again position the University as leaders in the use of IBM Server Power technology. Utilising this technology, more self-service type applications benefiting staff and students will be enabled and available via intranet and internet. Finally, the Microsoft Forefront Anti-Virus system was implemented, replacing the Sophos system. Implementation was achieved by using Windows Servers Update Services to deploy the distribution of the software.

CONVOCATION AND ALUMNI

(MR DAVID SEDUMEDI, MANAGER)

Homecoming is an event organised by the Convocation and Alumni Department to attract DUT graduates to re-engage with the University as alumni. Last organised in 2009, the event in 2011 saw a staggering 1800 graduates attending. The growth and interest is considerable, given that 300 graduates attended in 2008. Various functions were graced by provincial luminaries, including the Premier of the KwaZulu-Natal, Dr Zweli Mkhize. The "Give-a-Tiger Campaign" ('Tiger' being slang for a ten rand note) was launched at Homecoming. This is an initiative to raise money for a bursary fund for disadvantaged yet meritorious students to pursue their studies at the University.

The Executive of Convocation presented the 2011 Silver Tusk awards to four more recipients. This award is bestowed upon the Durban University of Technology Alumni who through their personal and/or professional accomplishments and hard work bring honour and recognition to the University, in line with the institution's tradition of excellence.

The recipients of the Silver Tusks for 2011 are Vanitha Engelbrecht (Master Brewer at SAB), Nevasha Naidoo (Chartered Public Relations Practitioner), Pinkie Mtshali (well known as the Durban Diva) and Siemon Allen (internationally recognised artist).

The new Convocation Executive was elected at the Annual General Meeting. The senior office bearers are Mr Wiseman Madinane (President), a Director at HI TECH Transformers and Mr Ntokozo Chonco (Deputy President), who is the Deputy Director General: Department of Co-operative Governance and Traditional Affairs, KwaZulu-Natal Provincial Government.

2011 RESEARCH OUTPUTS BY TIP AMBIT

Office of the DVC:TIP

DHET Accredited Journals

- 1 Olufayo, O.A, Ochieng G.M, Ndambuki, J.M, and Otieno F.A. O. 2011. One-dimensional finite difference approach for sedimentation process in sand filled reservoirs. *International Journal of the Physical Sciences*, 6 (7), pp. 1635-1642.
- 2 Otieno, F.A. O., Olufayo, O.A, and Ochieng, G. M. 2011. Sand water storage: Unconventional methods to freshwater augmentation in isolated rural communities of South Africa. *Scientific Research and Essays*, 6 (9) pp.1885-1890
- 3 Odinga CA, Otieno FAO and Adeyemo J.A. 2011. Investigating the effectiveness of aquatic plants (*Echinocloa L* and *Cyperus L*) in removing nutrients from wastewater: the case of Chemelil constructed wetland- Kenya. *International Journal of Physical Sciences*, 6 (16), pp. 3958-3968.
- 4 Otieno F.A. O. and Adeyemo J.A. 2011. Multi-objective cropping pattern in the Vaalharts irrigation scheme. *African Journal of Agricultural Research*, 6 (6), pp. 1286 – 1294.
- 5 Bloodless Dzwauro, Fred A. O. Otieno, and George M. Ochieng. 2011. Towards a more sustainable surface raw water tariff structure in the Vaal basin: A situational analysis. *International Journal of the Physical Sciences*, 6 (29), pp. 6751 - 6758.
- 6 Dzwauro, B., and Otieno, F.A. O. (2010). Integrating quality and cost of surface raw water: Upper and Middle Vaal Water Management Areas South Africa. *Water Science and Technology: Water Supply*, 10 (2), pp. 201–207.
- 7 Masukume, M., Eskandarpour, A., Onyango, M., Ochieng and Otieno, F. 2011. Treating High Nitrate Groundwater Using Surfactant Modified ZEOLITE in Fixed Bed Column. *Separation Science and Technology*, 46, pp. 1131-1137.
- 8 Wekesa, BW., Otieno FAO and Steyn GS. 2011. A Review of Physical and Socio Economic Characteristics and Intervention Approaches of Informal Settlements. *Habitat International Journal*, pp. 35, 238-245.

Conference Papers/ Abstracts/ Posters

- 1 B. Dzwauro, F.A. O. Otieno and Ochieng', G. M. 2011. Rule-set based Water Quality Index for the Vaal basin, South Africa. *Proceedings of the 12th WaterNet/ WARFSA/GWP-SA Symposium: 'IWRM: Harnessing the Rivers of Knowledge for Socio-Economic Development, Climate Adaptation & Environmental Sustainability* Maputo, Mozambique, 26 - 28 October 2011.
- 2 Dzwauro, B., Otieno, F. and Ochieng'G. 2011. Ecological Functionality of the Upper and Middle Vaal Water Management Areas. *Proceedings of the 3rd Municipal Water Quality Conference*, Cape Town International Conference Centre, South Africa, 27 June –1 July.

- 3 Otieno, F.A. O. and Dzwauro, B. 2011. Water Pricing as a Strategy to Sustainable Water Management in South Africa - Case of the Vaal River system. *Proceedings of the 4th IWA-Singapore International Water Week 2011: Sustainable Water Solutions for a Changing Urban Environment*, Suntec Convention Centre, Singapore, 4 - 8 July 2011.
- 4 Olufayo, O.A, Ochieng G. M, Ndambuki, J. M, and Otieno, F.A. O. 2011. A Process-based model for fluidized bed in sand filled reservoirs. *World Environmental & Water Resources Congress 2011: Bearing Knowledge for Sustainability*, California, USA, 22-26 May 2011.
- 5 Otieno, F.A. O. and Taiwo, O. E. 2011. Towards Sustainable Waste Management: Household Habits with Respect to Waste Disposal. *Proceedings of the Thirteenth International Waste Management and Landfill Symposium*, S. Margharita di Pula, Cagliari, Sardinia, Italy, 3-7 October 2011.
- 7 Taiwo, O. E. and Otieno, F.A. O. 2011. Comparative Study of Solid Waste Management practices for Selected Cities in Africa. *Proceedings of the Thirteenth International Waste Management and Landfill Symposium*, S. Margharita di Pula, Cagliari, Sardinia, Italy, 3-7 October 2011.
- 8 Ojo, O. I., Ochieng, G. M and Otieno, F.A. O. 2011. Assessment of Water Logging and Salinity Problems in South Africa: An Overview of Vaal Harts Irrigation Scheme. *Proceedings of the WIT Transactions on Ecology and the Environment*, Palm Springs, California, 22-26 May 2011
- 9 Beemsen, K. and Muller, N. J. 2011. A new approach to training cooperatives. *Ithala consultative conference*, Pietermaritzburg, 23-24 November 2011.

Paper in Non Refereed Proceedings

- 1 Adeyemo, J. A., Enitan, A. M. and Otieno, F.A. O. 2011. Minimization of water use in the food processing operations. *Proceedings of 6th Dubrovnik Conference on Sustainable Development of Energy, Water and Environment Systems*, Dubrovnik, Croatia 25–29 September, 2011.

Book Chapter

- 1 Dzwauro, B., Ochieng, GM., Letsoalo, ME and Otieno, F.A. O. 2011. Data Reduction for Water Quality Modelling, Vaal Basin. Chapter in *Book Scientific and Engineering Applications using MATLAB* (Edited by Leite, EP) Published by InTech, ISBN 978-953-307-659-1

Institute for Water and Wastewater Technology (IWWT)

- 1 Rawat, I., Kumar, R. I., Mutanda, T., Bux, F. 2011. Dual role of microalgae: Phycoremediation of domestic wastewater and biomass production for sustainable biofuels production. *Applied Energy*. 88, pp. 3411–3424.

- 2 Marrangane, Z., Sheena Kumari, S.K., Pillay, L., Bux, F. 2011. Simultaneous quantification and comparative analysis of genetic diversity among *Gordonia* populations in foaming activated sludge treatment plants through RT-PCR and nested PCR-RFLP. *Journal of Basic Microbiology*, 51 (4), pp. 415-423.
- 3 Bhola, V., Desikan, R., Sheena Kumari, S.K., Subburamu, K., Sanniyasi, E., Bux, F. 2011. Effects of parameters affecting biomass yield and thermal behaviour of *Chlorella vulgaris*. *Journal of Bioscience and Bioengineering*, 3 (3), pp. 377-382.
- 4 Mutanda, T., Karthikeyan, S., Bux, F. 2011. The Utilization of Post-Chlorinated Municipal Domestic Wastewater for Biomass and Lipid Production by *Chlorella* sp. under Batch Conditions. *Applied Biochemistry and Biotechnology*, 164 (7): 1126-1138.
- 5 Mutanda, T., Ramesh, D., Karthikeyan, S., Kumari, S., Anandraj, A., Bux, F. 2011. Bioprospecting for Hyper Lipid Producing Microalgal Strains for Sustainable biofuel production. *Bioresource Technology*, 102, pp. 57-70.
- 6 S. White, A. Anandaraj and F. Bux. 2011. Pam fluorometry as a tool to monitor microalgal nutrient stress and optimise biodiesel production. *Bioresource Technology*, 102, pp. 1675-1682.
- 7 Singh, B., Bux, F. and Sharma, Y. C. 2011. Comparison of homogeneous and heterogenous catalysis for synthesis of biodiesel from *M. Indica* OIL. *Journal of Chemical Industry & Chemical Engineering Quarterly*, 17, (2), pp. 527-531.
- 8 Faizal Bux, D Naidoo, S Kumari 2011. Characterization of *Nocardia farcinica*, a Filamentous Bacterium Isolated from Foaming Activated Sludge Samples. *Journal of Water Environment Research*, 83, (6), pp. 527 – 531.
- 9 Naidoo, D., Sheena Kumari, S. K., Bux, F. 2011. Physiological, biochemical and molecular characterization of *N. farcinica*, isolated from foaming activated sludge samples. *Water Environmental Research*, 83 (6), pp. 527-53.
- 10 Ramdhani, N., Sheena Kumari, S. K., Bux, F. 2011. Nitrifiers in two BNR plants. *Water Environment Research*. (accepted).
- 11 Ramanathar, R. K., Ramesh, D., Mutanda, T., Rawat, I., Bux, F. 2011. Thermal behaviour and pyrolytic characteristics of freshwater *Scenedesmus* sp. biomass. *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*. (In Press).

Book Chapters

- 1 Murugesan, S., Dhamotharan, R., Ramanathar, R.K., Mutanda, T. and Bux, F. 2011. Phycoremediation: An Alternative for Cost-Effective Treatment of Waste Streams. *Advances in Environmental Research*, 24. (In Press).
- 2 Mutanda, T., Ramesh, D. Anandraj, A. and Bux, F. 2011. Sustainable biodiesel production using wastewater streams and microalgae in South Africa in: CHEMISTRY FOR SUSTAINABLE DEVELOPMENT IN AFRICA. ICSU Regional office for Africa in collaboration with Springer – Verlag Heidelberg, Germany. (In Press).
- 3 Murugesan, S., Dhamotharan, R., Ramanathar, R.K., Mutanda, T. and Bux, F. 2011.

Phycoremediation: An alternative for cost-effective nutrient removal process. Editor: Melanie N. Johansen *Advances in Environmental Research*, 24. Nova Science Publishers Inc, New York, USA ISBN: 978-1-61324-625-2.

Conference Papers

- 1 Sheena Kumari S.K., A. Moonusamy and Faizal Bux. 2011. Microbial diversity of a Submerged Membrane Bioreactor (SMBR) and a Conventional Activated Sludge (CAS) system treating wastewater from a sugar manufacturing industry. *Water Convention Conference*, Singapore, 4 - 8 July 2011 (Poster).
- 2 Ramdhani N., Sheena Kumari, F. Bux. 2011. Microbial Ecology of Nitrosomonas-related AOB and Nitrobacter-related NOB in three activated sludge plants. *Proceedings of the 2nd IWA Development Congress and Exhibition*, Kuala Lumpur, Malaysia, 21-24 November 2011.
- 3 Moonusamy A., S. K. Sheena Kumari, F. Bux. 2011. Microbial community analysis of a Submerged Membrane Bioreactor (SMBR) and a Conventional Activated Sludge (CAS) system treating industrial wastewater. *Proceedings of the 2nd Regional Conference of the Southern African Young Water Professionals*, CSIR International Convention Centre, Brummeria, Pretoria, 3 July 2011 - 5 July 2011.
- 4 Deepnarain N., S. K. Sheena Kumari, F. Bux. 2011. Profiling of dominant filamentous bacteria in a full-scale wastewater treatment plant. *Proceedings of the 2nd Regional Conference of the Southern African Young Water Professional*, CSIR International Convention Centre, Brummeria, Pretoria, 3 July 2011 - 5 July 2011.
- 5 Mutanda, T., Ramanathar, R.K., Nemukula, A., Rawat, I., Bux, F. 2011. Biomass, metabolite accumulation and morphological characteristics of *Chlorella vulgaris* cells exposed to different free chlorine dosages. *Proceedings of the 1st International Conference on Algal Biomass Biofuels and Bioproducts*, Westin St. Louis, Missouri, USA 17-20 July 2011.
- 6 Nemukula, A., Mutanda, T., Dillschneider, R., Posten, C., Anandraj, A., Bux, F. 2011. Growth kinetics of a hyper-saline *Nannochloropsis salina* as a function of light intensity and nutrient stress for extraction of high-value lipids and carotenoids. *Proceedings of the 1st International Conference on Algal Biomass Biofuels and Bioproducts*, Westin St. Louis, Missouri, USA, 17-20 July.
- 7 Bhola, V., Rawat, I., Mutanda, T., Bux, F. 2011. Optimization of nutritional parameters for maximal biomass and lipid yield of *Chlorella vulgaris* within a tubular photo-bioreactor. *Proceedings of the 2nd IWA Development Congress*, Kuala Lumpur Convention Centre, Kuala Lumpur, Malaysia 21 - 24 November, 2011.
- 8 Moonusamy, A., Sheena Kumari, S.K., Bux, F. 2011. Microbial population dynamics of a membrane bioreactor and a conventional activated sludge plant treating effluents from a sugar industry. *Water Science and Technology* (Under review).

Post Doctoral Fellows/Research Associate

- 1 Ranjith Kumar Ramanathan: Constructed wetland for wastewater treatment and biodiesel production from wastewater treated microalgae biomass.
- 2 S K Santhosh Kumar (Research Associate): Development of microbial population database: a tool for evaluating BNR processes in KwaZulu-Natal- WRC Project
- 3 Taurai Mutanda: Biomass and Lipids from Microalgae Bloodless Dzwauro: Hybrid EAs for Dosage Predictions

DTech

- 1 Abhishek Guldhe: Biodiesel production from microalgae by enzymatic transesterification
- 2 Oluymi Olatunji Awolusi: Evaluation of seasonal impacts on nitrifiers and nitrification performance of a full scale activated sludge system
- 3 Abimbola Motunrayo Enitan: Application of an evolutionary algorithm to enhance wastewater degradation and biogas production in a UASB reactor
- 4 Aluwani Nemukula: Evaluation of oleaginous microalgae from hyper-saline environments for high-value lipids and carotenoids
- 5 Christine Odinga: Assessment of heavy metals and pathogens removal from municipal wastewater using a constructed wetland
- 6 Nishani Ramdhani: Quantification of nitrifying bacteria from wastewater treatment systems Virthie Bhola: The mitigation of carbon dioxide from flue gas using indigenous microalgae
- 7 Ismail Rawat: Large Scale Micro-algal Cultivation and Lipid Yield Optimisation in a Raceway Pond Utilising Wastewater as a Substrate
- 8 Krishan Ramluckan: Development and optimisation of technology for the extraction and conversion of micro algal lipids to biodiesel

MTech

- 1 Trisha Govender: Isolation of phycobiliproteins from a hypersaline Cyanobacterium
- 2 Kriveshin Pillay: Elucidation of polyphosphate and glycogen accumulating organisms in enhanced biological phosphorus removal
- 3 Nashia Deepnarain: Evaluating remedial measures to control filamentous bacteria in return activated sludge streams
- 4 Arlene Moonusamy: Microbial community analysis of a full-scale membrane bioreactor
- 5 Monique Uwimpuhwe (Environmental Health): Microbiological drinking water quality analysis and evaluation of water-borne diseases in Rusheshe, Rwanda
- 6 Jafaar Bux (Chemical Engineering): Anaerobic digestion of biomass for energy production

Business Studies Unit

DHET Accredited Journal

- 1 Beemsen, K. and Parumasur, S.B. 2011. Presenting Valid and Reliable Tools to Measure the Effectiveness of a Front Line Management Training Programme. Journal of Corporate Ownership & Control, 8, (4), pp. 473 – 485.

Conference Proceeding

- 1 Beemsen, K. and Muller, N.J. A new approach to training cooperatives. Ithala consultative conference, Pietermaritzburg, 23-24 November 2011.

Entrepreneurial Development Unit

Journal Publication

- 1 Thakur, S. 2011 "Pushing buttons for Democracy: An African Perspective." Nairobi, Kenya. On 23-25 November 2011 he was invited to an international conference in Nairobi Kenya to deliver a paper on "India and Philippines: A Comparative Analysis for Possible Adaptation in Africa" (accepted)

Conference Proceedings

- 1 Thakur, S. 2011. Africa Digital week, 23-30 July, Accra, Ghana. As part of this process a peer-reviewed paper was delivered in Ghana: "E-voting and good governance" in July 2011.

Projects

- 1 Thakur, S. 2011. EDU was commissioned to investigate electronic voting (e-voting) by the Independent Electoral Commission (IEC) to investigate international good and bad experiences in e-voting. This resulted in a comprehensive report entitled "E-voting: The cross-national experience." This was handed in at the end of 2011.
- 2 Thakur, S. 2011. Zambia 13-23 September 2011. Lusaka and Solwezi, Zambia. Zambian Observer Mission 2011, Thakur was invited as an International Expert and Observer to the Zambian 2011 elections for 11 days where he witnessed and commented on this election.

International and Provincial Portfolios – Surendra Thakur

Finished term at:

- As 3-year ICASA CCC (June 2011).
- As national Treasurer of CSSA (September 2011).
- Will step down as KZN president of the CSSA in April 2012 due to study and research commitments.

Institute of Systems Science (ISS)

DHET Accredited Journals

- 1 Duffy, K.J., Codron, J., Daryl Codron, Julia A, Lee-Thorp, Matt Sponheimer, Kirkman, K., Sealy, J. 2011. Landscape-scale feeding patterns of African elephant inferred from carbon isotope analysis of feces. *Journal of Oecologia*, 165 (1), pp. 89 – 99.
- 2 Duffy, K.J. 2011. Simulations to investigate animal movement effects on population dynamics. *Natural Resource Modeling*, 24: pp. 48-60.
- 3 O’Kane, C. A. J., Duffy, K. J., Page, B. R. and Macdonald, D.W. 2011. Overlap and seasonal shifts in use of woody plant species amongst a guild of savanna browsers. *Journal of Tropical Ecology*, pp. 27:1–10.
- 4 O’Kane, C. A. J., Duffy, K. J., Page, B. R. and Macdonald, D.W. 2011. Are the long-term effects of mesobrowsers on woodland dynamics substitutive or additive to those of elephant? *Acta Oecologic.* (In Press).
- 5 Duffy, K.J., Dai, X., Shannon, G., and Slotow, R., Page, B. R. 2011. Movement Patterns of African Elephant (*Loxodonta africana*) in Different Habitat Types. *South African Journal of Wildlife Research*. (In Press)

Research and Postgraduate Support

DHET Accredited Journal

- 1 Moyo, S. and Meleshko, S.V. 2011. Application of the generalised Sundman Transformation to the linearisation of two second-order ordinary differential equations, *Journal of Nonlinear Mathematical Physics*, 18, (1), pp. 1-24.

Technology Transfer and Innovation

Refereed Conference Papers

- 1 Ilcev St. D., Moodley, K. 2011. Development of Ka-Band Geo onstellation for Global Mobile Satellite Communications (GMSC). Proceedings of the 2nd Sympoisum on Business Informatics in Central and Eastern Europe, Cluj-Napoca, Romania, 28-30 April 2011.
- 2 Ilcev St. D. 2011. Code Division Multiple Access (CDMA) Applicable for Mobile Satellite Communications. Proceedings of the International Siberian Conference on control and communications SIBCON, Russia, Krasnoyarsk, 15-19 September 2011.
- 3 Ilcev St. D. 2011. Implementation of Local Satellite Augmentation System (LSAS) for Airport Infrastructure. Proceedings of the International Siberian Conference on control and communications SIBCON, Russia, Krasnoyarsk, 15-19 September 2011.
- 4 Ilcev St. D. 2011. Orbcomm Gound Segment for Mobile Satellite Communications. Proceedings of the International Siberian Conference on control and communications SIBCON, Russia, Krasnoyarsk, 15-19 September 2011.
- 5 Ilcev St. D. 2011. High-gain mobile satellite antennas. Proceedings of the 21st International Conference “Microwave Engineering and Telecommunication Technologies. Sevastopol, Ukraine, 12-16 September 2011.

- 6 Ilcev St. D. 2011. Time Division Multiple Access (TDMA) Applicable for Mobile Satellite Communications. Proceedings of the 21st International Conference “Microwave Engineering and Telecommunication Technologies, Sevastopol, Ukraine, 12-16 September 2011.
- 7 Ilcev St. D. 2011. Array Mobile Satellite Antennas. Proceedings of the 21st International Conference “Microwave Engineering and Telecommunication Technologies, Sevastopol, Ukraine, 12-16 September 2011.
- 8 Ilcev St. D. 2011. Antennas Solutions for Mobile Satellite Broadcasting (MSB). Proceedings of the 21st International Conference “Microwave Engineering and Telecommunication Technologies, Sevastopol, Ukraine, 12-16 September 2011.
- 9 Ilcev St. D. 2011. Wire Antennas for Mobile Satellite Communications and Navigation. Proceedings of the 21st International Conference “Microwave Engineering and Telecommunication Technologies, Sevastopol, Ukraine, 12-16 September 2011.

Other Conference Papers

- 1 Ilcev, S. D. 2011. Maritime Communication, Navigation and Surveillance (CNS). Proceedings of the 9th International Symposium on Marine Navigation and Safety of Sea Transport, Trasnav-Nav, 2011, Gdynia, 15-17 June 2011.
- 2 Ilcev, S. D. 2011. Shipborne Satellite Antenna Mount and Tracking Systems. Proceedings of the 9th International Symposium on Marine Navigation and Safety of Sea Transport, Trasnav-Nav 2011, Gdynia, 15-17 June 2011.
- 3 Ilcev, S. D. 2011. Surface Reflection and Local Environmental Effects in Maritime and other Mobile Satellite Communications. Proceedings of the 9th International Symposium on Marine Navigation and Safety of Sea Transport, Trasnav-Nav 2011, Gdynia, 15-17 June 2011.
- 4 Ilcev, S. D. 2011. Space Division Multiple Access (SDMA) Applicable for Mobile Satellite Communications. Proceedings of the 10th IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services, Serbia, Nis, 5-8 October 2011.
- 5 Ilcev, S. D. 2011. Orbcomm Space Segment for Mobile Satellite System (MSS). Proceedings of the 10th IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services, Serbia, Nis, 5-8 October 2011.
- 6 Ilcev, S. D. 2011. Low and Medium Gain Antennas for Mobile Satellite Communications (MSC) and Navigation. Proceedings of the 10th IEEE International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services, Serbia, Nis, 5-8 October 2011.
- 7 Ilcev, S. D. and Moyo, S. 2011. European Geostationary Navigation Overlay Service (EGNOS), Botswana IST-Africa Conference & Exhibition, Gaborone, 2011.

REPORT OF THE INSTITUTIONAL FORUM (IF) TO THE COUNCIL

INSTITUTIONAL FORUM

Dr Lavern Samuels – Chairperson: Institutional Forum



The year 2011 was marked by stability of the governance systems at DUT. The Institutional forum fulfilled its mandate in terms of the Higher Education Act and continued functioning within a maturing of governance system at DUT. During this period the Institutional Forum deliberated over the revised DUT statute and submitted detailed advice to Council on this document. Much of the Institutional Forums advice was incorporated into the revised DUT Statute and the Institutional Forum was advised by Council on the outcome of its advice to Council. The revised DUT statute provides a framework for DUT to function within an even more efficient governance framework.

The Institutional Forum also deliberated over the Ministerial Task Team Report and submitted input on this document to Council. A part of the normal course of the Institutional Forum business is to submit nominations for Honorary Doctorate and for vacancies on the DUT Council. The Forum participated actively in both these processes. A major discussion during 2011 was around the Vice-Chancellor's strategic thrust for 2011 and beyond. This debate was vibrant and stimulating and resulted in constructive input on the plans.

During the course of the year the Institutional Forum elected Mr M Estrice to serve on the University Council. The Forum also elected Dr L Samuels and Mrs N Naidoo to serve on the Electoral College for election of Chancellor for DUT.

The major role of the Forum is to provide advice on transformation issues to Council. In this context the Institutional Forum deliberated extensively on the Employment Equity Report and provided advice on this report. The Institutional Forum also received a detailed report from the Vice Chancellor on the transformation agenda for DUT. This comprehensive presentation highlighted projects that will in many ways profoundly reshape the University.

A Transformation Forum is to be established as a sub-committee of the IF. The Institutional Forum also provided advice to Council on the post retirement medical aid negotiations. Two regular activities of the IF continued during 2012: assisting the Vice-Chancellor in inviting a constituency to make a presentation to each Council meeting and secondly hosting a team building institutional dinner dance.

All scheduled and special meetings of the Institutional Forum were quorate during 2012 and produced insightful discussions in the best interest for the University and its community. The Forum was once again able to stand together in delivering on its mandate. This set the tone for constructive contributions to Council and bodes well for the future of the University.

THE COMPOSITION OF THE INSTITUTIONAL FORUM IS
AS FOLLOWS:

- 1 **Prof. A C Bawa**
Vice-Chancellor & Principal
Representative: Management
- 2 **Prof. N Gawe**
Deputy Vice-Chancellor: Institutional Support Services
Representative: Management
- 3 **Ms Z K Seedat**
Representative: Council
- 4 **Cllr W L Mapena**
Representative: Council
- 5 **Dr L Samuels (Chairperson)**
Representative: Senate
- 6 **Mrs N Naidoo**
Representative: Senate
- 7 **Mr K S Moodley**
Representative: Academic Employees
- 8 **Mr P Moodley**
Representative: Academic Employees
- 9 **Mr U Ramsundar**
Representative: Professional, Administrative,
Support & Service Employees
- 10 **Mr T B T Nhassengo**
Representative: Professional, Administrative,
Support & Service Employees
- 11 **Mr F van Zyl**
Representative: Employee Organisation (Nteu)
- 12 **Ms A de Meyer**
Representative: Employee Organisation (Nteu)
- 13 **Mr B M Mbatha**
Representative: Employee Organisation (Nehawu)
- 14 **Mr M Estrice**
Representative: Employee Organisation (Nehawu)
- 15 **Mr G P Sam**
Representative: Employee Organisation (Tenusa)
- 16 **Ms L A Brady**
Representative: Employee Organisation (Tenusa)
- 17 **Dr L Mhlane**
Executive Officer: IF
- 18 **Mr A Dayi**
Representative: SRC (DBN)
- 19 **Mr L Duma**
Representative: SRC (PMB)
- 20 **Mr S Buthelezi**
Representative: SRC (PMB)
- 21 **Mr B Shelembe**
Representative: Postgraduate Students (DBN)
- 22 **Mr J Naidoo**
Representative: Gender Forum
- 23 **Ms C Bottcher**
Representative: Convocation
- 24 **Mr B K Zwane**
Representative: Convocation





**FACULTY OF
ACCOUNTING
& INFORMATICS**

FACULTY REPORT

FACULTY OF ACCOUNTING AND INFORMATICS



Professor Thiruthlall Nepal – Executive Dean: Faculty of Accounting and Informatics

MISSION STATEMENT

In keeping with the Mission Statement of DUT, the Faculty of Accounting and Informatics is committed to promoting quality in teaching and learning, encouraging a culture of ongoing research and technology transfer and engaging the business professions and other stakeholders to provide relevant career focused education.

ENROLMENT

During 2011, student enrolment reached 5 770 which was below the 6 002 reached in 2010. However, this was above the enrolment target of 5 030. This indicates that demand for programmes in the Faculty remains high. Undergraduate enrolment, up to BTech level, represents 99.5% of all enrolments in the Faculty. The low percentage of students registered for postgraduate qualifications (0.5%) remains a concern for the Faculty. However, it is noted that of all the accounting disciplines, only Management Accounting and Taxation offer Masters degrees, but do not offer Doctorates. Financial Accounting and Auditing which constitute 27% of the total enrolment offer professional qualifications which do not have Master's and Doctorate degrees. In these disciplines, professional qualifications are valued far higher than Masters and Doctorates. The only departments offering qualifications up to Doctorate level are the departments of Information Technology as well as Library and Information Studies.

The ratio of female to male students has remained the same as 2010. During 2011, the ratio reflects student gender participation as 55% female and 45% male. The higher ratio of female participation is also reflected at the postgraduate level with female students constituting 57% of postgraduate student enrolment.

African student representation in enrolment has increased marginally by 1% over 2010 and is now 86.20%. The other population groups have remained relatively constant with the following representation in 2011; Coloured 1.13%, Indian 12.22% and Whites at 0.40%. It is however, a concern to the Faculty that it is not attracting students from under-represented groups in any significant numbers. In 2011, only 23 White students and 65 Coloured students registered in the Faculty.

TEACHING AND LEARNING

During 2011, teaching and learning committees established the previous year became functional. The committees, under the guidance of the CELT representative, continued to identify good practices within departments which were then applied to the Faculty as a whole. The focus for 2011 was on improving throughput and success rates. In view of this and despite the lack of adequate physical facilities, tutorials were implemented as it was found that these had positive effects on pass rates. To this end, the CELT representative coordinated the training of tutors for first-year students in all DUT residences. A total of nine

tutors were trained for the Faculty. The project had a positive effect on the results in the Faculty.

During the year under review, Departments reviewed subject documentation and curricula to keep them in line with industry requirements. Departments' programmes are also highly diverse and dynamic, necessitating staff to regularly update their technical knowledge and amending the curricula to be both relevant and technologically modern. In this regard, the IT department has four staff members who are TERP 10 certified in SAP.

This year saw the first experimental use of Facebook as an online classroom in one of the courses in the foundation programme. The use of this technology improved the self-esteem, communication and articulation skills of the students. It also greatly improved the pass rate of the subject. It is encouraging to see that many staff within the Faculty are trained on e-learning and it is hoped that this technology will be used in the future.

Extended Curriculum Programmes (ECP) have continued to prove to be successful in providing access to under-prepared students. The Departments of Management Accounting and Information Technology have found that students gaining access through ECP generally perform well in main stream programmes after having graduated from ECP.

The introduction of information literacy as a compulsory component in certain programmes has led to a marked improvement in the students' referencing and research skills. The Faculty is investigating whether it is feasible to offer the subject across all programmes.

Departments have also concentrated on reviewing lecturing methodology, providing quality materials on subject matter and varying the methods and types of assessments.

The major project in the Faculty during 2011 was the Curriculum renewal Project (CRP). During the year, most departments finalised the programmes to be offered with the majority opting for the diploma and advanced diploma.

The physical facilities remain a concern within the Faculty. There are insufficient smaller venues (30 - 40 seater) to accommodate tutorial classes. The project initiated last year to improve the basic necessities in lecture halls has resulted in some improvement, but is far from satisfactory.

STUDENT PERFORMANCE

The overall graduation rate of the Faculty was 24% in 2010. This is lower than that achieved in 2009. This can be attributed in part to the graduation rate for the National Diploma (ND) in the Accounting programmes being skewed as a result of the phasing out of the National Higher Certificate (NHC) and the conversion of the students on the NHC programme to the ND programme. The BTech graduation has improved by 1% to 38% in 2010.

Success rates have been steady over the past three years. However, success rates are adversely affected by the high drop-out rates in first year. Despite this, the average success rate for the Faculty is 78% which is an improvement over 2010's 75%. With new strategies on reducing student drop-outs, it is expected that the success rates will improve.

The success rates within individual departments range from 77% to 80%. The comparative rates for the Faculty are as follows:

- 2009 - 76%
- 2010 - 75%
- 2011 - 78%

The Cohort throughput rate for the 2008 intake was 20%. This is less than the 2007 intake which was 22%.

STAFF PROFILE

During 2011, the Faculty employed 127 staff. Of these, 69 were female and 58 were male. Of the total number, 108 were academic and 19 were non-academic staff. Among the academic staff, 6 have Doctorate Degrees, 31 have Masters Degrees and 10 are qualified accountants. In addition, 12 staff members are registered for Masters and five for Doctorates. There has been an improvement in the number of staff with Doctorates and Masters qualifications as compared to 2010. This is largely due to the interventions put in place in the previous years.

The race profile of the staff is reflected below:

- Africans 30
- Coloureds 5
- Indians 75
- Whites 17

The staff profile of the Faculty has been slowly improving. However, the challenge remains to attract accounting and IT personnel in a highly competitive market.

RESEARCH

Research development, capacity building, improving staff qualifications and increasing research output remained a priority for the Faculty.

A series of workshops were again held in the Faculty which included among others, motivational workshops on getting started with research, accessing electronic journals, proposal writing, academic writing, database training, literature review and research methodology, writing for publications, referencing and Endnote.

Following the very successful proposal writing workshops, research proposal presentations and research-in-progress presentations, there was a marked increase in the number of proposals tabled at the Faculty Research Committee.

A key challenge in the Faculty remains a lack of supervision capacity as many members of staff are not suitably qualified to supervise postgraduate studies. Departments therefore rely on external supervisors to meet the demand for postgraduate supervision.

Highlight: Prof Olugbara has been invited to participate in the book project under the working title 'Advances in Grid Computing', ISBN 978-953-7619-X-X.

JOURNALS

Kalema, B. M., Olugbara, O.O & Kekwaletswe, R.M. (2011). The Application of Structural Equation Modeling Technique to Analyse Students Priorities in Using Course Management Systems. *International Journal of Computing and ICT Research*, 5, Special Issue, 34-44.

Mphahlele, M.I., Olugbara, O.O., Ojo, S.O. & Kourie, D.G. (2011). Cross-impact Analysis Experimentation using Two Techniques to Revise Marginal Probabilities of Interdependent Events. *ORION: The Journal of ORSSA*, 27(1), 1-15.

Singh, P. 2011. Transformation and performativity at universities in South Africa. *South African Journal of Higher Education*, 25 (6): 1190-1204.

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Zuva, T., Olugbara, O.O., Ojo, S.O. & Ngwira, S.M. (2011). Image Segmentation, Available Technique, Developments and Open Issues. *Canadian Journal of Image Processing and Computer Vision*. A.M Publishers, Canada, 2(3), 20-29.

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- Andrew, T., Petkov, D., Petkova, O., Nepal, T. and Samuels, L. (2011). Building Postgraduate Supervision Capacity through International Collaboration, 15th annual conference of IEASA (International Education Association of South Africa), 31st August - 3rd September 2011, Durban, South Africa.
- Cassim K. and Eyono Obono, S.D. 2011. On the Factors Affecting the Adoption of ICT for the Teaching of Word Problems. Proceedings of the World Congress on Engineering and Computer Science (International Conference on Education and Information Technology 2011), Vol. I, pp. 269-276. Edited by: Ao, S.I., Douglas, C., Grundfest, W.S. and Burgstone, J. San Francisco, USA. ISBN: 978-988-18210-9-6, ISSN: 2078-0958.
- Eyono Obono, S.D., Zulu S.P. and Barnabas T. 2011. On the factors affecting the adoption of isiZulu and isiXhosa shorthand in students' smses. Proceedings of the IADIS International Conference on e-Society (e-Society 2011 Proceedings), pp. 337-346. Edited by: Kommers, P. and Isaias, P. Avila, Spain. ISBN (Book): 978-972-8939-46-5.
- Eyono Obono, S.D. 2011. A framework for the evaluation of the usability of indigenous languages electronic dictionaries. Proceedings of the 2011 International Conference on ICT for Africa, Vol. I, pp. 13-25. Edited by: Osofisan, A., Mbarika, V., Chang, W.-I., Eyono Obono, S.D., Okunoye, A., Jones, C., Mainoma, A., Ayo, C.K., Adewumi, A., Obiozor, W., Onifade O.F.W., Boateng, R. and Longe, O. Ogun State, Nigeria, ISBN: 978-31014-8-3.
- Eyono Obono, S.D. and Kumar, S. B. 2011. A group-based tasks allocation algorithm for the optimization of long leave opportunities in academic departments. Proceedings of the Fourth International Conference on Machine Vision (ICMV 2011): Computer Vision and Image Analysis; Pattern Recognition and Basic Technologies (2011 International Conference on Software and Computing Technology). Edited by: Zeng, Z. and Li, Y. Pearl's Hill, Singapore. Proc. of SPIE Vol. 8350, 83502Q • © 2012 SPIE • CCC code: 0277-786X/
- Kalema, B. M, Olugbara, O.O & Kekwaletswe, R.M. (2011). The Application of Structural Equation Modelling Technique to Analyze Students Choice in Using Course Management Systems, 7th Annual International Conference on Computing and ICT Research (ICCIR 2011), Fountain Publishers, Kampala, Uganda, August, 7- 9, 326 -340.
- Khalili, P. and Olugbara, O.O. (2011). Positive Youth Development in Mobile Dynamic Virtual Environment. International Association for Development of the Information Society (IADIS) International Conference of e-Society, Avila, Spain, 10-13 March, 597-600.12/\$18 doi: 10.1117/12.920261, Proc. of SPIE Vol. 8350 83502Q-1.
- Gosebo N. and Eyono Obono, S.D. (2011) A factor analysis of the perceived diffusion of e-government in South African municipalities. Proceedings of the 2011 Global Congress on Science and Engineering (GCSE 2011) (3rd International Conference on Information and Multimedia Technology) (ICIMT 2011), Dubai, UAE.
- Green P. E. and Hardman S. (2011) Systems Approach to the evaluation of an academic department as a service provider at a University of Technology. 3rd Annual Conference on Higher Education Pedagogy. Virginia Tech, Blacksburg, VA (USA) February 3-4, 2011.
- Modupe, A., Olugbara, O.O & Ojo, S.O. (2011). Exploring Support Vector Machines and Random Forests to Detect Advanced Fee Fraud Activities on Internet. Proceedings of IEEE 11th International Conference on Data Mining (ICDM, 2011), December 11-14, Vancouver, Canada.
- Modupe, I.A. Olugbara, O.O & Ojo, S.O (2011). Experimental Comparison of Genetic Algorithm and Simulated Annealing to Minimize Energy in Ad-hoc Wireless Networks. Proceedings of IEEE International Conference on Intelligent Computing and Intelligent Systems (ICIS 2011) November 18-20, Guangzhou, China. Odunaike S.A, Chuene, N.D., Olugbara, O.O & Ojo S.O. (2011). Institutional e-Learning Sustainability for Rural Settings, Proceedings of the World Congress on Engineering and Computer

Science 2011 Vol. I WCECS 2011, October 19-21, 2011, San Francisco, USA

- Odunaike S.A., Olugbara, O.O. & Ojo S.O. (2011), A Conceptual Framework for Implementing E-Learning Technologies in Rural Settings, Information Systems Educators Conference (ISECON 2011), November 3-6, Wilmington North Carolina, NC, USA.
- Tamba Tamba, P.A. and Eyono Obono S.D. 2011. A perceptions survey on the factors influencing web searching abilities of IT and CS academics. Proceedings of the 2011 International Conference on Information Society (i-Society). Edited by: Shoniregun, C.A. and Akmayeva, G.A. London. Print ISBN: 978-1-61284-148-9, pages: 440 – 445.
- Zuva, T, Olugbara, O.O. Ojo, S.O. & Ngwira, S.M. (2011), Image Shape Representation and Description Techniques, Classification of Available Techniques and Open Issues, Proceedings of IEEE International Conference on Intelligent Computing and Intelligent Systems (ICIS 2011) November 18-20, Guangzhou, China.

CHAPTER IN BOOK

Olugbara, O.O. Ojo,S.O. & Adigun, M.O. (2011). A Grid Enabled Framework for Ubiquitous Healthcare Service Provisioning, Advances in Grid Computing. Zoran Constantinescu (Ed.), Croatia, InTech, ISBN: 978-953-307-301-9, 229-252.

Petkov, D., Alter, S., Wing, J., Singh, A., Petkova, O., Andrew, T. and Sewchurran, K. 2011. Project Contexts and the Possibilities for Mixing Software Development and Systems Approaches. In Mora, M., Steenkamp, A., Gelman, O. and Raisinghani, M. (Eds). Research Methodologies in Systems/Software Engineering and Information Systems: Philosophies, Methods and Innovationspp. 360-375. Hershey PA: IGI Global Publishing.

CONFERENCE PRESENTATIONS

Joosab, F. 2011. To Review or not to review. Institutional Research Day, 17 November, Library Complex, Steve Biko Campus, Durban University of Technology, Durban, South Africa.

Singh A, 2011. Toward improved understanding of agile software development work practices. Poster presentation at the SAICSIT Annual Research Conference 2011, October 2-4, The Pavillion, Cape Town, South Africa.

Singh, P. 2011. Oral assessment: Preparing learners for discourse in communities of practice. 18th International Conference on Learning, 5-8 July, University of Mauritius, Mauritius.

Singh, P. 2011. Transformation and performativity at universities in South Africa. Knowledge Production and Higher Education in the 21st century – Knowledge 2011 Conference, 28-31 March, The Pavilion, V&A Waterfront, Cape Town, South Africa.

Khalili, P. and Olugbara O.O. 2011. Positive youth development in a mobile dynamic virtual Environment. International Association for Development of the Information Society, 10 – 13 March, Avila, Spain

Olugbara, O. (2011). Binary categorization of emails to detect advanced fee fraud activities on internet. Institutional Research Day, 17 November, Durban University of Technology, Durban, South Africa.

Ndhlovu, B. & Olugbara, O. (2011). A lightweight framework for mobile documentation of very small enterprises business transactions. SAICSIT Annual Research Conference, 3-5 October, Cape Town, South Africa.

Professor Thiruthlall Nepal

Executive Dean: Faculty of Accounting and Informatics



FACULTY OF
APPLIED
SCIENCES

FACULTY REPORT

FACULTY OF APPLIED SCIENCES



Professor Darren Lortan – Executive Dean: Faculty of Applied Sciences

MISSION STATEMENT

To develop within a values driven ethos, quality technicians and technologists that are practice oriented and responsive to the needs of the people of South Africa and Africa as a whole by providing the highest standards of teaching, learning and community engagement underpinned by a commitment to empowering staff and students to succeed.

OVERVIEW STAFFING

The total permanent and contract staffing complement of the Faculty of Applied Sciences (FAS) was 127 of which 50.4% (n=64) was female. The race profile of the staff in FAS reflects the difficulty in recruiting, attracting and retaining suitably qualified staff from the designated groups. Of the total complement in the Faculty in 2011 only 26.8% (n = 34) were African and only 3.9% (n = 5) were Coloured, with the remaining 48.0% (n = 61) and 19.7% (n = 25) being Indians and Whites respectively.

Of the 75 academic staff, 71% (n = 53) had postgraduate degrees with 27% holding doctoral degrees. It is noteworthy that an increasing number of staff (including non-teaching staff) had registered for postgraduate degrees. Three members of the non-teaching staff have Masters degrees and two have doctorates.

ENROLMENT TRENDS

Student enrolment grew from 1659 in 2010 to 1676 in 2011 in line with the enrolment planning targets for FAS. Of the students registered in the Faculty in 2011 4.5% (n=75) were registered for postgraduate qualifications. The proportion of students registered for the undergraduate degree (B.Tech) was 10.08% (n=169). This figure needs to grow in order to supply future postgraduate students.

Data on student enrolment by gender and race show that the Faculty student population remains predominantly female, with male students constituting 45.3% (n=760) of the student population in 2011. While the participation rate of males is not a cause for concern, the situation needs to be monitored. At the postgraduate level however, the participation rate by females is significantly higher at 81.3% (n=61) in 2011.

The overall student participation by race is as follows: Africans 1219 (72.7%), Coloureds 32 (1.9%), Indians 376 (22.4%) and Whites 48 (2.9%). Under-representation of Coloured and African students at the postgraduate level remains a concern. However in 2011, African and Coloured students respectively comprised 36.7% and 0% of the 60 students registered for MTech degrees and they comprised only 40% and 7% of the 15 students registered for DTech degrees.

TEACHING AND LEARNING

Graduation rates from 2008 to 2010 for the Faculty have decreased from 23% in 2008 to 20% in 2010. The Faculty performance on the whole with regard to the National Diploma graduation rates is in line with national benchmarks for similar programmes.

The increase in success rates per servicing department from 74% in 2010 to 77% in 2011 remains well below the 80% achieved in 2008. Over the cohort study for the period 2006 – 2008 the throughput rate of the Faculty (peaking at 36% in minimum time) has remained impressive.

HIGHLIGHTS

The following highlights were the most notable for the reporting year:

- Associate Professors K. Bisetty and N. Deenadayalu were promoted to the rank of Full Professor (Department of Chemistry).
- Dr A Maharaj (Department of Mathematics Statistics and Physics) was promoted to Senior Lecturer.
- Dr OA Ijabadeniyi (Department of Biotechnology and Food Technology) was promoted to Senior Lecturer.
- Ms Thishana Singh (Department of Chemistry) was awarded a Ph.D. from the University of KwaZulu-Natal.
- Ms A Singh (Department of Mathematics Statistics and Physics) was awarded a M.Sc. from the University of London.
- Ms A Badenhorst (Department of Horticulture) was awarded a M.Sc. from the University of South Africa.
- Mrs H Grobbelaar (Department of Food and Nutrition: Consumer Sciences) was awarded a MTech from the Durban University of Technology.
- Mr J Foley (Department of Horticulture) was awarded a MTech from the Durban University of Technology.
- Mr Manqele (Department of Maritime Studies) was awarded a B.Sc (Hons) from the University of KwaZulu-Natal.

RESEARCH

CONFERENCE PAPERS/ PROCEEDINGS

International

- 1 Mchunu, S.I., Singh, S. and Permaul, K. Pillai, S.K., Kumar, A. 2011 Glycerol Utilisation and Bioconversion to 1, 3-Propanediol and Ethanol. BioMalaysia 2011 International Congress, 21- 23 November 2011 at Kuala Lumpur Convention Centre.
- 2 Mellem, J.J. International Symposium for HPTLC (High Performance Thin Layer Chromatography) BASEL Switzerland, 06 – 08 July 2011
- 3 Permaul, K. Genetics and molecular biology of microorganisms Annual ASCB Meeting, Denver Convention Centre, Colorado, USA 3-7 December 2011.
- 4 V. Bhola, I Rawat, T. Mutanda and F. Bux. 2011. Optimisation of Nutritional Parameters for Maximal Biomass and Lipid yield of *Chlorella vulgaris* within a tubular photobioreactor.
- 5 N. Ramdhani, S. Kumari, F. Bux. 2011. Microbial ecology of Nitrosomonas-related AOB and Nitrobacter-related NOB in three activated sludge plants treating different effluents.
- 6 Rodriguez A., Mokoena M.P., Corcho, F. Bisetty K., Perez J. J. 2011. Computational study of the folded structure of the miniprotein CLN025 in explicit and implicit solvents. International Interdisciplinary Science Conference On Bioinformatics: An interface between Computer Science and Biology, 15-17 November, New Delhi, India.
- 7 M.P. Mokoena, K. Bisetty, F. Corcho, and J. Perez. 2011. Determination of the Folded Structure of Vasoactive Intestinal Peptide Using Molecular Dynamics. Annual Protein and Peptide Conference (PepCon2011), 23-25 March. Beijing, China.
- 8 Ijabadeniyi A. O, Buys, E. M, Debusho, L. K & Vanderlinde, M. 2011 Bacterial pathogens in irrigation water and on produce are affected by certain predictor variables. International Association of Food Protection Conference Milwaukee, Wisconsin, USA. July 31 – August 3, 2011.
- 9 A New Philosophical Approach : Green Adventures in Organic

- Chemistry, Gengan RM, K Anand, TR Makhanya. 15 th Annual IEASA Conference, Conference Centre, Greyville Race-course, Durban, 30 August 2011.
- 10 D K Chetty, K G Moodley and A Ramrung, "Trace analysis of organic acids in power station water by HPLC." Pittcon, Atlanta, USA 13 – 18 March 2011.
- 11 K G Moodley, D K Chetty, S R Ramphal, S R Chetty and C Maru, "Determination of trace organic chlorinated benzenes in dam water." Singapore International Water Week, 4-8 July 2011.
- 12 K G Moodley, D K Chetty, S R Ramphal, S R Chetty and C Marume, "Determination of trace organic micro pollutants in dam and river water by GC-FID." Paper presented orally at World Aqua Congress, New Delhi, 16-18 November 2011.
- National**
- 1 Mokoena, M. Life Sciences modelling workshop. CSIR International Convention Centre, during the Centre for High Performance Computing (CHPC) annual conference. 6-9 December 2011, Pretoria, RSA.
- 2 Birijlall, N., Singh, S., Permaul, K., Pillai, S.K. P The cloning and expression of xylanase variants in *Pichia pastoris*. National SASM 2011, Capetown, South Africa. 6-9 Nov. 2011.
- 3 Mbokazi, M. Kumar, K., Pillai, S.K., Permaul, K. and Singh, S. Optimisation of bioreactor parameters for maximum chitinase production by an actinomycete. Local SASM- UKZN. 28 Oct. 2011.
- 4 Kumar, A., Sharma, S., Mishra, S., Singh, S. Physico-chemical and anatomical responses of *Jatropha curcas* under co-induction of bioinoculants and salt stress. National SASM 2011, Capetown, South Africa. 6-9 Nov. 2011.
- 5 Khan, K., Permaul, K., Singh, S. Error prone PCR of fungal xylosidase gene XLND. National SASM 2011, Capetown, South Africa. 6-9 Nov. 2011.
- 6 Tabosa Vaz, S, Singh, S., Permaul, K., Kumar, A.. A comparative analysis of stability and structure-functional changes of different xylanases. National SASM 2011, Capetown, South Africa. 6-9 Nov. 2011.
- 7 Ramphal, U., Singh, S., Permaul, K. Strain improvement of a chitinolytic isolate and its application on crustacean shell waste. National SASM 2011, Capetown, South Africa. 6-9 Nov. 2011.
- 8 Lazarus, A.C., Singh, S., Permaul, K. Assessing chitin degradation in crustacean shells. National SASM 2011, Cape town, South Africa. 6-9 Nov. 2011.
- 9 Singh, A., Coovadia, Y., Reddy, L. and Odhav, B. "Taming TB" International Organisation for Chemical Sciences in Development Working Group on Plant Chemistry from 12-15 January 2011, at the University of the Western Cape, South Africa.
- 10 Hurinanthan, V., Parboosing, R. and Odhav, B. Anti HIV activity of medicinal plants International Organisation for Chemical Sciences in Development Working Group on Plant Chemistry from 12-15 January 2011, at the University of the Western Cape, South Africa.
- 11 Hurinanthan, V., Parboosing, R. and Odhav, B. Screening of medicinal plants for Anti-HIV activity. South African Society for Microbiology 2011 from 6-9 November 2011 at the Southern Sun Hotel and Conference Centre, Cape Town.
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HIGHLIGHTS

SA China Symposium

The Durban University of Technology (DUT), in partnership with the National Research Foundation (NRF) and the Natural Science Foundation of China (NSFC), hosted the SA-China Symposium on Fungal Bioresources and Applications at the Protea Hotel Umhlanga Ridge, in Durban from 30 September to 1 October 2011.

This is the second international biotechnology research collaboration, following the ground breaking research in sequencing of a thermophilic genome that was undertaken in partnership with the University of Sains Malaysia's Centre for Chemical Biology.

The symposium was specifically focused on research in fungal bioresources and applications. Extensive work has gone into researching biotechnological applications that can be obtained from fungal research. Studies presented looked at sustainable use of bioresources and different proteins that can have applications in chemical production, biofuels, food and the pulp and paper industry.

Ms Nokuthula Mchunu

- Outstanding Doctoral Research Awarded
- Research Visit to University Sains, Malaysia from 1 September 2010- 19 August 2011

EXTERNAL ENGAGEMENT

Within the Faculty, Community Engagement has found a variety of manifestations. These include free and/or subsidised services to others, both within and outside of the DUT community. Staff and learners implement services and activities either on a voluntary or compulsory basis and such involvement is perceived to have benefits for learners, departments, staff, the DUT and the wider community. Activities undertaken include community service where learners are introduced to the work environment as an opportunity to implement theory, practise skills and provide a service. In some activities learners were not involved at all. Examples include the following:

The second year students in the Department of Biotechnology and Foodtechnology undertook their community service learning project on HIV/ AIDS Awareness in 2011. They used their knowledge on HIV/AIDS to prepare a project proposal and plan for delivery to the community.

Two projects emerged:

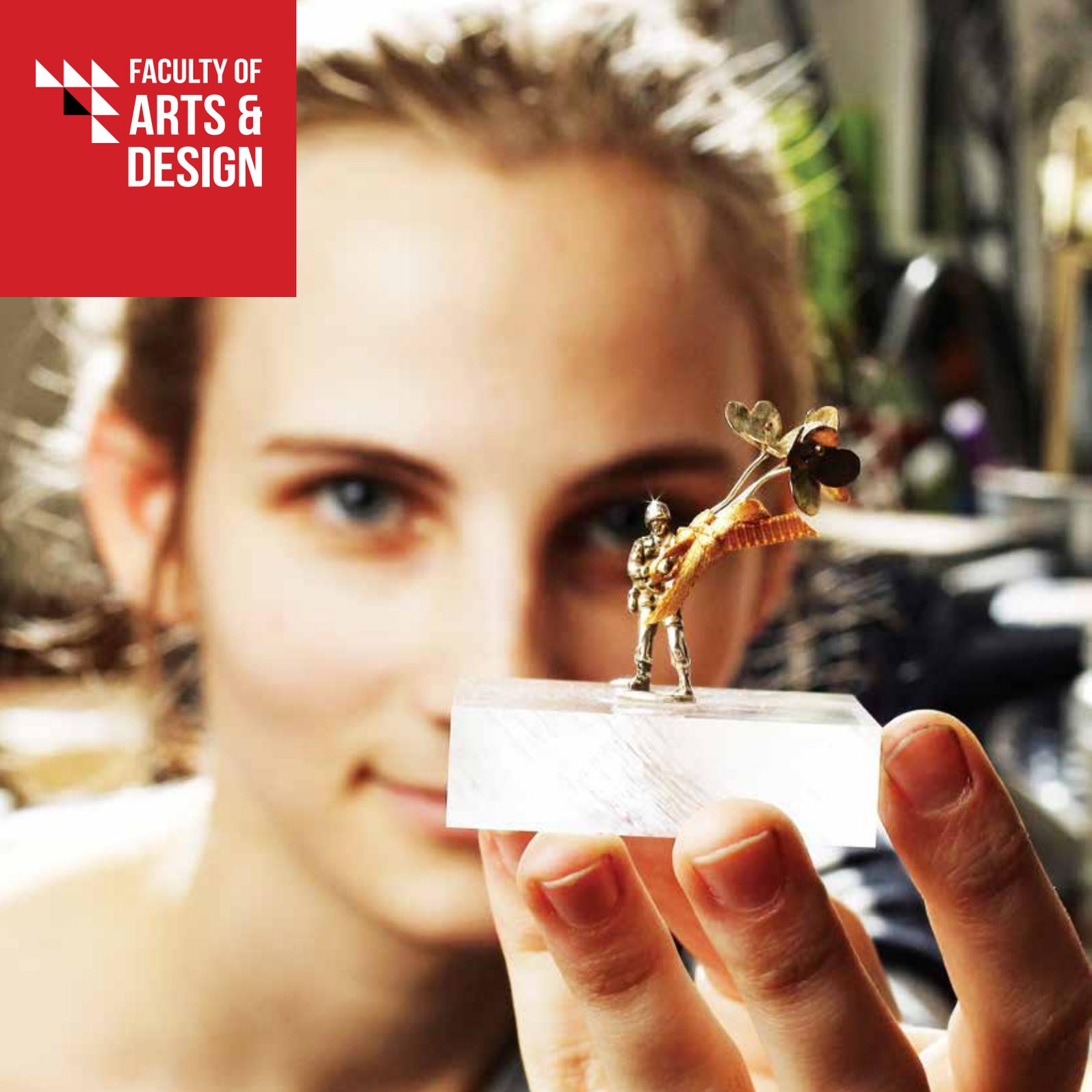
The majority of the class planned, practiced and executed a drama production with song and dance bringing out overtly the message of 'being aware about HIV/AIDS. The target audience was 60 grade 11 students at the Sastri Secondary School. A quiz was held with the audience thereafter and prizes were given. The rest of the class engaged in collecting items for promoting health and hygiene and good eating practice amongst orphans at the St Thomas orphanage in Sydenham. They also did a sketch focusing especially on the girls.

An indigenous knowledge-based research was conducted in partnership with women from the Qadi community in Inanda. The scope of the project included the nutritional quality of traditional foods in general as well as exploring the benefits of traditional fermented beverages. Three full-time BTech students and one MTech student, supervised by Dr Mokoena in the Biotechnology and Food Technology Department, completed their research projects as part of this engagement. The students were able to isolate bacterial cultures responsible for the fermentation and studied their characteristics using biochemical and molecular methods, thus enabling the development of appropriate starter cultures. The outputs of the project were reported in DUT research newsletters, local newspapers and presented in local conferences.

The Department of Food and Nutrition: Consumer Sciences is currently involved with Vulingqondo crèche in Umbilo and hosts their year end children's Christmas party. The department is also involved with the Lakehaven vegetable garden.

Professor Darren Lortan

Executive Dean: Faculty of Applied Sciences



FACULTY REPORT

FACULTY OF ARTS AND DESIGN



Dr Kenneth F Netshiombo – Executive Dean: Faculty of Arts and Design

STRATEGIC DIRECTION

Student centredness and curriculum renewal were important strategic goals for the Faculty of Arts and Design in 2011. A faculty workshop on student centered approaches, addressed by the Vice-Chancellor and the Executive Dean was a keynote for the Faculty. The Curriculum Renewal Project launch in March was followed by intensive development activity at departmental and Faculty levels throughout the year. Faculty approval of the new PhD (Visual and Performing Arts) has opened the way for postgraduate study in several Arts and Design programmes that previously terminated at Masters level. The Faculty already has a well-established DTech in Language Practice. In August, Mr Petros Pashapa, Dean: School of Art and Design, Chinhoyi University of Technology, Zimbabwe, visited the Faculty and gave a presentation on "Patterns in Graphic Development". The Faculty has established links with Chinhoyi, and is sharing expertise in postgraduate supervision and examining.

FACULTY STRUCTURE

In 2011, the Faculty comprised seven departments and 14 distinct programme clusters (various levels including National Diploma, BTech, B.Ed, MTech and DTech).

Department of Drama Studies

Department of Fine Art and Jewellery Design

Department of Media, Language and Communication

Department of Visual Communication Design

ND Drama

ND Performing Arts Technology

ND Fine Art

BTech Fine Art

MTech Fine Art

ND Jewellery Design & Manufacture

BTech Jewellery Design & Manufacture

ND Journalism

BTech Journalism

MTech Journalism

ND Language Practice

BTech Language Practice

MTech Language Practice

Dtech Language Practice

ND Translation And Interpreting Practice

BTech Translation And Interpreting Practice

Servicing:

English and Communication

ND Graphic Design

BTech Graphic Design

MTech Graphic Design

ND Photography
BTech Photography
MTech Photography
ND Interior Design
BTech Interior Design
MTech Interior Design

School of Education
Department of Fashion and Textiles
Department of Video Technology
BEd FET Economic and Management Science
BEd FET Natural Science
BEd FET Technology
ND Fashion
BTech Fashion
MTech Fashion
ND Video Technology
BTech Video Technology

OVERVIEW

Student winners of prestigious awards during 2011 included Graeme Duane, Video Technology graduate, who won an Emmy Award for Cinematography at the 2011 Emmys. This is a truly remarkable achievement and brings to four the number of Emmys won by Video Technology students. Dave Fisher, a graduate of the B Tech: Video Technology, won 'Best Adventure Film' at the Sundance Film Festival – the largest independent film festival in the world – for his film "Halo Effect", and received eight nominations in other categories.

Fine Art second-year student Mhlonishwa Chiliza and first-year student Jabulani Mbili won first and second prizes in the open category of the National Creative Arts Youth Festival - Visual Arts Exhibition. Third-year painting student Joseph Greyling and Nicole Maurel were finalists in the highly competitive national Sasol New Signatures competition.

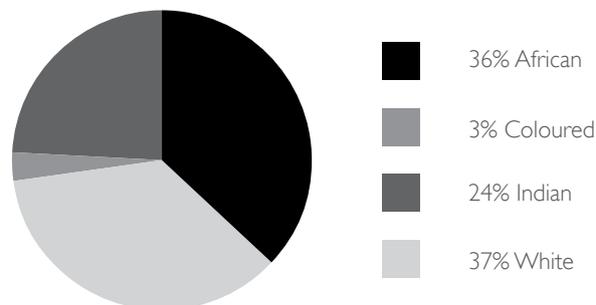
Jewellery students Lungelo Dlamini, Shelele Mbhatha, Jongani Mzukwa and Colin Ngiba were placed third in the Student and Professional Collaboration category of the national 2011 Plat Africa Jewellery Design competition. In the same competition, BTech student Songezo Baleni won a Merit Award for his wedding ring design in the individual student category.

Drama Studies students won numerous awards - Jessica Jamison (Best Actress: 2011 Fugard Festival); Menzi Mkhwane (Best Newcomer 2011: The Mercury Durban Theatre Award). Samson Mlambo wrote and directed Meet Bro Six-Two which garnered the 2012 Musho Festival Audience Appeal Award while Wiseman Mncube won the LTJ Travel Best Performer Award at the same festival. Fashion and Textile third-year students, Shelley Botha and Nabeela Osman, were in the top three in the region in the Vodacom Durban July Fashion Award. The theme was "A Right Royal Affair". The Emma Smith Award was won by Graphic Design student Bryce Louw, against strong competition from contenders in the other Arts and Design disciplines.

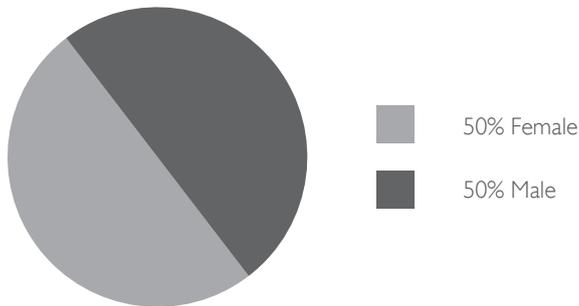
Staff Profile

Faculty staff consisted mainly of Africans (36%), Indians (24%) and Whites (37%) with a very small proportion of Coloured staff (3%).

Staff by Race Group

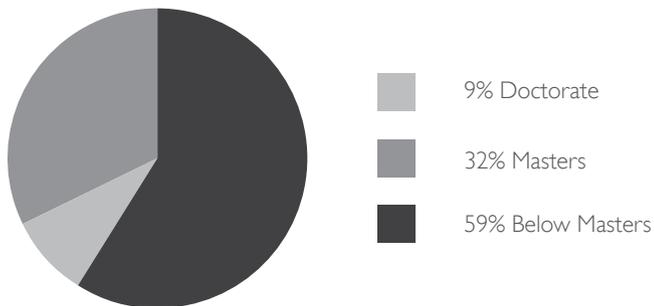


Staff by Gender



The number of academic staff to improve their postgraduate qualifications continued to grow in 2011: Dr D. Njizela (D Ed), Ms Deseni Soobben (MA), Ms R. J. Msimango (M Comm) and Mr R. Holmes (M Ed).

Staff Qualification Profile



TEACHING AND LEARNING

All departments in the Faculty participated in a major curriculum renewal project that was launched at a university-wide workshop in March, and was continued through a series of faculty and departmentally-based meetings and workshops throughout the year. Departmental "Curriculum Champions" facilitated the process and reported on progress to faculty and University structures. Departments finalised their plans to ensure that programmes would be developed to comply with the Higher Education Qualifications Framework. Considerations of student access, relevance to industry and intellectual

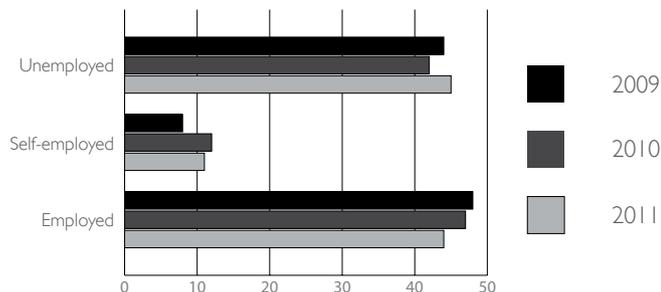
challenge determined whether the suitable future direction of programmes was towards the introduction of bachelor's degrees or diplomas. The revision and development of curricula have also been shaped by an exploration of learning modules in which critical knowledge and skills might be shared across a number of programmes. The Fine Art Advisory Board met in August 2011 and approved the Exit level Outcomes for the Fine Art BFA and BFA (Hons). Video Technology have proposed to introduce a three year Professional degree, the Bachelor of Arts: Television, followed by a Bachelor of Arts Honours Degree: Television.

A key event in opening up postgraduate study opportunities for Arts and Design students in the faculty was the development of a new PhD Programme in Visual Arts and Design for the Faculty. Prof Kate Wells of the Department of Visual Communication Design was driver of this initiative, which received Senate approval in November and is currently under consideration by the Council on Higher Education.

Innovative teaching and learning practice is a hallmark of the Faculty of Arts and Design. Faculty staff who completed e-learning training during 2011 were Prof Debbie Lütge, Lloyd O'Connor, Tanya van der Walt, Dr Mamothibe Thamae, Anita Hiralal, Dr Yasmin Rugbeer, Tasneem Seedat, and Irene John (Pioneers); and Sharon Zoepke, Dr Mikhail Peppas and Prof Graham Stewart (Mobiles). The School of Education has been leading the adoption of e-learning on a significant scale. Mr Ben Tarr uses online learning for Skills and Life Orientation 101 and 201. Mrs Anita Hiralal introduced online learning to third year Accounting students and produced a paper on the experiences of her students doing Accounting through online learning. Her presentation was subsequently voted the best in Faculty of Arts and Design at the DUT Research Day. The Department of Media, Languages and Communication ran a workshop in July on M-Ubuntu, initiated by Dr S Zulu of the Language Practice Programme. Staff members were trained to use mobile phones for teaching and learning.

STUDENT PERFORMANCE

Graduate Employment Profile

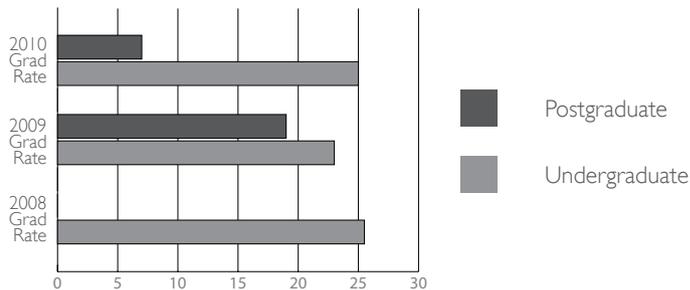


Graduate Employment Profile 2009 to 2011 – Arts and Design

The DUT Graduate Survey shows that graduate employment rates for students in Arts and Design have continued to decline. Respondents who reported being employed dropped from 46.5% in 2010 to 43.9% in 2011, and those who reported being self-employed from 11.5% down to 10.7%. This trend in the Faculty of Arts and Design is in contrast to the average employment rate reported for the University as a whole, where the employment rate rose from 53% in 2010 to 56.1% in 2011. Some departments are of the opinion that the rates may be skewed to some extent because students who are already in employment often find it difficult to attend the graduation ceremonies where the Graduation Survey is conducted. The Consensus Study on the State of Humanities in South Africa published in 2011 by the Academy of Science of South Africa, shows 70.5% of graduates in the Humanities reporting that they “work for an employer” in the 2000-2010 period. The significant difference between this figure and that reported by Arts and Design students at DUT may be attributed to the fact that the ASSAF figure reflects employment trends over a ten-year period while the DUT figures are based on a sample of students who have only very recently graduated.

Graduation Rate

Graduation Rate (%) 2008 to 2010

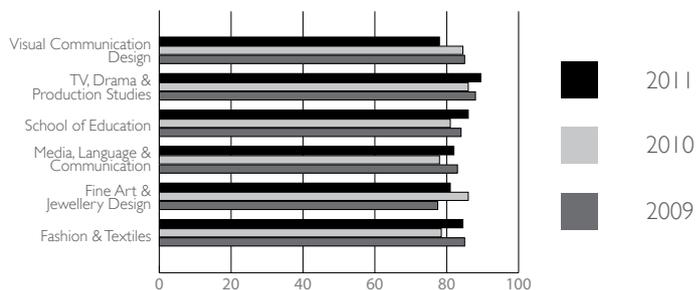


The Faculty Graduation Rate average for 2010 was 25%, 2.5% above the national target. Postgraduate percentages, however, tend to be exaggerated by the relatively small numbers involved, e.g. eight postgraduate qualifications awarded at the end of 2009.

Success Rate

Faculty success rates continue to recover and rose from 81% in 2010 to 83% in 2011. For the second year, student performance has exceeded the national target of 80%. Tracking and addressing student performance remains one of the Faculty’s main strategic aims, and is the subject of in-depth analysis by each department and by the Faculty. Some of the factors negatively influencing student success are discussed below.

Success Rates (%) Faculty of Arts and Design

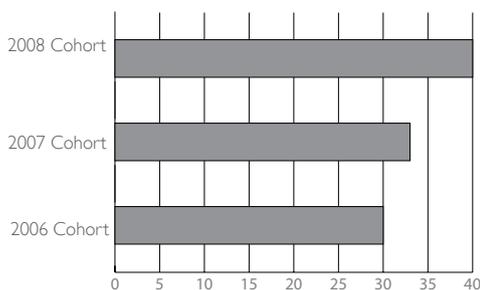


Success rates for VCD dipped in 2011 from 85% in both 2009 and 2010, to 78% in 2011. This is attributable to high failure rates in first year Graphic Design and high drop-out and failure rates in first year Interior Design. Letters received from parents attest to violent campus disruptions as one cause of poor student performance. In the Fine Art National Diploma there was a high failure rate in first year; 15 of the 30 first time entering cohort passed all subjects. On analysing the reasons for the failure rate, most of the failures were due to poor attendance and non-submission of work. This is despite students being issued due performance warnings and being issued with a warning letter and being interviewed by the head of department at mid-year.

Cohort Studies

The rise in the Faculty dropout rate from 33% to 40% is a major concern. Investigation has shown student financial problems to have been the primary reason for the attrition. Departments that showed significant increases in the dropout rate were Visual Communication Design, Video Technology and Fashion Design. Drama Studies and Fine Art and Jewellery Design showed a decrease in dropout rate.

Dropout Rates 2006 to 2008 Student Cohort (%)



In the case of Fine Art, lower dropout rates are primarily due to stringent vetting and testing of applicants to ascertain their suitability to the programme.

RESEARCH

University Research Day featured a full day's session of Art and Design presentations, organised by Faculty Research Co-ordinator, Dr Bheki Mngomezulu. Papers were presented across a diverse range of Arts and Humanities topics, by both lecturers and postgraduate students of the Faculty. Presentations provoked a considerable amount of discussion and exchange of views, and represented a high point in faculty research-related activities for the year. The regular Lunch Hour seminar series organised by Dr Yasmin Rugbeer provided a platform for staff to share their research and development activities with their peers.

There were two significant book publications in the Faculty. Siyazama: Art, AIDS, and Education in South Africa, was edited by Professor Kate Wells (Visual Communication Design) with contributions from Rowan Gatfield (Workspace), Piers Carey (Visual Communication Design). The second book (Re) searching Durban, was edited by F. Khan and N. Ramlutchman and featured Faculty members Dr Kenneth Netshiombi (Executive Dean), Nirima Madhoo-Chipps, Lee Scott (Fashion and Textiles) and Dr Mikhail Peppas (Journalism).

Other staff publications included:

- Jan Jordaan was editor of the Dialogue Amongst Civilisations peer reviewed exhibition catalogue published by Art For Humanity, Durban University of Technology.
- Dr Yasmin Rugbeer and H. Rugbeer. 2011. "Mobile Communication: The MXit Revolution". Journal of Commerce, Administration and Law. Vol 4, issue 1, pages 39-49.
- John Roome. Two articles in the Tracey Electronic Journal: "In Response to Dr. Paul Hamilton, Drawing with printmaking technology in a digital age" and "Drawing in a Digital World: A self-reflective critical analysis of the creative output of John Roome".

Staff Exhibitions and Performances

Chris and Marlene de Beer held an exhibition at the KZNSA Gallery titled Phenomenal Engagement, Bronwen Vaughan Evans held an exhibition titled "A Portrait of Ophelia" at ArtSpace in Johannesburg in May. Hendrick Stroebel mounted a critically acclaimed body of work done over 15 years titled Recollect – A Torquoise Journey at the KZNSA gallery in May.

Andries Botha held a solo show titled (IN) SOMNIUM at the Everard Read CIRCA on Jellicoe Gallery, Johannesburg in August.

Wendy Schultz showcased an ecologically friendly bridal collection for her Masters degree in Technology: Fashion, at the DUT fashion show in October.

Robin Singh, after directing the first production of Mike van Graan's new work Green Man Flashing in Durban in March/April 2011, went on to play the character Khan in the drama series Fallen for SABC 1.

Papers presented at conferences:

Professor Debbie Lütge – two papers: "Tracing Footprints in Shifting Sands Transposes Paradigms: An Artist's Perspective" and "Performing Race and Other Stereotypes: A Memory Bank in a Socio-Political Context" at the International University "Global Theatre Experience" at Der Retzhof, Austria, August 2011.

Lloyd O'Connor. "'Stories of Our Time' - In search of a communal healing: Engaging the performative potential of history, ritual and African spirituality in Brett Bailey's Ipizombi? (1998)". IFTR Annual Conference - Tradition, Innovation, Community, International Federation for Theatre Research (IFTR), University of Osaka, Japan, August 2011.

Piers Carey, "Widening Participation in Durban, South Africa: a view from Graphic Design at the Durban University of Technology". Proceedings of the Forum for Access and Continuing Education, 2010 conference.

Prof Graham Stewart, "The challenge of designing a collaborative reference source for South African Literature – the ESAACH Wiki". Literature, Literacy and Language - English Academy of Southern Africa, 2011 International Golden Jubilee Conference. Cape Peninsula University of Technology, Cape Town, 7-9 September 2011.

Ayesha Mall. "Legacy Media and social media nexus: Ethical considerations for South African newsrooms". 2nd International SEARCH Conference - New Media Culture and Challenges. Taylor's University, Kuala Lumpur, Malaysia, 28-29 May 2011.

Dr Yasmin Rugbeer. "Intercultural Communication: A Comparative Study of Japanese and South African Work Practice". Inter-Cultural Negotiation of the Global Space: African Perspectives. The African Association for Rhetoric and Partners, Cape Town, 30 June - 2 July 2011.

The following staff and students presented papers at the DUT Institutional Research Day, November, 2011: Dr Bheki Mngomezulu, Chris de Beer, Dr Lolie Makhubu, Z Dladla, John Roome, Andrea Alcock, S Madi, S Naidoo, L Tsim, Delisile Nkosi and Anita Hiralal. Professor P. D Siyakwazi, Professor Kate Wells, Dr M Mkhize, Dr D Mdzindle and Jan Jordaan also presented papers at international conferences.

COMMUNITY ENGAGEMENT

The Workspace studio offered internships to students working for the DUT, producing a new logo and Corporate identity for the University and designing all materials for Professor Bawa's Inauguration as Vice-Chancellor in March, amongst other work; and for external clients, including the UN Food Programme. Rowan Gatfield initiated a project to redevelop the Durban Rickshaws as part of preparation for his PhD. Workspace and undergraduate students all participated in competitions related to the COP17 conference, resulting in work from lecturer

Ernest van der Merwe and third-year students being displayed at the conference; one second and one first year student winning prizes in a related competition, and Workspace's designing two exhibitions for the conference.

Interior Design's Service Learning model integrates professional development with community development. The programme's community service project engaged with the KZN Correctional Services Department to re-design and re-furbish the crèche for female inmates and their children at the Westville Prison. The service learning component of the Diploma course also took students out to a range of employers. Video Technology was able to combine student training in leading edge 3D television production with an eThekweni Municipality community development project supplying 3D educational content on tablet devices for pupils. Working together with local innovation company MatlaInfotech and Taiwanese company ITRI, the department became the first and only television or film school in South Africa to offer training in 3D. In October three BTech students, Joanelle Meyer, Gavillian Letsoalo and Andrew Abrahams, completed five educational 3D programmes which were then supplied to Matla for broadcast on the pilot project.

The Department of Photography continued its provision of a graduation photography service for the DUT, combining student learning in photographic practice with organisational, entrepreneurial and business skills.

Fashion Design second year students were involved in a social upliftment project producing t-shirts for 6-12 month old babies as part of the stretch module in 2011. These t-shirts were handed over to a charitable organisation in the Hillcrest area.

The Department of Drama and Production Studies has a growing Community Outreach Portfolio. Drama studies lecturer Pamela Tancsik

and her students contributed a piece of educational theatre on climate change "Women greening the nation" to accompany the international COP17 Climate Change conference. Dr Jutka Devenyi is involved in the Ubunye Eco-Tourism Cooperative, having created and managed its virtual marketplace "The Zulu Exchange".

The School of Education has been engaged in a Community outreach project for the past four years that focuses on issues that affect High School students in the Pietermaritzburg area. As part of their Skills and Life Orientation, students who are in third year, organise and run the project. Issues that are addressed in the community outreach projects are driven by the needs of the communities and in 2011 the focus was on careers and career choices. The outreach day was well attended by the neighbouring high schools as well as two schools in the Greytown and Richmond areas respectively.

Intercultural Studies students in the Translation and Interpreting Practice programme, led by staff members Ms OB Swift and Mr BR Nxumalo, made significant contributions to the World International Sign Language Conference (WASLI) in July 2011.

In Visual Communication Design, workshops with Swedish Design partnerships FRONT and Editions in Craft and members of the Siyazama Project took place in April, which led to the design of beaded glass lamps displayed to great acclaim at the Milan Design Fair in Italy. In October, Professor Wells set up a new Memorandum of Understanding between Editions in Craft (Sweden) and DUT.

The Faculty Saturday enrichment school continued successfully in 2011. The project is funded by the eThekweni Rotary Club and managed by the Executive Dean and staff from the Arts and Design Faculty Office.

The Art Gallery featured the exhibition "Re-use" in December 2011 to coincide with the international Climate Change Conference (COP17)

that was taking place in Durban. The thematically-centred exhibition was curated by newly-appointed Curator Francesca Verga who sourced artworks from the student Fine Art and Jewellery Design exhibition, incorporating renewed, natural and found objects on the exhibition. The Gallery hosted MTech exhibitions by three Faculty staff members during 2011: Moses Khubisa and Imvunge Street Photographers – Moses Khubisa (Photography) Telling Tales – Lee Scott (Fashion and Textiles) and An Anthology – Samantha Vincent (Jewellery Design).

Dr K.F. Netshiombo

Executive Dean: Faculty of Arts and Design

February 2012

ACKNOWLEDGEMENTS

Department of Management Information for statistical reports
Report on April Graduate Survey 2011. Centre for Quality Promotion and Assurance.

Heads of individual departments for their input. Academy of Science of South Africa. 2011. Consensus Study on the State of Humanities in South Africa. Pretoria: ASSAF.







**FACULTY OF
ENGINEERING
& THE BUILT
ENVIRONMENT**



FACULTY REPORT

FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT



Professor Theo Andrew – Executive Dean: Faculty of Engineering and the Built environment

The Faculty of Engineering and the Built Environment comprises nine departments on the Steve Biko Campus viz. Chemical Engineering, Civil Engineering and Survey, Construction Management and Quantity Surveying, Electrical Power Engineering, Electronic Engineering, Industrial Engineering, Mechanical Engineering, Town and Regional Planning, Architectural Technology and the Department of Civil Engineering on the Indumiso Campus in Pietermaritzburg. Architectural Technology joined the Faculty at the beginning of 2011. Every department offers professional programs which are accredited by a professional council. This implies that the qualifications offered are recognised for professional registration. In 2011, the student enrolment headcount was 6545, while the total number of staff positions (permanent and contract) was 163.

The Faculty was awarded funding for a second DOE Infrastructure and Efficiency project in 2009. The funding is being disbursed over three years (2010 – 2012) and is for two major initiatives: new lecture venues and the upgrading of teaching equipment. The amount awarded for the new venues totals R54 million and R21 million for equipment. The University is contributing an additional R7 million to the cost of the venues. Together with the funds made available by DOE in the first Infrastructure grant (in 2008) for cyber labs, the faculty has sufficient funds for a new building to be located next to the S-Blocks on the Steve Biko Campus which will house the cyber labs and new lecture

venues. The space vacated in the S-Blocks, when the new building is completed, will be converted to additional laboratory space for academic departments.

The vision of the Faculty of Engineering and the Built Environment (FEBE) is to be known for excellence in producing relevant professionals who use engineering and technology for societal development in South Africa. While our programs are focused on the relevant sciences and technologies, which is necessary of professional competence, FEBE is committed to making a direct contribution to the development of the South African society. To ensure that we remain focused on this vision we have embraced five objectives which have become the mission of FEBE viz.

- To continually ensure that our graduates are socially relevant
- To ensure that the professional career orientation of our students is informed by the relevant stakeholders
- To provide an appropriate infrastructure to our students which will ensure technological excellence
- To ensure that learning and teaching in the Faculty is in line with student needs and latest innovative practices
- To foster research and development that contributes to the national and international pool of knowledge; and that informs the undergraduate curriculum

ENROLMENT TRENDS

FEBE is pleased to report that all its programs either comply or exceed the enrolment plan of DUT with a total student population of 6 545 compared with the target of 6 301. While the major business of the Faculty is the national diploma programs which accounts for approximately 78.5 % of the total headcount, the Faculty is enjoying a sustained increase in the BTech applications. Unfortunately, due mainly to staff resource constraints, many eligible applications cannot be accommodated. This is expected to contribute to improving the postgraduate headcount which comprised 33 MTech and eight DTech registrations.

The percentage headcount per race remained relatively stable over the last three years with 1.7 % Coloured, 4.7 % White, 25.5% Indian and 68.1 % African. Women students account for 25.6 % of the student population and this has increased marginally over the last three years.

TEACHING AND LEARNING

The core business of teaching and learning is embedded in the challenges that are intrinsic to our students and lecturers. This is compounded by the less than desirable teaching and learning physical environment and disruptions at DUT. The DHET has recently allocated significant amount of funds for infrastructure and equipment redress and this will go a long way in ameliorating the one situation. In addition, new practices in teaching which are intended to facilitate better learning are beginning to take off. The following are some initiatives, over and above the usual such as tutorship/mentorship which are already making a positive impact on learning.

- More effective management of the student's progression through the program.
- Re-adjustment of program structure.
- Inclusion of software simulation system at the first year level in some subjects.
- A number of guest lecturers presented lectures (or talks) to our

students during 2009, and staff have been encouraged to make more use of this practice.

- Bottleneck modules have been identified and every effort is made to address the results of the analysis. There is a noticeable improvement in the success rates in certain bottleneck modules such as Electrotechnology I.

Two further strategic interventions are noteworthy. The Faculty has embarked on setting up a research group in engineering education that will focus on improving the performance in teaching and learning. Several papers were presented at the SASEE conference (accredited for DHET subsidy) in Stellenbosch last year by staff members. The findings in the various projects are becoming embedded in the conversations at various faculty meetings.

The Faculty is steaming ahead with the Curriculum Renewal Project at DUT. Project meetings are held once every two weeks and we are now at a stage where we have draft curricula for new programs in many departments. The process has stimulated the staff members to rethink what we teach and why, and the way in which the learning is managed.

Student performance

While success rates, throughput rates and drop-out rates remain a challenge for the Faculty, there is sustained improvement. While performance figures are lower in engineering programmes throughout the country for example, the average time taken to complete a four year B Eng programme is five-and-a-half years and a three-year diploma five years, the Faculty does not accept this as the norm. Instead, student performance is highest on the agenda of the Faculty's strategic initiatives. Interventions over the past two years, some of which are mentioned above, are beginning to show amelioration. The graduation rate has dropped from 17 % in 2009 to 16% in 2010. This may be attributed to the increase in headcount during this period. The average success rate for the Faculty remains at 72%.

Highlights

- Department of Chemical Engineering's Shane Govender who graduated cum laude, received a silver medal from the South African Institution of Chemical Engineers (SAIChE), and Nastasia Ramsamy was awarded the Gold Medal for the best female engineering BTech student in South Africa by the Institute of Professional Engineering Technologists (IPET).
- Department of Civil Engineering and Survey, Durban, Chris Adonis received the IPET gold medal for best performance in an engineering BTech programme in South Africa.
- Department of Town and Regional Planning Malebo Mohlamonyane won the KwaZulu-Natal SAPI award in the category undergraduate project and, Shian Saroop and Nokwanda Malinga received commendations in the category undergraduate PROJECT from the same institute.
- The Department of Architectural Technology attained full unconditional SACAP validation (accreditation). The board comprised of official members of SACAP as well as a diverse group of practitioners and academics. The department awaits the final comprehensive report of the visiting board. Verbal feedback during the validation process and the announcement were very positive and the academic curriculum development initiatives since 2009 were well acknowledged. The pedagogic approaches of the programme were commended and the learning spaces were perceived as adequate. The academic quality improvement initiatives have been affirmed by the results of national and international architectural competitions over the past two years. In 2010, DUT was placed second in both the Murray & Roberts Des Baker Competition and the SHiFT Social Housing competition (run every two years) whilst in 2011 DUT was again placed second in the Murray & Roberts Des Baker Competition.
- Robynne Hansmann, Theresa Gordon and Joe Kitching from the Department of Town and Regional Planning received commendation for the project North Public Transport Corridor:

Conceptual Proposals for CBD to Bridge City, eThekweni Municipality in the category Professional Project during the SAPI Annual Planning Awards 2011.

STAFF PROFILE

FEBE has a total staff complement of 163 of which 111 are academic (permanent and contract). Of these, we had 95 posts filled. Expected qualifications of academic staff are below the benchmark and this is the most challenging area for development. The percentage of academic staff that have a highest qualification of a Masters degree or equivalent is 41% and 11% percent have Doctoral degrees.

Women make up for approximately 23,3 % of the total staff. Of the 125 male staff, the demographic profile is approximately 3.2% Coloured, 14,4 % African, 26,4 % White, and 52,8 % Indian. While FEBE has made much progress in working towards a diverse student population, the progress with respect to staff equity is slow. There are a number of factors that contribute to this slow progress but the Faculty remains committed to keeping this high on its agenda.

RESEARCH AND SCHOLARSHIP

Building sustained research capacity in FEBE remains a challenge and this is directly related to staff qualifications. However, the staff have now accepted that transforming from our past into a University culture cannot be achieved without a vibrant research culture. Despite the challenges, the Faculty is encouraged by the progress made. There are significant research and development activities across the following areas within the Faculty:

Applied Computational Intelligence, Bio-composites/Nano-materials, Chemical Thermodynamics, Engineering Education, Membrane Technologies for Water Purification, Radio Astronomy Engineering, Real Time Power System Simulation, Reinforced and Moulded Plastics, Renewable Energy, Sustainable Development & Human Settlement, and Transportation.

Staff development with respect to research and scholarship will remain a strategic priority in the short and medium term. To this end, all those staff members who are contractually bound to complete a Masters degree are receiving focussed attention with mentoring, investment of resources and accountability. In addition, the formation of research cell groups within FEBE has shown tangible results, although one has to continually assess and experiment with different options. As part of the research development initiative, the Department of Civil Engineering in Pietermaritzburg has established a very active research interest group comprising both staff and students. Although in its infancy, the members are making steady progress.

The following research outputs and highlights is an indication that the Faculty does have sustained research activity. This is a significant increase from previous years.

Conference Papers/Proceedings

- 1 Adeyemo J. A., Enitan A. M. and Otieno F. A. O. (2011). Minimisation of water use in the food processing operations, Proceedings of 6th Dubrovnik Conference on Sustainable Development of Energy, Water and Environment Systems, 25 – 29 September, Dubrovnik, Croatia.
- 2 Adeyemo J. A. and Enitan A. M. (2011). Wastewater minimisation in batch process industries, Proceeding of 6th Dubrovnik Conference on Sustainable Development of Energy, Water and Environment Systems, 25 – 29 September, Dubrovnik, Croatia.
- 3 Alfa, D. and Pillay, V. L. (2011). Development and evaluation of a small scale disinfection system, WISA Membrane Technology Conference 2011, Durban, South Africa.
- 4 Andrew, T. (2011). Dealing with two cultural constraints in engineering curriculum design: Work Integrated Learning and Systems Thinking, Global Engineering Deans Council Conference, 20-22 October 2011, Peking University, Beijing, China.
- 5 Andrew, T., Petkov, D., Petkova, O., Nepal, T. and Samuels, L. (2011). Building Postgraduate Supervision Capacity through International Collaboration, 15th annual conference of IEASA (International Education Association of South Africa), 31st August - 3rd September 2011, Durban, South Africa.
- 6 Bernhardt, H.W. and Arnold, D.R. (2011). Cane Trash Burner: A novel way of utilising the Energy inherent in Sugarcane Trash, Proceedings of 84th Annual Congress of SA Society of Sugarcane Technologists, Durban, 423-431.
- 7 Bernardt, W., Andrew, T. and Walker, M. (2011). Establishing a Culture of Research in an Engineering Faculty at a South African University of Technology, 1st biennial conference of SASEE, 10-12 August, Stellenbosch, South Africa,
- 8 Chetty, M and Ramsuroop, S. (2011). Review of Teaching, Learning and Assessment Strategies for Chemical Engineering Project at DUT, 1st biennial conference of SASEE, 10-12 August, Stellenbosch, South Africa,
- 9 Govender, P. and Kyereahene-Mensah, D. A. (2011). Artificial Immune Systems and Negative Selection for Fault Diagnosis, Proc.-2011 International Symposium on Innovations in Intelligent Systems and Applications (INISTA 2011), Istanbul, Turkey, 199-204, ISBN 978-1-61284-922-5.
- 10 Graham, B. and Walker, M. (2011). Analysis of trends in National Diploma student success rates in Mechanical Engineering at the Durban University of Technology, 1st biennial conference of SASEE, 10-12 August, Stellenbosch, South Africa, ISBN 978-0-620-50774-5.
- 11 Kanny, K. and Mohan, T. P. (2011). Thermal, mechanical and water barrier properties of nanoclay treated sisal fiber reinforced epoxy polymer composites, Proceeding of 18th International Conference on Composite Materials – ICCM 18, 21-26 August, Jeju Island, S. Korea.
- 12 Kanny, K. and Mohan, T. P. (2011). "Thermal, mechanical and water barrier properties of nanoclay treated sisal fiber reinforced epoxy polymer composites", Proceeding of 18th International Conference on Composite Materials – ICCM 18, 21-26 August, Jeju Island, S. Korea.

- 13 Kunene, O. and Allopi, D. (2011). Investigation on Asphalt Roads within the Port of Durban, Proceedings of the 10th Conference on Asphalt Pavements for Southern Africa (CAPSA'11), ISBN 978-0-620-51414-9.
- 14 Loji, K. (2011). Teaching Electrical Engineering Content in a Laboratory Environment: Challenges and opportunities, 1st biennial conference of SASEE, 10-12 August 2011, Stellenbosch, South Africa.
- 15 Mwaipungu, R. R. and Allopi, D. (2011). The use of longitudinal roughness data as a tool for effective maintenance management of gravel roads, Proceedings of the 30th Annual Southern African Transport Conference (SATC 2011), Pretoria, South Africa, ISBN 978-1-920017-51-4.
- 16 Olofintoye O. O. and Adeyemo J. A. (2011). A potential application of nanotechnology for the prediction of maximum rainfall, Proceedings of the Fourth African Regional Conference of Vice Chancellors, Deans of Science, Engineering and Technology, (COVIDSET 2011), 23 – 25 November, Johannesburg, South Africa.
- 17 Pillay, N. and Govender, P. (2011). PSO Tuned PI/PID Controller for Open-Loop Unstable Processes with Time Delay, Proc. – 15th Portuguese Conference on Artificial Intelligence, Lisbon, Portugal, 223-237, ISBN: 978-989-95618-4-7
- 18 Pillay, V. L., (2011). Future Trends in Membrane Technology, WISA Membrane Technology Conference 2011, Durban, South Africa.
- 19 Pillay, V.L. and Visvanathan, C. (2011). Recent developments in fabric membranes, Membrane Science and Technology Conference, August 2011, Singapore.
- 20 Pillay, V. L. (2011). A gravity-fed Woven Fabric Microfilter for Rural Water Supply: Aspects of Social Acceptance and Implementation Strategies, Membrane Science and Technology Conference, August 2011, Singapore.
- 21 Pillay, V.L. and Jacobs, E.P. (2011). Membrane Technology: Past, Present and Future Trends, WRC 40th Anniversary Conference, 31 Aug – 1 Sept, Johannesburg, South Africa.
- 22 Ramsuroop, S. (2011). Developing engineering conceptual competencies in chemical engineering students through socially relevant DIY projects, 1st biennial conference of SASEE, 10-12 August 2011, Stellenbosch, South Africa.
- 23 Saroop, S. H. and Allopi, D. (2011). Environmentally sound infrastructure solutions on projects, Proceedings of the International Renewable Energy & Environment Conference (IREEC 2011), Malaysia, ISBN 2078-0737.
- 24 Tabakov P.Y. (2011). Big Bang - Big Crunch optimization method in optimum design of complex composite laminates, Proceedings of International Conference on Computer, Electrical, and System Science, and Engineering, ICCESSE 2011, Paris, France, 1309-1313.
- 25 Vallabh, S.V. and Ramsuroop, S. (2011). Constructive Alignment of Laboratory Instruction in Chemical Engineering at the Durban University of Technology, 1st biennial conference of SASEE, 10-12 August, Stellenbosch, South Africa.
- 26 Wing, J.W., Andrew, T. and Petkov, D. (2011). "On improving the understanding of software requirements by clients", poster presentation, Master's and Doctoral Symposium, SAICSIT 2011, 3-5 October, Cape Town, South Africa.
- 27 Wing, J.W., Andrew, T. and Petkov, D. (2011). Software requirements and the client – An exploration of the underlying complexity of the problem, 2nd International Business Management Conference, 28-30 September, UKZN, South Africa.

Journals Articles and Chapters in Books

- 1 Allopi, D. and Kunene, O. (2011). Assessment of Road Infrastructure within the Port of Durban, Southern African Asset Management Association, ISBN 978-0-620-50260-3.
- 2 Enitan, A. M. and Adeyemo, J. A. (2011). Food processing optimisation using evolutionary algorithms, African Journal of Biotechnology, Vol. 10(72).
- 3 Mohan, T. P. and Kanny, K. (2011) Study of catalytic effect of nanolayered montmorillonite organoclays in epoxy polymer; ISRN Nanotechnology, article ID 96293.

- 4 Mohan, T. P. and Kanny, K. (2011). Effects of synthetic and processing methods on dispersion characteristics of nanoclay in polypropylene polymer matrix composites, *Journal of Materials Sciences and Applications*, vol. 2(7), 785-800.
- 5 Mohan, T. P. and Kanny, K. (2011). Water barrier properties of nanoclay filled sisal fibre reinforced epoxy composites, *Journal of Composites Part A: Applied Science and Manufacturing*, vol. 42(4), 385-393.
- 6 Mohan, T. P. and Kanny, K. (2011). Influence of nanoclay on rheological and mechanical properties of short glass fibre reinforced polypropylene composites, *Journal of Reinforced Plastics and Composites*, vol. 30(2), 152-160.
- 7 Mohan, T. P., Kuriakose, J. and Kanny, K. (2011). Effect of nanoclay reinforcement on structure, thermal and mechanical properties of natural rubber – styrene butadiene rubber (NR-SBR), *Journal of Industrial and Engineering Chemistry*, vol. 17(2), 264-270.
- 8 Mohan, T. P., Kuriakose, J. and Kanny, K. (2011). Water uptake and mechanical properties of natural rubber-styrene butadiene rubber (NR-SR) – nanoclay composites, *Journal of Industrial and Engineering Chemistry*, article in press.
- 9 Mohan, T. P., Prem George, A. and Kanny, K. (2011). Combined effect of isophthalic acid (IPA) and polyethylene glycol (PEG) in polyethylene terephthalate (PET) polymer on thermal, mechanical and gas transport properties, *Journal of Applied Polymer Science*, article in press.
- 10 Mwangi, F. M. and Kanny, K. (2011). Development of Granular-medium-based impact energy management system, *International Journal of Crashworthiness*, article in press.
- 11 Olofintoye, O. and Adeyemo J. A. (2011). The role of global warming in the reservoir storage drop at Kainji Dam in Nigeria, *International Journal of Physical Sciences*, vol. 6(19).
- 12 Odinga. C. A., Otieno, F. A. O. and Adeyemo, J. A. (2011). Investigating the effectiveness of aquatic plants (*Echinocloa L* and *Cyperus L*) in removing nutrients from wastewater: the case of Chemelil constructed wetland- Kenya, *International Journal of Physical Sciences*, Vol. 6(16).
- 13 Petkov, D., Alter, S., Petkova, O. and Andrew, T. (2011). On the Suitability of Soft Systems Methodology and the Work Systems Method in Some Software Project Contexts, accepted for publication in *International journal of Information Technologies and the Systems Approach*, ISSN: 1935-570X.
- 14 Petkov, D., Alter, S., Wing, J., Singh, A., Petkova, O., Andrew, T. and Sewchurran, K., (2012), "Project Contexts and the Possibilities for Mixing Software Development and Systems Approaches", in *Research Methodologies in Systems/Software Engineering and Information Systems: Philosophies, Methods and Innovations*, Mora, M., Gelman, O., Steenkamp, A., and Raisinghani, M., (eds.), IGI Publishing, Hershey, PA. ISBN 978-1-4666-0179-6.
- 15 Petkov, D., Petkova, O., Sewchurran, K., Andrew, T. and Misra, R. (2011). "The Work Systems method as an approach for Teaching and Researching Information Systems", in *Information Systems Theory: Explaining and Predicting our Digital Society*, vol. 2. Dwivedi, Y. K., Wade, M. R. and Schneberger, S. L. (eds.), Springer, New York, 413-421, ISBN 978-1-4419-9706-7.
- 16 Rathilal, S., Carsky, M., Heyberger, A. and Rouskova, M. (2011). Correlations for the prediction of NTU and mass transfer coefficient for a VPE., *South African Journal of Chemical Engineering*, vol. 16(1).
- 17 Saroop, S. and Allopi, D. (2011). The need to implement green technology in municipal infrastructure projects, *Civil Engineering*, The South African Institution of Civil Engineering, vol. 19(9), 43-45, ISSN 1021-2000.
- 18 Tabakov, P. Y. (2011). Big Bang – Big Crunch lay-up optimization in design of thick anisotropic pressure vessels based on an extract elasticity solution, *Scientific Journal: Bulletin of St Petersburg State University of Engineering and Economics*, vol. 51(8).

Technical Reports

The following technical reports were produced by Professor V L Pillay.

- (i) WRC K8/885: Final Report - Evaluation of Woven Fabric Microfilters (WFMF) in Immersed Membrane Bioreactors (IMBRs).
- (ii) Umgeni Water: Technical Progress Reports – Development of the Remote Rural Water Treatment System.

Highlights

The Indlebe Radio Telescope (IRT) project, situated in the Department of Electronic Engineering and initiated in 2006, has now expanded to four separate radio telescope projects. Data recorded on the IRT on a daily basis is being used for a research project by Prof Charles McGruder at the Western Kentucky University in the USA. He is performing an astronomy experiment to better understand and predict the celestial pole offset and the variable ionospheric refraction. The MITRA telescope is an international project between the Department of Physics at the University of Mauritius and the Department of Electronic Engineering at DUT. The aim is to build identical telescope arrays at each location and perform very long baseline interferometry (VLBI) on a 2400 km baseline. This project is fully funded by the DST and is supported by the Minister of Science and Technology, Naledi Pandor and has been discussed at Ministerial level in Mauritius. For the DUT station, funding of R500 000 has been secured from the Department of Science and Technology for the first phase of the project which is scheduled for completion at the end of June 2013. Other African partners will be joining this project. Stuart MacPherson and Gary van Vuuren from the Department of Electronic Engineering are the project leaders.

During the latter part of 2011 Prof Pavel Tabakov, from the Department of Mechanical Engineering, was a visiting scholar in the Department of Information Technology of the Serikbayev East Kazakhstan State Technical University in the town of Ust-Kamenogorsk, Republic of Kazakhstan. The main purpose of the visit was to lecture graduate

courses on “Artificial Intelligence” and “Systems Analysis” as well as consult with PhD students. In addition, Prof Tabakov was appointed as a co-supervisor/research consultant for two PhD students. The thesis titles are: “Development of information models of research and academic university resources and the procedure of their expertise” and “Information system for multi-criterion assessment of uncertainty and investment risk”.

The Durban University of Technology and the Indian Institute of Technology in Chennai are collaborating on a space science programme to develop aerospace grade material using nano-technology. The programme is jointly funded by the National Research Foundation in South Africa and the Department of Science and Technology in India over a period of three years. Professor Mervyn Kanny from the Department of Mechanical Engineering is the project leader at DUT

STAKEHOLDER/EXTERNAL ENGAGEMENT

In keeping with our vision, staff in FEBE is encouraged to engage with the relevant agents in society. These agents range across professional bodies, learned societies, government agencies, rural communities, and business or industry. The activities are numerous and therefore only a selected list of activities is provided below.

- Yashaen Luckan (Department of Architecture) serves on the SACAP Validation Board and also evaluates new architectural and related qualifications for the CHE.
- Prof D Allopi, Salma Vahed and Yunus Vawda (Civil Engineering and Survey, Durban), Tom Mckune (Civil Engineering, PMB), and Andrew Naicker (Industrial Engineering) are involved in ECSA accreditation visits to various universities.
- Greg Parrott (Civil Engineering and Survey, Durban) serves on the committees of the South African Institute of Steel Construction (SAISC) and the Concrete Society of Southern Africa (CSSA).
- Terry Hunter (Civil Engineering and Survey, Durban) serves on the South African Council for Professional and Technical Surveyors (PLATO) vetting committee.

- Tom McKune (Civil Engineering, Pietermaritzburg) has been appointed as the secretariat for the World Federation of Engineering Organisations (WFEO) Committee on Engineering Capacity Building (CECB) which will be hosted by ECSA for the next four years.
- Siva Reddy and Dr Peter Utting (Construction Management and Quantity Surveying) serve on the National Council of the Chartered Institute of Building (Africa).
- Ranil Singh (Industrial Engineering) is a council member of the SAIEE.
- Dr Maggie Chetty and Suresh Ramsuroop (Chemical Engineering) are members of the SAChE KZN council.
- Suresh Ramsuroop (Chemical Engineering) continues to play a prominent role in the Engineering Council of South Africa's (ECSA), Engineering Standard Generating Body (ESGB) and accreditation panels.
- Professor Theo Andrew serves on the KZN Council of the South African Institute of Electrical Engineers (SAIEE) and is a founding board member of the South African Society for Engineering Education (SASEE). He is also a member of the Global Engineering Deans Council and has been appointed to the HEQC with effect from 2012.
- Greg Parrott and Tom McKune presents CPD courses around the country to professional engineers in industry on behalf of the South African Institute of Civil Engineering (SAICE).
- Andrew Naicker and Cor Lourens (Industrial Engineering) served as adjudicators for the Productivity SA - NPI Productivity Regional Awards.
- The Department of Power Engineering together with the TIP ambit has secured a R10 million grant over 2012/13 to develop and install 6 hybrid renewable energy systems into deep rural areas of KZN.
- The Technology Station in Moulded and Reinforced Plastics in the Department of Mechanical Engineering continues to provide cutting edge technological solutions to industry partners and SMEs. The

Station at the DUT engaged in 93 projects with a total monetary worth of R1 112 795, of which 73 were short term and have thus been completed. The remainder is ongoing. Ninety one of these projects were/are carried out for SMEs and some large companies whilst two were internal (manufacturing components for the major project). In total, 29 SMEs, 16 large companies and eight DUT departments were assisted, in many cases more than once. The Department of Chemical Engineering initiated a project on "Implementation Strategies for POU Water Treatment Units in Rural Areas". The project will look at both the technical aspects and the social acceptability aspects of the water filtration system developed at DUT, and will take place in a rural village in the Eastern Cape. Partners in the project include MVULA Trust and TU-Delft and the main sponsor is SANTRUST.

- The Singakwenza Ndawonye Student Empowerment Scheme continues to provide a valuable vehicle to undertake community projects and to engage with the community immediately surrounding the Indumiso Campus and the Province at large – through this scheme 82 students have managed to secure and complete their WIL component thereby improving the programme throughput rate.
- The Department of Civil Engineering in Pietermaritzburg has been appointed by DUT to undertake the design and construction of a replacement bulk water supply system for the Indumiso Campus. The project will involve DUT students in carrying out the work, in partial fulfillment of their experiential learning requirements. The project will result in an estimated R 1,3 million saving to the University had the contract been awarded outside the University.
- Collin Loji (Power Engineering) held a workshop on first of August with teachers at the Yellowwood Park Primary School focused on "identifying difficulties and improving teaching and learning of Mathematics". He subsequently offered free tuition and advice at various times during 2011.

- A K Mahomed (Construction Management and Quantity Surveying) is the advisor to the Queensburgh Islamic Society on the construction of a mosque, religious classrooms and residential quarters.
- George Ramphal (Construction Management and Quantity Surveying) is involved with the documentation regarding the establishment of the Reservoir Hills Educare, assisted Cheshire Homes with their building projects on an ongoing basis and is a consultant to the Brahma Kumaris Centre on a voluntary basis.
- Pierre Bonnet (Power Engineering) continues to provide technical assistance and support to water pumping and bio-gas projects through Aqualima.
- The Department of Town and Regional Planning actively participates in MILE, the partnership between DUT, UKZN, MUT and the eThekweni Municipality and hosted the Built Environment Seminar on Sustainability on 22 September 2011.
- The Department also continues to participate in the professional bodies of the South African Planning Institute (SAPI) and Theresa Gordon is elected as the educational representative on the regional branch and Gill Lincoln is elected onto the National SAPI Conference Steering Committee.
- Alan Hansen (Town and Regional Planning) assisted the DUT Environmental Committee (DEC) by preparing the draft constitution, Vision, Aims, Goals, Policy, Charter, objectives/functions, strategy, plan of action for the establishment thereof, proposed implementation process, proposed environmental infrastructure, DEC Membership and review of best practice both internationally and in South Africa. He also facilitated the establishment and Launch of the Concrete Flower Organisation (Student Environmental Society).
- During 2011, the Chemical Engineering Department continued to participate in the international chemical engineering education forums. Through active participation in the European Union Chemepass Project, the Department has been included in the new Thematic Network project entitled: EUROPEAN CHEMISTRY AND CHEMICAL ENGINEERING NETWORK (EC2E2N). The network, funded by the European Commission, is established to facilitate the transition of chemistry and chemical engineering qualifications to the new higher education framework adopted in Europe. Whilst the primary objective of the project is to benefit higher education in Europe, there are several benefits and opportunities that arise from DUT's participation in the project. Suresh Ramsuroop has also been elected to serve on the Working Party of Education (WPE) of the European Federation of Chemical Engineering (EFCE).
- The Department of Chemical Engineering has continued to be actively involved in environmental and sustainability projects in the Durban South Basin. Suresh Ramsuroop currently serves as the technical consultant to the South Durban Community Environment Alliance (SDCEA). In addition to the various community training and empowerment workshops he conducted in Durban South communities, he provides the technical expertise on the Environment Impact Assessment Studies in the chemical and allied industries.

Professor Theo Andrew

Executive Dean: Faculty of Engineering and the Built Environment

February 2012



FACULTY OF
HEALTH
SCIENCES



FACULTY REPORT

FACULTY OF HEALTH SCIENCES



Professor Threethambal Puckree: Executive Dean: Health Sciences

INTRODUCTION

The Faculty of Health Sciences offers programmes of learning in several scarce skills disciplines. The cohesion of departments within the Faculty allow for a supportive environment for both students and staff. Health Sciences graduates are equipped with the necessary skills and attributes to enter the workplace as competent practitioners.

HEADCOUNT

Undergraduate headcounts increased by almost 3% from 2010 with 32% being male. The postgraduate count (6% of total students) remained stagnant, with 36% male. The male: female ratios showed no significant change from the 2010 reports. The postgraduate head counts will improve significantly with an increase in postgraduate supervision capacity and credentialing of staff.

Headcount by race showed an increased enrolment of African students by 1% to 63% in undergraduate programmes and a 3% increase to 19% in postgraduate courses. Almost 50% of the postgraduate students are white with no change from the 2010 figures.

TEACHING AND LEARNING

Many departments are now using e-learning strategies with a clear success associated with this as noted in the Department of Radiography success rates. The department of Radiography subscribes mainly to e-learning.

Highlights of initiatives in the Faculty include the “Gimme Five” programme which supports learning through the use of games. Staff has enthusiastically incorporated this into their programmes.

The Faculty continues to run extended programmes to allow access into higher level programs. Although statistics to evaluate the success of this is not available, anecdotal evidence suggests that many students from extended programs have been successful and continued on to Masters Degree programmes.

The Faculty was honored when Sherlien Prithepaul was awarded the National Excellence in Teaching Award.

PERFORMANCE

Success rates

Success rates have improved in most departments with an average increase of 4 % from the 2010 performance namely 84% to 88% in 2011 (range 1-8%). The best performing departments were Radiography (98%) followed by Dental Sciences (92%). Homeopathy was the worst performing with success rates declining from 71% in 2010 to 66% in 2011. The Faculty is strategising to improve these.

Graduation Rates

A drop in graduation rates by 3% for undergraduates and 4% for postgraduates from the previous year is of concern to the Faculty. However, current success rates will be reflected in improved graduation

rates in the future. Various strategies have been implemented and planned to improve success, graduation and throughput rates. For undergraduates, structured developmental support, mentoring and access to computer laboratories have been implemented. The postgraduate graduation rates will be improved through streamlining postgraduate processes, tracking students, improving supervision capacity, staff credentialing and efforts made by the TIP Directorate.

Cohort Throughput

Cohort throughput in minimum time hovers at about 39-40%.

Strategies to improve success rates

Several strategies to improve success rates, and throughput rates have been discussed and being implemented. Some of these are dependent on institutional support and the need to secure external funding. In the meantime, a structured academic development plan is in process. Many departments have mentoring programs. Efforts are being made to secure external funding to support this initiative.

COMMUNITY ENGAGEMENT

Staff and students are actively involved in several community engagement projects. A few of these will be mentioned here. Staff from the Department of Community Health Studies is part of a collaborative project between the University of KwaZulu-Natal, Lever Brothers and eThekweni Municipality. Somatology staff and students assisted at the Comrades Marathon and at several Wellness days outside DUT. Homeopathy runs a clinic in collaboration with LifeLine at the Warwick Junction (Ukubanesibindi), and a community clinic at Redhill. The Indumiso Nursing department has initiated several community based projects in the local community which has been received with appreciation.

STAFF PROFILE

The Faculty is supported by 133 full time staff, 70% of which is female, and 42% African. 37 percent of staff hold Masters degrees and five percent have Doctoral degrees. Efforts are being made to support credentialing of staff. Almost all staff with Masters or Doctoral degrees participate in supervision of postgraduate students either as co supervisors or supervisors.

Staff have made significant progress in publishing their work in peer reviewed and other journals. A total of 25 peer reviewed publications in accredited journals, 10 publications in non accredited journals, two chapters in books, one book, 40 conference presentations and one patent made up the research output for 2011.

Several staff members have secured external funding to support their research.

CONCLUSION

The Faculty continues to review its strategic objectives based on performance data. While the student and staff profiles in terms of race and gender are on track, staff profiles require more effort in terms of credentialing and research output. Efforts are being made to improve student participation in management structures. The dedication of academic and support staff as well the efforts of students are reflected in the performance of the Faculty.

Professor T. Puckree

Executive Dean: Faculty of Health Sciences

15 February 2012





FACULTY OF
MANAGEMENT
SCIENCES



FACULTY REPORT

FACULTY OF MANAGEMENT SCIENCES



Dr Rishi Balkaran – Executive Dean: Faculty of Management Sciences (Acting)

VISION AND MISSION

The Faculty of Management Sciences strives to be the Faculty of choice for management education, leadership and technology advancement.

The Faculty sees the accomplishment of this through:

- Providing dynamic lifelong education and learning opportunities by adopting best practices;
- Promoting excellence in technology transfer and innovation;
- Promoting excellence in relevant, applied and interdisciplinary research;
- Creating sustainable partnerships with key stakeholders; and
- Nurturing respect for human dignity, ethical values and principles; professionalism and accountability.

A STUDENT-CENTRED PARADIGM

In line with the institution's commitment towards student centredness, the Faculty has placed emphasis on its approach towards service delivery. The following areas were focused on:

Registration of Students: A “one stop shop approach” – the Faculty has introduced a separate venue for registration of students. Attempts were made to ensure that all services from support to academic were present at the same venue. This together with the streamlining of the administrative systems made the registration process more tolerable for students and parents. Other initiatives in respect of web registration, student accommodation and finance, recruitment and marketing are work in progress.

Policy Review: The Faculty Board has reviewed several of the Institutions policies and the relevant changes were recommended to Senate. These policies included the Admission policy for International Students, The Vice-Chancellor's Service Excellence Awards, Research Awards, Policy for Post Doctoral students, Assessment Policy and the Community Engagement Policy. The Faculty Board will review other policies within the institution to ensure a student-centred approach.

Curriculum Renewal: The thrust of our efforts came from the significant amount of work and commitment placed on curriculum renewal. This process jump-started in 2011 with the formation of a Faculty Committee of Curriculum Experts. This was a representation of Curriculum Champions from all the programmes of the Faculty. Several departmental, Faculty, institutional and national workshops were held with a quest for developing cutting edge qualifications that meet local, national and global needs. Departments have worked hard in producing ideas around new programmes at under graduate and post graduate levels. This involved robust discussions with industry stakeholders, other educational sectors, including Government. Several fresh and exciting programmes have been planned from the Para-legal sector to the Business aligned environment.

General Education: The essence of student centredness may be seen in the institution's and Faculty's plan to include general education as a significant component of the curriculum. The Faculty launched its first General Education Workshop in November 2011 and plans are afoot

The challenges the Faculty faces in respect of teaching and learning continue to stem from areas like large class sizes, high workloads, poor teaching and learning infrastructure and limited staff capacity. Staff development initiatives are afoot and means to address “over-teaching” are being implemented.

STUDENT PERFORMANCE

The success rate for the Faculty averages at 75% in 2011 which increased by 3% from 2010. Whilst it may be noted that this figure is below the DHET benchmark of 80%, the Faculty acknowledges its challenges and strives towards better solutions. The success rates per department may be viewed in Figure 1.

SUCCESS RATES 2011	
Applied Law	79%
Business Studies Unit	64%
Hospitality and Tourism	75%
Marketing, Retail & Public Relations	80%
Public Management & Economics	74%
Applied Management	72%
Entrepreneurial Studies & Management	77%
Human Resources & Quality Management	74%
Operations & Quality Management	75%
Regional Governance & Development	73%

Figure 1 Success Rates 2011

STUDENT GRADUATION RATE

Figure 2 highlights the growth pattern of the graduation rates of the Faculty for the periods 2008-2010 which indicates a growth over the last measurable period. The increase in graduation rates depends on a number of critical factors. Some are: Pass rates of individual subjects, drop-out rates, students not graduating as a result of outstanding fees and enrolment rates.

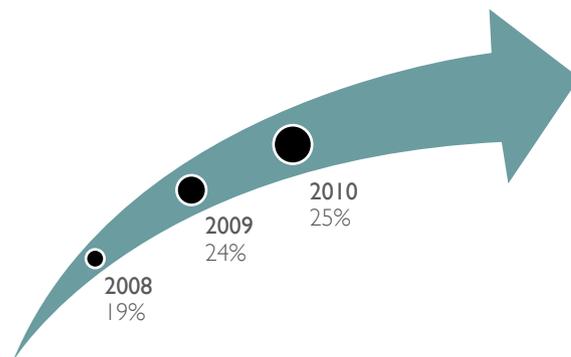


Figure 2 Graduation Growth

STUDENT THROUGHPUT RATE

The total cohort for first time (entering Diploma) students for 2008 was 1391 across the Faculty of Management Sciences. The total number of graduates in 2010 in respect of the 2008 cohort of students was 419. The throughput rate for the Faculty averaged at 30%. Our fight is against the drop-out rate of students and the Faculty will develop plans to reduce this factor wherever possible.

EXAMINATION BOARD REVIEW OF PASS RATES 2011

The examination board resolved that all pass rates that were less than 75% were to be considered as low.

The Board identified a total of 40 subjects spread across the Faculty that fell under this category. Strategies to improve the performance of these subjects will be discussed between the subject Lecturer, the Head of Department, Dean and the Academic Development Officer.

The following subjects fell below the threshold of 50% and the subject Lecturer would be required to present the possible reasons for this at Faculty Board and remedies to improve the situation: Research Methodology 9 Applied Management Riverside, Industrial Relations (Public Management) and Wildlife Management (Eco-Tourism).

The examination process, which includes setting of examination papers, the submission of marks, auditing of scripts and the publication of marks were discussed as several anomalies surfaced during the 2011 examination period. Recommendations were made to the relevant sections/ departments and these efforts were intended to improve the level of efficiency of the examinations process. The Faculty is currently working with strategies to aid in the supplementary examination process in respect of its timing and efficient communication with students.

STAFF PROFILE

The total staff within the Faculty (permanent and contract) comprised 122 of which 85% are Academics. Female staff (Academics) comprised 51% in 2011. The racial and gender breakdown of may be viewed in Table 1.

Gender	African	Coloured	Indian	White
Female	15%	1%	22%	13%
Male	15%	1%	22%	11%

Table 1: Racial and Gender Composition of Academic Staff only 2011

Coloured staff members are under represented by a significant margin. The Faculty does analyse the equity profile of departments before employment of staff however the pressure in respect of the need for suitably qualified and experienced staff often overrides any other needs.

Academic staff with post graduate qualifications comprised 67% of the total academic staff. This has grown by 13% from the previous year. Seventeen percent of the total academic staff have doctorates which increased by two percent from 2010. Staff members without a masters degree amounts to 33% of the total academic staff of the Faculty. These staff members with the exception of four academics have registered for their Masters qualification. Attempts have been made to ensure that all staff achieve their masters qualification. The Dean will be interviewing every staff member in this regard in 2012.

RESEARCH

The Research activity within the Faculty has accelerated at great pace. The 2011 research outputs accredited and non- accredited and articles in peer reviewed journals for the Faculty has almost doubled from the previous year.

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- Naidoo, Paulene. Department of Public Relations.
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- Mchunu, P.J., Department of Regional Governance & Development (Ecotourism), Masters in Environment and Development (Protected Area Management). UKZN, Supervisor: Dr Mark Dent

Successful MTech and D- Tech Supervision

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Dr R Balkaran

Acting Executive Dean: Faculty of Management Sciences



The newly renovated City Campus



REPORT OF THE CHIEF FINANCIAL OFFICER

REPORT OF THE CHIEF FINANCIAL OFFICER (CFO) AND THE CHAIRPERSON OF THE FINANCIAL COMMITTEE

Dheo A Kumar – Chief Financial Officer



In keeping with Durban University of Technology's sound financial management and in compliance with statutory requirements, this finance report provides an overview of the University's budget process, resource allocation according to strategic objectives, control mechanisms in place to maintain financial discipline, as well as an overview of the financial results for 2011.

Despite continued pressure on its financial resources, the University had a good financial year. The University realised a surplus from operations and this can be attributed to cost containment and fiscal discipline.

OVERVIEW OF THE BUDGET PROCESS

The budgets are prepared generally on a zero basis and each operating division give input into the budget preparation. The process followed is set out below.

- The income for the University is projected;
- Funds are allocated for strategic priorities;
- The staffing costs for all posts within the University are calculated;
- The Institutional costs i.e. costs not directly associated with departments, e.g. electricity, rates, insurance, advertising, audit fees, etc. is calculated;
- An inflationary adjustment is awarded to departments for their operating budgets, departments in turn are required to align their budgets in terms of their strategic plans;

- Meetings are held with the Vice-Chancellor, Deputy Vice-Chancellor: Academic and members of Senior Executive Team (SET);
- The SRC is consulted on the tuition and the residence fee adjustments;
- The final draft budget is discussed with SET and recommended to the Finance Committee;
- The Finance Committee in turn interrogates the Budget and recommends it to the University's Council for approval.

PRINCIPLES THAT UNDERPIN THE BUDGET PROCESS

- The Ministerial Statement on funding;
- Ensuring that the budgets are aligned to the strategic plans of the University.
- Balanced budget;
- Financial sustainability.

ALLOCATION OF RESOURCES

Academic and Research

Fifty six percent (56%) of the University's total budget was allocated to the Research and Academic sector. These two sectors however, accounted for 76% of the University's staff costs.

Institutional Costs

This includes amongst other costs, electricity, rates, insurance, audit fees, bank charges, internet facilities and costs of implementing strategic imperatives identified by the Vice Chancellor.

The Institutional cost allocation accounted for 25% of the University's total budget.

Deputy Vice Chancellor (DVC) Institutional Support Sector

The cost allocation in this area accounted for 13% of the University's total budget. This sector accounts for 15% of the University's staff costs.

Vice Chancellor (VC) Sector

This sector's cost allocation accounted for 6% of the University's total budget and for 9% of the University staff costs.

BUDGETARY CONTROL

Financial resources are allocated to the respective management portfolios and distributed to the respective cost centres within their ambits.

The University adopts a zero tolerance on unauthorised expenditure and strict fiscal discipline is exercised. Expenditure is authorised in terms of the Council approved delegation of authority.

COMMENTS ON THE FINANCIAL RESULTS

The consolidated financial statements of the Durban University of Technology (DUT) includes the results of the University, Durban University of Technology (Pty) Ltd, Melrose Properties (Pty) Ltd, Maxelect Investments (Pty) Ltd, DUT Guesthouse (Pty) Ltd and the Business Studies Unit, a division of the Durban University of Technology.

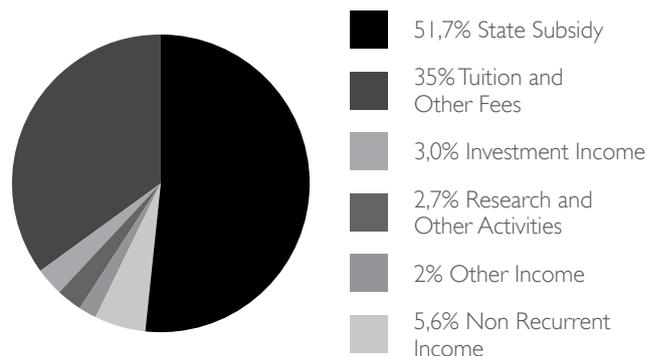
The Audit Opinion

The auditors have issued an unqualified opinion on the consolidated financial statements.

Income vs Expenditure

The net surplus from operations was R51,640 million and the surplus for the year before transfers was R125,620 million.

Income



The main sources of Income was State Subsidy (51,7%) and tuition fee (35%), which makes up 87% of the University's revenue.

State Subsidy Income

Subsidy Income increased from R500 million to R565 million – an increase of 12,94%. The subsidy income is analysed as follows:

Teaching inputs grant

The University's actual teaching input was 37 947 FTE's but we were funded only for 35 558 FTE's.

Teaching output grant

It is important to recognise that the University exceeded the normed output by 983 outputs which converts to R17.9 million.

Research output grant

The University's actual output was 102 against the normed output of 281.

The University received only R401 000 as Research Development Grant which was well short of expectation, and this impacted on our ability to develop research capacity.

Tuition and other fee income

Tuition fee and other fees income increased by 6,7% from R359 million to R383 million. It is important to note that the head count of students decreased by 2% from 25 183 (2010) to 24 660 in 2011. Tuition and other fees were adjusted by 6% for the year under review.

Cash Flow and Liquidity

The University's Cash flow continues to be positive. Cash and cash equivalents as at year end increased from R413,152 million to R514,179 million. The main reason for the increase in cash is as a result of the University realising a surplus of income over expenditure.

The current ratio is 3,5:1 which exceeds the accepted norm of 2:1.

Investments

Non-current investments

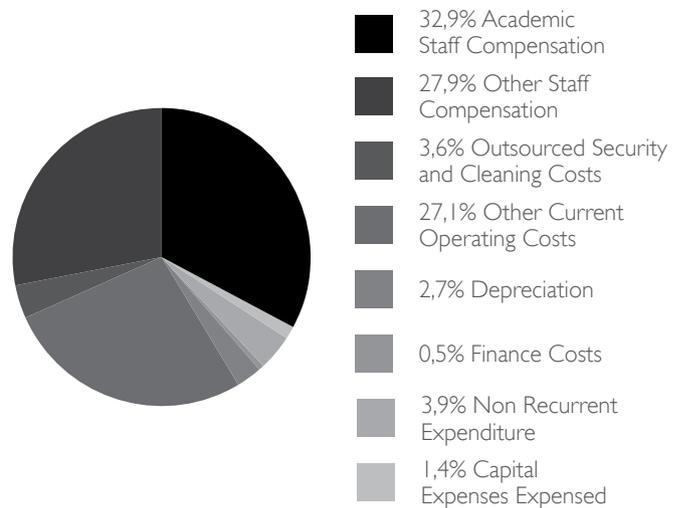
The University's Investment Portfolio increased by R17,607 million from R219,494 million to R237,101 million. The main reason for the growth is due to the increase in the market value of the portfolio.

The cash component of this portfolio (R34 326) is reflected as cash and cash equivalents, in the Statement of Financial Position.

Investment Income

Investment income includes interest received from short term deposits, call accounts, non-recurrent income and interest and dividends from non-current investments.

Expenditure



Academic and Other Staff Compensation

The above costs increased by R15,559 million from R573,037 million to R588,596 million, this includes a net increase in the provision for Post Retirement Benefits and other staff compensation of R18,5 million (2010 - R43,6 million) and an across the board salary adjustment of 6,5%.

Ratio of Staff costs to Re-current income

The financial information for the following calculation is derived from the Income Statement, "Council controlled unrestricted funds" column and Recurrent Income is defined as State Subsidy, Tuition and other fee Income:

The ratio for the year under review was 66% (2010 – 70,5%).

In striving towards reaching the DHET's benchmark of 58-62%, Executive Management (EM) has the following interventions in place:

- The University has not created any new posts for the 2012 year and only a few academic posts were created in the 2011 academic year.

- All vacant administrative posts are reviewed by EM before they are filled.

EM continue to look for ways to reduce the ratio, including increasing the income, which means increasing student numbers. To meet this challenge, proposals have been made to DHET for grants for substantial infra-structural projects at the Pietermaritzburg and Durban campuses.

POST RETIREMENT BENEFITS

Pension

DUT employees on the NTRF pension fund are entitled to a defined contribution pension benefit. However, members who transferred from AIPF (Government fund) to NTRF in 1994 are entitled to a minimum defined benefit guaranteed upon retirement at the normal retirement age (60 years).

The University's obligation in terms of the above as at 31 December 2011 was R56,6 million.

This is a closed scheme.

Medical Aid

Post Retirement Medical Aid (PRMA) Scheme for DUT pays eligible members who are former Technikon Natal staff who entered the medical aid scheme before 1 January 2000. No benefit is payable upon withdrawal.

This Scheme currently has 203 employed members and 161 retired members.

In terms of the Actuarial Valuation, the post retirement benefit obligation at 31 December 2011 was R113 million (2010: R94 million).

This is a closed scheme.

Accumulative Leave Pay

The Actuarial Valuation of accumulative leave at 31 December 2011 was R34,2 million (2010: R44,9 million). The University continues to make inroads into reducing this liability. This is a closed scheme.

The above liabilities have been provided for in full in the Annual Financial Statements.

The major contribution to the total liabilities in the Statement of Financial Position is post-retirement benefit obligations and employee benefit liabilities which together amount to R222 million or 53.9%.

Other Operating Costs

Other recurrent operating expenditure decreased from R268,525 million (2010) to R262,269 million (2011). This was due to fiscal discipline and savings in line items such as electricity, water, rates and taxes, travel and conferences, printing and stationery, advertising and marketing and instructional materials.

Outsourced costs

Security and cleaning increased from R32,081 million (2010) to R35,220 million (2011), resulting in an increase of 9.78%.

Receivables and Pre-payments

A cumulative provision of R167 million (2010: R160 million) for tuition and residence fees student debtors has been provided for at 31 December 2011. Student debt after the above provision is R32 million. The large movement in receivables and pre-payments in the Statement of Financial Position is due to NSFAS owing the University R71 million, which was received subsequent to year end.

Student Loans

The University has advanced loans to the value of R47,678 million over the years to students (R9 million in 2011 for the BTech students).

These loans are administered by NSFAS. The terms and conditions of these loans are identical to the loans granted by NSFAS, except that these loans do not attract interest and have no bursary element if a student successfully completes his or her studies.

During the period under review, the University advanced loans to the BTech students because NSFAS stopped funding BTech students. Such loans, however, are unsustainable.

The value of student loans after fair value adjustment and provision for impairment is R22,428 million.

Business Studies Unit

The Business Studies Unit realised a profit of R2,6 million. Considering the challenges that this unit has had to endure over the last financial year, it has performed exceptionally well under the circumstances.

Student Housing

The Student Housing Department realised a surplus of R4,9 million (R8,2 million deficit in 2010). The main reason for this turnaround is that the provision for bad debts decreased by R5,7 million. There was also significant savings in transport costs, cleaning services, rates and staff costs.

CONCLUSION

Although the financial results for 2011 are pleasing, increasing our third-stream income, donor funding and improving research outputs must remain our strategic priorities. The unqualified Audit Report bears testimony to the fact that the financial affairs of the University are well managed.



D. A. Kumar
Chief Finance Officer



R. Harichunder
Chairperson of Finance Committee



Staff member
in the newly
renovated staff
cafeteria at ML
Sultan Campus



CONSOLIDATED ANNUAL FINANCIAL STATEMENTS

NATURE OF BUSINESS Public higher education institution

AUDITORS Ernst & Young Inc.
Nexia SAB&T

BANKERS Standard Bank of South Africa Limited
First National Bank of South Africa Limited

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CONSOLIDATED ANNUAL FINANCIAL STATEMENTS

COUNCIL'S STATEMENT OF RESPONSIBILITY FOR THE CONSOLIDATED ANNUAL FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2011

Council is responsible for the preparation, integrity, and fair presentation of the consolidated annual financial statements of the Durban University of Technology. The consolidated financial statements presented on pages 129 to 169 have been prepared in accordance with South African Statements of Generally Accepted Accounting Practice (SA GAAP), as prescribed by the Minister of Higher Education and Training in the regulations in terms of the Higher Education Act, 1997 (Act No. 101 of 1997), as amended, and include amounts based on the judgments and estimates made by management.

Council considers that in preparing the consolidated financial statements they have used the most appropriate accounting policies, consistently applied and supported by reasonable and prudent judgements and estimates, and that all Statements of GAAP that they consider to be applicable have been followed. Council is satisfied that the information contained in the financial statements fairly presents the results of operations for the year and the financial position of the University at year-end.

Council has the responsibility for ensuring that accounting records are kept. The accounting records should disclose with reasonable accuracy the financial position of the University to enable the Council to ensure that the financial statements comply with relevant legislation.

Durban University of Technology and its subsidiaries operated in a well-established control environment, which is well documented and regularly reviewed. This incorporates risk management and internal control procedures, which are designed to provide reasonable, but not

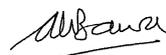
absolute, assurance that the assets are safeguarded and the risks facing the business are being controlled.

The 'going-concern' basis has been adopted in preparing the consolidated financial statements. Council has no reason to believe that the University will not be a going concern in the foreseeable future, based on the forecasts and available cash resources. These financial statements support the viability of the University.

The University's external auditors, Ernst & Young Inc. and Nexia SAB&T audited the consolidated financial statements, and their report is presented on pages 127 to 128. Council believes that all representations made to the independent auditors during their audit were valid and appropriate.

APPROVAL OF THE CONSOLIDATED ANNUAL FINANCIAL STATEMENTS

The consolidated annual financial statements set out on pages 129 to 170 were approved by the Council on June 9, 2012 and are signed on its behalf by:



Prof Ahmed C. Bawa
Vice-Chancellor and Principal



Dr Jairam Reddy
Chairperson of Council



D. A. Kumar
Chief Financial Officer

CONSOLIDATED ANNUAL FINANCIAL STATEMENTS

INDEPENDENT AUDITORS' REPORT TO THE COUNCIL OF THE DURBAN UNIVERSITY OF TECHNOLOGY

REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS

We have audited the consolidated financial statements of the Durban University of Technology and its subsidiaries, which comprise the consolidated statement of financial position as at December 31, 2011, and the consolidated income statement, the consolidated statement of comprehensive income, the consolidated statement of changes in funds and the consolidated statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information, as set out on pages 129 to 170.

Council's responsibility for the consolidated financial statements

The University's Council is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with South African Statements of Generally Accepted Accounting Practice and in the manner required by the Minister of Higher Education and Training in terms of Section 41 of the Higher Education Act, 1997 (Act No. 101 of 1997), as amended, and for such internal control as the Council determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in

accordance with the Public Audit Act of South Africa, the General Notice issued in terms thereof and International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the University and its subsidiaries as at December 31, 2011, and their financial performance and cash flows for the year then ended in accordance with South African Statements of Generally Accepted Accounting Practice and in the manner required by the Minister of Higher Education and Training in terms of Section 41 of the Higher Education Act, 1997 (Act No. 101 of 1997), as amended.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

In accordance with the Public Audit Act of South Africa and the General notice issued in terms thereof, we report the following findings relevant to performance against predetermined objectives, compliance with laws and regulations and internal control, but not for the purpose of expressing an opinion.

Predetermined objectives

We performed procedures to obtain evidence about the reliability of the information in the Report of the Vice Chancellor as set out on pages 18 to 23 of the annual report. There were no material findings on the Report of the Vice Chancellor concerning the reliability of the information.

Compliance with laws and regulations

We performed procedures to obtain evidence that the entity has complied with applicable laws and regulations regarding financial

matters, financial management and other related matters. We did not identify any instances of material non-compliance with specific matters in key applicable laws and regulations as set out in the General notice issued in terms of the Public Audit Act of South Africa.

Internal control

We considered internal control relevant to our audit of the financial statements, Report of the Vice Chancellor and compliance with laws and regulations. We did not identify any deficiencies in internal control that we considered sufficiently significant for inclusion in this report.

ERNST & YOUNG INC.

Ernst & Young Inc

Director - Kreesen Naidu

Registered Auditor

Chartered Accountant (SA)

June 2012

NEXIA SAB&T

Nexia SAB&T

Director - Muhammed Fazel Sulaman

Registered Auditor

Chartered Accountant (SA)

June 2012

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

AS AT DECEMBER 31, 2011

	Note	2011 R'000	2010 R'000
ASSETS			
NON-CURRENT ASSETS		724 827	696 103
Property, plant and equipment	2	490 064	466 201
Intangible assets	3	7 548	10 676
Investments	4	202 775	196 751
Deferred tax	13	537	1 141
Non-current receivables	6	23 903	21 334
CURRENT ASSETS		628 760	495 001
Inventories	7	1 588	1 326
Receivables and prepayments	8	112 993	80 523
Cash and cash equivalents	9	514 179	413 152
TOTAL ASSETS		1 353 587	1 191 104

ACCUMULATED FUNDS AND LIABILITIES			
ACCUMULATED FUNDS		940 758	815 453
Property, plant and equipment funds		593 382	557 378
Restricted use funds		122 322	133 072
Unrestricted use funds		160 921	59 854
Fair value reserve		64 133	65 149
NON-CURRENT LIABILITIES		233 394	243 446
Interest bearing borrowings	10	43 383	50 171
Retirement benefit obligations	11	169 745	160 861
Employee benefit liabilities	12	20 266	32 414
CURRENT LIABILITIES		179 435	132 205
Trade and other payables	14	128 308	96 767
Provisions	15	32 320	26 523
Current portion of interest bearing borrowings	10	7 733	7 841
Current portion of non-interest bearing borrowings	10	11 074	1 074
TOTAL EQUITY AND LIABILITIES		1 353 587	1 191 104

CONSOLIDATED INCOME STATEMENT

FOR THE YEAR ENDED DECEMBER 31, 2011

	NOTE	COUNCIL CONTROLLED UNRESTRICTED	SPECIFICALLY FUNDED ACTIVITIES RESTRICTED		STUDENT AND STAFF ACCOMMODATION RESTRICTED		
RECURRENT ITEMS		R'000	R'000	SUB-TOTAL R'000	R'000	2011 R'000	2010 R'000
INCOME		930 952	28 201	959 153	73 403	1 032 556	951 175
State appropriations - subsidies and grants		565 326	-	565 326	-	565 326	500 553
Tuition fee and other income		309 682	-	309 682	73 072	382 754	359 441
Income from contracts:		1 719	28 201	29 920	-	29 920	36 358
- For research		11	27 347	27 358	-	27 358	31 560
- For other activities		1 708	854	2 562	-	2 562	4 798
Sales of goods and services		19 727	-	19 727	324	20 051	21 775
Private gifts and grants		1 418	-	1 418	-	1 418	2 676
SUB-TOTAL		897 872	28 201	926 073	73 396	999 469	920 803
Investment income	16.1	33 080	-	33 080	7	33 087	30 372
EXPENDITURE		834 391	28 247	862 638	68 408	931 046	917 010
Personnel	17	606 903	3 338	610 241	13 575	623 816	605 118
- Academic professional		318 303	-	318 303	-	318 303	309 264
- Other personnel		261 806	3 338	265 144	5 149	270 293	263 773
- Security and cleaning		26 794	-	26 794	8 426	35 220	32 081
Other current operating expenses	18	182 723	24 909	207 632	54 637	262 269	268 525
Depreciation and amortisation	2,3	26 363	-	26 363	196	26 559	23 227
SUB-TOTAL		815 989	28 247	844 236	68 408	912 644	896 870
Finance costs	20	4 831	-	4 831	-	4 831	4 999
Capital expenditure expensed		13 571	-	13 571	-	13 571	15 141
Surplus/(deficit) - Recurrent items		96 561	(46)	96 515	4 995	101 510	34 165

continue next page

	NOTE	COUNCIL CONTROLLED UNRESTRICTED	SPECIFICALLY FUNDED ACTIVITIES RESTRICTED		STUDENT AND STAFF ACCOMMODATION RESTRICTED		
		R'000	R'000	SUB-TOTAL R'000	R'000	2011 R'000	2010 R'000
NON-RECURRENT ITEMS							
INCOME		26 955	34 446	61 401	-	61 401	135 678
State grants		-	13 539	13 539	-	13 539	70 583
Private gifts and grants		-	5 173	5 173	-	5 173	35 412
Realised cumulative net fair value gains on the disposal of investments	16.2	9 527	-	9 572	-	9 527	1 511
Income from contracts		-	10 955	10 955	-	10 955	6 454
Investment income	16.1	-	4 774	4 774	-	4 774	3 109
Other income		17 428	5	17 433	-	17 433	18 609
EXPENDITURE		7 108	30 183	37 291	-	37 291	32 841
Personnel	17						
- Academic professional		-	7 624	7 624	-	7 624	5 047
- Administration		226	4 434	4 660	-	4 660	2 428
Other current operating expenses	18	4 776	18 125	22 901	-	22 901	19 789
Loss on disposal of property, plant & equipment		210	-	210	-	210	4095
Other losses net	19	1 896	-	1 896	-	1 896	1 482
Surplus/(deficit) – Non Recurrent items		19 847	4 263	24 110	-	24 110	102 837
NET SURPLUS FOR THE YEAR – BEFORE TRANSFERS AND TAXATION		116 408	4 217	120 625	4 995	125 620	137 002
Amounts received not expended : To funds		-	(27 970)	(27 970)	-	27 970	107 727
Amounts spent from prior year receipts : From funds		-	23 753	23 753	-	23 753	14 211
Taxation		(69)	-	(69)	(535)	(604)	1 316
NET SURPLUS FOR THE YEAR – AFTER TRANSFERS AND TAXATION		116 339	-	116 339	4 460	120 799	44 802
Less: Income allocated to departments		(17 637)	-	(17 637)	-	(17 637)	(16 593)
NET SURPLUS AFTER INCOME ALLOCATED TO DEPARTMENTS		98 702	-	98 702	4 460	103 162	28 209

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

FOR THE YEAR ENDED DECEMBER 31, 2011

	Note	2011 R'000	2010 R'000
OPERATING REVENUE		999 469	920 803
Less: Operating expenses		(947 829)	(924 134)
- Staff costs	17	(636 100)	(612 593)
- Other operating expenses	18	(285 170)	(288 314)
- Depreciation and amortisation	2,3	(26 559)	(23 227)
NET SURPLUS/ (DEFICIT) FROM OPERATIONS		51 640	(3 331)
Income from investments	16.1	37 861	33 481
Loss on disposal of property, plant and equipment		(210)	(4 095)
Other income		56 627	131 087
Finance costs	20	(4 831)	(4 999)
Other expenses		(15 467)	(15 141)
SURPLUS FOR THE YEAR BEFORE TRANSFERS		125 620	137 002
Amounts received not expended: To funds		(27 970)	(107 727)
Amounts spent from prior year receipts: From funds		23 753	14 211
Taxation – deferred tax	13	(604)	1 316
SURPLUS FOR THE YEAR AFTER TRANSFERS		120 799	44 802
Other comprehensive income		(1 016)	20 600
Fair value adjustment on available for sale investments		(1 016)	20 600
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		119 783	65 402

CONSOLIDATED STATEMENT OF CHANGES IN FUNDS

FOR THE YEAR ENDED DECEMBER 31, 2011

DESCRIPTION	Unrestricted accumulated fund R'000	Unrestricted general reserve fund R'000	Unrestricted endowment and similar funds R'000	SUB-TOTAL A R'000	Restricted residence fund R'000	Restricted specific project fund R'000	SUB - TOTAL B R'000	Fair value reserve R'000	Property, plant and equipment Funds R'000	GRAND - TOTAL R'000
BALANCE AT JANUARY 1, 2011	36 677	11 493	11 684	59 854	-	133 072	133 072	65 149	557 378	815 453
Transfers - credit	-	-	-	-	-	-	-	-	36 004	36 004
Other transfers, including Other comprehensive income	57	1 248	-	1 305	-	4 217	4 217	(1 016)	-	4 506
Net surplus for the year	116 339	-	-	116 339	4 460	-	4 460	-	-	120 799
Transfers out	(16 577)	-	-	(16 577)	(4 460)	(14 967)	(19 427)	-	-	(36 004)
BALANCE AT DECEMBER 31, 2011	136 496	12 741	11 684	160 921	-	122 322	122 322	64 133	593 382	940 758

FOR THE YEAR ENDED DECEMBER 31, 2010

DESCRIPTION	Unrestricted accumulated fund R'000	Unrestricted general reserve fund R'000	Unrestricted endowment and similar funds R'000	SUB-TOTAL A R'000	Restricted residence fund R'000	Restricted specific project fund R'000	SUB - TOTAL B R'000	Fair value reserve R'000	Property, plant and equipment Funds R'000	GRAND - TOTAL R'000
BALANCE AT JANUARY 1, 2010	18 581	14 823	11 684	45 088	-	81 521	81 521	44 549	488 687	659 845
Transfers - credit	-	-	-	-	-	-	-	-	68 691	68 691
Other transfers, including Other comprehensive income	20	-	-	20	-	93 516	93 516	20 600	-	114 136
Net surplus/ (deficit) for the year	53 065	-	-	53 065	(8 263)	-	(8 263)	-	-	44 802
Reclassification	-	(3 330)	-	3 330	-	-	-	-	-	(3 330)
Transfers out	(34 989)	-	-	(34 989)	8 263	(41 965)	(33 702)	-	-	(68 691)
BALANCE AT DECEMBER 31, 2010	36 677	11 493	11 684	59 854	-	133 072	133 072	65 149	557 378	815 453

CONSOLIDATED STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED DECEMBER 31, 2011

	Note	2011 R'000	2010 R'000
CASH FLOWS FROM OPERATING ACTIVITIES			
Cash generated from operations	25	106 623	44 001
Investment income	25	37 861	33 481
Finance costs	25	(4 831)	(4 999)
NET CASH INFLOWS FROM OPERATING ACTIVITIES		139 653	72 483
CASH FLOWS FROM INVESTING ACTIVITIES			
Purchase of property, plant and equipment		(48 857)	(77 707)
Purchase of non-current investments		(62 890)	(21 130)
Proceeds from realisation of property, plant and equipment		366	-
Proceeds from realisation of non-current investments		65 434	22 546
NET CASH OUTFLOW FROM INVESTING ACTIVITIES		(45 947)	(76 291)
CASH FLOWS FROM FINANCING ACTIVITIES			
Increase in borrowings		3 104	1 863
Increase in funds		4 217	93 516
NET CASH INFLOWS FROM FINANCING ACTIVITIES		7 321	95 379
INCREASE IN CASH AND CASH EQUIVALENTS		101 027	91 571
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR		413 152	321 581
CASH AND CASH EQUIVALENTS AT END OF YEAR	9	514 179	413 152

NOTES TO CONSOLIDATED ANNUAL FINANCIAL STATEMENTS

FOR THE YEAR ENDED DECEMBER 31, 2011

I ACCOUNTING POLICIES

I.1 UNIVERSITY INFORMATION

The consolidated financial statements of the University and its subsidiaries for the year ended December 31, 2011 were authorised for issue in accordance with a resolution of Council on June 9, 2012.

The principal activities of the University and its subsidiaries relate to teaching, research and the providing of residential accommodation to students.

I.2 BASIS OF PREPARATION

These consolidated financial statements have been prepared under the historical cost convention, except for certain financial instruments which are measured at fair value. The consolidated financial statements are presented in South African Rands (R), and all values are rounded to the nearest thousand (R'000) except where otherwise indicated.

These policies have been consistently applied to all the years presented, except where otherwise stated.

I.3 STATEMENT OF COMPLIANCE

The consolidated financial statements have been prepared in accordance with South African Statements of Generally Accepted Accounting Practice ("SA GAAP") and in the manner required by the Minister of Higher Education and Training in terms of Section 41 of the Higher Education Act, 1997 (Act No. 101 of 1997) as amended.

I.4 PRESENTATION OF CONSOLIDATED INCOME STATEMENT

In terms of SA GAAP and the Higher Education Act, 1997 (Act No. 101 of 1997), the income statement is required to include disclosure up to the line item "Net surplus/(deficit) for the year after transfers". The University has included the line items "Income allocated to departments" and "Net surplus after income allocated to departments" over and above the minimum requirements as it considers this to be improved disclosure.

I.5 SIGNIFICANT ACCOUNTING JUDGEMENTS, ESTIMATES AND ASSUMPTIONS

The preparation of the University's consolidated financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, at the reporting date. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods.

Judgements

In the process of applying the University's accounting policies, management has made the following judgements, which have the most significant effect on the amounts recognised in the financial statements:

Operating lease commitments - University as lessor

The University has entered into commercial property leases on its investment property portfolio. The University has determined, based on an evaluation of the terms and conditions of the arrangements, that it retains all the significant risks and rewards of ownership of these properties and accounts for the contracts as operating leases.

(Refer to I.10)

Investments

All investments are considered to be available-for-sale investments as the intention is to grow the value of the investment portfolios over a long-term horizon.

ESTIMATES AND ASSUMPTIONS

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are as follows:

Depreciation

At the end of each financial year, management reviews the assets within property, plant and equipment to assess whether the estimated useful lives and estimated residual values applied to each asset are appropriate.

Retirement benefit obligations

The University's future obligations in respect of its defined benefit pension plans and its post employment medical benefit plan are determined using actuarial valuations on the projected unit credit method. An actuarial valuation involves making various assumptions. These include the determination of the discount rate, future salary increases, mortality rates and future pension increases. Due to the complexity of the valuation, the underlying assumptions and its long-term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date. Details of these assumptions are provided in note 11.

Student fees receivable

At year-end management makes an estimate of the amount of total outstanding student fee debt that it expects to hand over to external debt collectors and the total subsequent receipts it expects to receive after year-end. In addition, management estimates the amounts that it expects to recover from outstanding balances handed over based upon the age profile of debts handed over and based on prior experience and trends. A provision for impairment is raised based on these estimates. A detailed breakdown of the student fee receivable is provided in note 8.

Student loans

In determining the fair value of student loans management has assumed:

- 1) There will be no repayment for the first three years of the loan period (being the period the student will be studying)
- 2) The repayment period of the loan is 10 years after the initial grace period (2010: 10 years)
- 3) A discount rate of 9% p.a. (2010: 9% p.a.)

The impairment provision is indirectly based on a formula determined by National Student Financial Aid Scheme ("NSFAS") which takes into account the experience of NSFAS in collecting student loans.

I.6 BASIS OF CONSOLIDATION

The consolidated financial statements comprise the financial statements of the University and its subsidiaries as at December 31, 2011. Subsidiaries are fully consolidated from the date of acquisition, being the date on which the University obtains control, and continues to be consolidated until the date that such control ceases.

The financial statements of the subsidiaries are prepared for the same reporting period as the University, using consistent accounting policies. All intra-group balances, income and expenses and unrealised gains and losses resulting from intra-group transactions are eliminated in full.

- IFRS 7 Financial Instruments: Disclosures (Amendment) – Transfer of Financial Assets (Effective for annual periods beginning on or after July 1, 2011) Offsetting Financial Assets and Financial Liabilities (Effective for annual periods beginning on or after January 1, 2013)
- IFRS 1 First-time Adoption of IFRS (Amendment) – Severe Hyperinflation and Removal of fixed dates for First-time Adopters (Effective for annual periods beginning on or after July 1, 2011)
- IAS 1 Financial Statement Presentation – Presentation of items of Other Comprehensive Income (Effective for annual periods beginning on or after July 1, 2012)
- IAS 28 Investments in Associates and Joint Ventures (Effective for annual periods beginning on or after January 1, 2013)
- IAS 32 Financial Instruments: Presentation (Amendment) Offsetting Financial Assets and Financial Liabilities (Effective for annual periods beginning on or after January 1, 2014)

Management is still in the process of estimating the impact of implementing the above standards, interpretations and amendments.

I.8.3 STANDARDS, INTERPRETATIONS AND AMENDMENTS ADOPTED DURING THE YEAR

- IAS 24 Related Party Disclosures (revised)
- IAS 32 Financial Instruments: Presentation – Classification of Rights Issues (amendment)
- IFRIC 14 Prepayments of a Minimum Funding Requirement (amendment)
- IFRIC 19 Extinguishing Financial Liabilities with Equity Instruments
- IFRS 1 First-time Adoption of International Financial Reporting Standards - Accounting policy changes in the year of adoption; Revaluation Basis as Deemed Cost and Use of "Deemed Cost" for operations subject to Rate Regulation (amendments)
- IAS 27 Consolidated and Separate Financial Statements - Transitional Requirements for Amendments made as a result of IAS 27

The adoption of the above standards, interpretations and amendments did not have a material impact on the financial performance or financial position of the University with the exception of additional disclosures.

I.9 PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are initially stated at cost. The cost of an asset comprises the purchase price and costs directly attributable to bringing the asset to the location and condition necessary for it to operate as intended by management.

Land and buildings, which have been adapted to specialised functions, and all other land and buildings which are used for general purposes, plant and equipment are recorded at cost net of accumulated depreciation and accumulated impairment losses, if any, except for donations, which are valued by external independent valuers.

No depreciation is provided on freehold land as it is deemed to have an indefinite life. Property, plant and equipment are depreciated on a straight-line basis estimated to write each asset down to its estimated residual value over the estimated useful lives of the assets which range as follows:

Buildings	50 - 100 years
Motor vehicles	8 - 15 years
Computer equipment	4 - 8 years
Equipment	10 - 15 years
Furniture and equipment	20 years
Air conditioners	10 - 20 years
Lifts	30 - 40 years

The assets' residual values, useful lives and methods of depreciation are reviewed at each reporting date, and adjusted prospectively, if appropriate.

Individual items of property, plant and equipment acquired for R5 000 (2010: R5 000) or less are expensed in the year of acquisition. Where these items meet the definition of an asset, management will expense these items at its discretion however, these items are recorded in the asset register for control purposes.

Routine maintenance costs are charged against income as incurred. Costs of major maintenance or overhaul of an item of property, plant or equipment are recognised as an expense, except if the cost had been recognised as a separate part of the cost of the asset, and that amount has already been depreciated to reflect the benefits that had been replaced or restored.

An item of property, plant and equipment and any significant part initially recognised is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Gains and losses on derecognition of property, plant and equipment are determined by reference to their carrying amounts and are taken into account in determining operating surplus.

Library acquisitions

New library collections are written off in the year of acquisition.

1.10 LEASES

The determination of whether an arrangement is, or contains a lease is based on the substance of the arrangement at inception date of whether the fulfilment of the arrangement is dependent on the use of a specific asset or assets or the arrangement conveys a right to use the asset. A reassessment is made after inception of the lease only if one of the following applies:

- a. There is a change in contractual terms, other than a renewal or extension of the arrangement;
- b. A renewal option is exercised or extension granted, unless the term of the renewal or extension was initially included in the lease term;

- c. There is a change in the determination of whether fulfilment is dependent on a specified asset; or
- d. There is a substantial change to the asset.

Where a reassessment is made, lease accounting shall commence or cease from the date when the change in circumstances gave rise to the reassessment for scenarios (a), (c) or (d) and at the date of renewal or extension period for scenario (b).

For arrangements entered into prior to January 1, 2005, the date of inception is deemed to be January 1, 2005 in accordance with transitional requirements of IFRIC 4.

University as a lessee

Operating lease payments are recognised as an expense in the statement of comprehensive income on a straight-line basis over the lease term.

University as a lessor

Leases where the University does not transfer substantially all the risks and benefits of ownership of the asset are classified as operating leases. Initial direct costs incurred in negotiating an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income. Contingent rents are recognised as revenue in the period in which they are earned. (Refer to note 1.5)

1.11 BORROWING COSTS

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the respective assets. All other borrowing costs are expensed in the period they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

1.12 INTANGIBLE ASSETS

Intangible assets acquired separately are measured on initial recognition at cost. Following initial recognition, intangible assets are carried at cost less any accumulated amortisation and any accumulated impairment losses. The useful lives are assessed as finite. Intangible assets with finite lives are amortised over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. Intangible assets with indefinite useful lives are tested for impairment annually as at December 31, as appropriate and when circumstances indicate that the carrying value may be impaired.

For assets excluding goodwill, an assessment is made at each reporting date as to whether there is any indication that previously recognised impairment losses may no longer exist or may have decreased. If such indication exists, the University estimates the asset's or cash-generating unit's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of comprehensive income. The amortisation period and the amortisation method for an intangible asset with a finite useful life are reviewed at least at each financial year end. The amortisation expense on intangible assets is recognised in the statement of comprehensive income through surplus/deficit for the year.

The amortisation periods are as follows:

Right to internet usage - 20 years

Computer software - 4 years

1.13 INVENTORIES

Inventories are stated at the lower of cost and net realisable value. Cost is determined by the weighted average cost method. Net realisable

value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

1.14 IMPAIRMENT OF NON-FINANCIAL ASSETS

The University assesses at each reporting date whether there is an indication that an asset may be impaired. If any such indication exists, or when annual impairment testing for an asset is required, the University makes an estimate of the asset's recoverable amount.

An asset's recoverable amount is the higher of an asset's fair value less costs to sell and its value in use. Where the carrying amount of an asset exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

An assessment is made at each reporting date as to whether there is any indication that previously recognised impairment losses may no longer exist or may have decreased. If such indication exists, the recoverable amount is estimated. A previously recognised impairment loss is reversed only if there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. If that is the case the carrying amount of the asset is increased to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, recent market transactions are taken into account, if available. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples or other available fair value indicators.

The increased amount cannot exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss

been recognised for the asset in prior years. Such reversal is recognised in profit or loss unless the asset is carried at the re-valued amount, in which case the reversal is treated as a revaluation increase.

After such a reversal the depreciation charge is adjusted in future periods to allocate the asset's revised carrying amount, less any residual value, on a systematic basis over its remaining useful life.

I.15 FINANCIAL ASSETS

Initial recognition and measurement

The University's financial assets within the scope of IAS 39 Financial Instruments: Recognition and Measurement are classified as loans and receivables, and available-for-sale financial assets. The University determines the classification of its financial assets at initial recognition. All financial assets are recognised initially at fair value plus, in the case of investments not at fair value through profit or loss, directly attributable transaction costs. The University has not designated any financial assets upon initial recognition as at fair value through profit or loss.

Subsequent measurement

The subsequent measurement of financial assets depends on their classification as follows:

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables consist of trade receivables and cash and cash equivalents.

Trade receivables

Trade receivables are subsequently measured at amortised cost using the effective interest rate method ("EIR"), less impairment. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. A provision for impairment of trade receivables is established when

there is objective evidence that the University will not be able to collect all amounts due according to the original terms of the receivables. Significant financial difficulties of the debtor and default or delinquency in payments are considered indicators that the trade receivable is impaired. The carrying amount of the asset is reduced through the use of an allowance account, and the amount of the loss is recognised in the statement of comprehensive income within 'other current operating expenses'. Subsequent recoveries of amounts previously impaired, are credited against the provision account in the statement of financial position.

Cash and cash equivalents

Cash and cash equivalents are subsequently carried in the statement of financial position at amortised cost. For the purposes of the statement of cash flows, cash and cash equivalents comprise cash on hand, deposits held at call with banks, other short-term highly liquid investments and bank overdrafts. Bank overdrafts are included within current liabilities on the statement of financial position and are carried at amortised cost.

Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives that are either designated in this category or not classified in any of the other categories. They are included in non-current assets in the statement of financial position unless management intends to dispose of the investment within 12 months of the reporting date. Such assets are comprised of investments in listed equity shares, quoted interest bearing corporate and government bonds, quoted unit trusts and money market deposits.

After initial measurement, available-for-sale financial investments are subsequently measured at fair value with unrealised gains or losses recognised as other comprehensive income in the available-for-sale fair value reserve until the investment is derecognised, at which time

the cumulative gain or loss is recognised in other operating income in the surplus or deficit, or determined to be impaired, at which time the cumulative loss is recognised in other operating expenses in the surplus or deficit and removed from the available-for-sale reserve.

The fair value of marketable securities is its market value. Market value is calculated by reference to Stock Exchange quoted selling prices at the close of business on the reporting date. If the fair value of an investment cannot be determined, the investment is measured at cost where there is no fixed maturity, or at amortised cost if there is fixed maturity.

Derecognition of financial assets

A financial asset (or, where applicable a part of a financial asset or part of a group of similar financial assets) is derecognised when:

- The rights to receive cash flows from the asset have expired; and
- The University has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the University has transferred substantially all the risks and rewards of the asset, or (b) the University has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the University has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, and has neither transferred nor retained substantially all the risks and rewards of the asset nor transferred control of the asset, the asset is recognised to the extent of the University's continuing involvement in the asset.

In that case, the University also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the University has retained. Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the University could be required to repay.

1.16 IMPAIRMENT OF FINANCIAL ASSETS

The University assesses at each reporting date whether there is any objective evidence that a financial asset or a group of financial assets is impaired. A financial asset or a group of financial assets is deemed to be impaired if, and only if, there is objective evidence of impairment as a result of one or more events that have occurred after the initial recognition of the asset (an incurred 'loss event') and that loss event has an impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated. Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganisation and where observable data indicates that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

Financial assets carried at amortised cost

For financial assets carried at amortised cost the University first assesses whether objective evidence of impairment exists individually for financial assets that are individually significant, or collectively for financial assets that are not individually significant. If the University determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is, or continues to be, recognised are not included in a collective assessment of impairment.

If there is objective evidence that an impairment loss has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future expected credit losses that have not yet

been incurred). The present value of the estimated future cash flows is discounted at the financial assets original effective interest rate. If a loan has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate.

The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognised in the statement of comprehensive income. Interest income continues to be accrued on the reduced carrying amount and is accrued using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss. The interest income is recorded as part of finance income in the statement of comprehensive income. Loans together with the associated allowance are written off when there is no realistic prospect of future recovery and all collateral has been realised or has been transferred to the University.

If, in a subsequent year, the amount of the estimated impairment loss increases or decreases because of an event occurring after the impairment was recognised, the previously recognised impairment loss is increased or reduced by adjusting the allowance account. If a future write-off is later recovered, the recovery is credited to finance costs in the statement of comprehensive income.

Available-for-sale financial investments

For available-for-sale financial investments, the University assesses at each reporting date whether there is objective evidence that an investment or a group of investments is impaired.

In the case of equity investments classified as available-for-sale, objective evidence would include a significant or prolonged decline in the fair value of the investment below its cost. 'Significant' is to be evaluated against the original cost of the investment and 'prolonged' against the period in which the fair value has been below its original cost. Where

there is evidence of impairment, the cumulative loss – measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that investment previously recognised in the statement of comprehensive income – is removed from other comprehensive income and recognised in surplus or deficit. Impairment losses on equity investments are not reversed through surplus or deficit; increases in their fair value after impairment are recognised directly in other comprehensive income.

In the case of debt instruments classified as available-for-sale, impairment is assessed based on the same criteria as financial assets carried at amortised cost. However, the amount recorded for impairment is the cumulative loss measured as the difference between the amortised cost and the current fair value, less any impairment loss on that investment previously recognised in surplus or deficit.

Future interest income continues to be accrued based on the reduced carrying amount of the asset and is accrued using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss. The interest income is recorded as part of finance income. If, in a subsequent year, the fair value of a debt instrument increases and the increase can be objectively related to an event occurring after the impairment loss was recognised in surplus or deficit, the impairment loss is reversed through surplus or deficit.

1.17 FINANCIAL LIABILITIES

Initial recognition and measurement

Financial liabilities within the scope of IAS 39 are classified as loans and borrowings. The University determines the classification of its financial liabilities at initial recognition.

All financial liabilities are recognised initially at fair value plus directly attributable transaction costs.

The University's financial liabilities include trade and other payables and borrowings.

The subsequent measurement of financial liabilities depends on their classification as follows:

Trade and other payables

Accounts payable and accrued liabilities are subsequently measured at amortised cost using the effective interest rate method. Gains and losses are recognised in income when the liabilities are derecognised as well as through the amortisation process.

Deposits provided by prospective and current students are treated as current liabilities until the amount is billed as due. Deposits are initially measured at fair value. They are subsequently measured at amortised cost using the effective interest rate method. Gains and losses are recognised in income when the liabilities are derecognised as well as through the amortisation process.

Interest bearing borrowings

All interest bearing loans and borrowings are initially recognised at the fair value of the consideration received plus directly attributable transaction costs.

Subsequent to initial recognition, interest bearing loans and borrowings are measured at amortised cost using the effective interest method.

Gains and losses are recognised in net profit or loss when the liabilities are derecognised as well as through the amortisation process.

Derecognition of financial liabilities

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of

a new liability, and the difference in the respective carrying amounts is recognised in surplus or deficit.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount reported in the consolidated statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, or to realise the assets and settle the liabilities simultaneously.

Fair value of financial instruments

The fair value of financial instruments that are traded in active markets at each reporting date is determined by reference to quoted market prices or dealer price quotations (bid price for long positions and ask price for short positions), without any deduction for transaction costs. For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques. Such techniques may include using recent arm's length market transactions; reference to the current fair value of another instrument that is substantially the same; discounted cash flow analysis or other valuation models.

1.18 PROVISIONS

Provisions are recognised when the University has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

Where the University expects some or all of a provision to be reimbursed, the reimbursement is recognised as a separate asset but only when the reimbursement is virtually certain. The expense relating to any provision is presented in surplus or deficit net of any reimbursement.

If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

1.19 PENSION OBLIGATIONS

The University operates defined contribution and defined benefit (National Tertiary Retirement Fund) pension schemes in accordance with the Pension Funds Act, 1956. The assets of both schemes are held separately from those of the University and are administered, in the case of the defined benefit plan by trustees of the Fund and in the case of the defined contribution plan by the insurance company selected by the trustees of the Fund.

The cost of providing benefits under the defined benefit plans are determined separately for each plan using the projected unit credit method. Under this method the cost of providing pensions is charged to surplus or deficit to spread the cost over the service lives of employees in accordance with the advice of qualified actuaries. The pension obligation is measured at the present value of the estimated future cash outflows using interest rates of government securities that have terms to maturity approximating the terms of the related liability. The net difference between the expected return on plan assets and the interest factor arising from discounting the obligation is recognised under personnel costs. The obligation is valued annually by independent qualified actuaries. Actuarial gains and losses are recognised immediately in surplus or deficit. Contributions to the defined contribution scheme are charged to the statement of comprehensive income as incurred.

1.20 POST-EMPLOYMENT BENEFITS

The University provides post-retirement medical benefits to certain of

their retirees. The expected costs of these benefits are accrued over the period of employment, using an accounting methodology similar to that of defined benefit pension plans. These obligations are valued annually by independent qualified actuaries. Actuarial gains and losses are recognised immediately in surplus or deficit.

Actuarial valuations of post-retirement benefit obligations are based on assumptions which include employee turnover, mortality rates, the discount rate, expected long-term rate of return on retirement plan assets, healthcare costs, inflation rates and salary increments.

Employee benefit liabilities

Employee benefit liabilities represent the non-current portion of the accumulated leave pay. The University pays a benefit of basic salary multiplied by the number of accumulated leave days on resignation, death or retirement of an employee. The accrual of additional leave days ceased as at December 31, 2008. The actuarial valuation uses the projected unit credit method, and is based on assumptions which include leave days due to active members, salary increments, the discount rate, the inflation rate and mortality rates.

1.21 REVENUE RECOGNITION

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the University and the revenue can be reliably measured. Revenue is measured at the fair value of the consideration received, taking into account discounts, rebates, and other Value Added Taxes or duty.

State appropriations - subsidies and grants

State appropriations and grants for general purposes are recognised as income in the financial year to which the subsidy relates. Appropriations for specific purposes, i.e., capital expenditure, are brought into the appropriate fund at the time that they are available for expenditure for the purpose provided. However, if the funding is provided in advance of the specified requirement, (i.e. the University does not have immediate entitlement to it) the relevant amount is retained as a current liability.

Designated income from contracts, grants and donations

Income received for designated specific purposes will arise from contracts, grants, donations and income on specific purpose endowments. In all instances, any such income is recognised in surplus or deficit in the financial period when entitled to the use of those funds. Thus, funds included as income but which will not be used until some specified future period or occurrence, are transferred from surplus or deficit to an appropriate fund and held in that fund until the financial period in which the funds can be used, at which time the amount is transferred back to income through surplus or deficit. Prior to that time, the amount is appropriately grouped in one of the restricted funds comprising aggregate funds (held in trust).

Tuition and residence fees

Tuition and residence fees are brought into income in the period to which they relate and at the time, these are formally billed. The income must be recognised as realisable and, to the extent that it is not, provision is realistically made for the estimated unrealisable amount. Deposits provided by prospective students are treated as current liabilities until the amount is billed as due.

Interest and dividend income

Interest is recognised on a time proportion basis, taking account of the principal outstanding and the effective rate over the period to maturity, when it is determined that such income will accrue to the University. Dividends are recognised when the right to receive payment is established.

Interest, dividends and other income received or due on assets representing endowment and trust funds are recognised as income in the statement of comprehensive income from which the respective amounts are transferred, if required in terms of the establishment of the respective funds, to the respective funds and the amounts appropriately re-invested.

I.22 NORMAL TAX AND DEFERRED TAX

Current income tax

Current tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. Current tax represents the expected tax payable on taxable income for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustments to tax payable of previous years.

Deferred tax

Deferred tax is provided using the liability method on all temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred tax liabilities are recognised for all taxable temporary differences except:

- Where the deferred tax liability arises from the initial recognition of goodwill, or of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; and
- In respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, except where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, carry-forward of unused tax assets and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry-forward of unused tax assets and unused tax losses can be utilised; except:

- Where the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of

the transaction, affects neither the accounting profit nor taxable profit or loss; and

- In respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint ventures, deferred tax assets are only recognised to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilised.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are reassessed at each reporting date and are recognised to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised directly in equity through other comprehensive income is recognised in equity through other comprehensive income and not in the surplus or deficit for the year.

Value-added tax

Revenue, expenses and assets are recognised net of the amount of value-added tax except:

- Where the value-added tax incurred on a purchase of assets or services is not recoverable from the taxation authority, in which case the value-added tax is recognised as part of the cost of acquisition of the asset or as part of the expense item as applicable, and
- Receivables and payables that are stated with the amount of valued added tax included.

The net amount of value-added tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the statement of financial position.

I.23 FOREIGN CURRENCY TRANSLATION

The University's consolidated financial statements are presented in Rand, which is also the University's functional currency. Transactions in foreign currencies are initially recorded by the University at their respective functional currency rates prevailing at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the functional currency spot rate of exchange ruling at the reporting date. All differences are taken to surplus or deficit.

2 PROPERTY, PLANT AND EQUIPMENT

2011	Land and buildings R'000	Furniture, equipment and computers- owned R'000	Furniture, equipment and computers- leased R'000	Vehicles R'000	Total R'000
Opening cost as at January 1, 2011	393 091	209 423	5 961	6 919	615 394
Opening accumulated depreciation as at January 1, 2011	(49 923)	(91 892)	(5 105)	(2 273)	(149 193)
OPENING NET CARRYING AMOUNT AS AT JANUARY 1, 2011	343 168	117 531	856	4 646	466 201
Additions	9 133	28 626	-	644	38 403
Disposals	(202)	(319)	-	(55)	(576)
- cost	(220)	(9 478)	-	(55)	(9 753)
- accumulated depreciation	18	9 159	-	-	9 177
Depreciation charge	(5 138)	(18 577)	-	(703)	(24 418)
Transfer of Prior Year's Work in Progress	(8 081)	8 081	-	-	-
Current Year Work in Progress	9 576	878	-	-	10 454
Transfer of leased computers to owned	-	856	(856)	-	-
- cost	-	5 961	(5 961)	-	-
- accumulated depreciation	-	(5 105)	5 105	-	-
CLOSING NET CARRYING AMOUNT AS AT DECEMBER 31, 2011	348 456	137 076	-	4 532	490 064
AS AT DECEMBER 31, 2011					
- cost	403 499	243 491	-	7 508	654 498
- accumulated depreciation	(55 043)	(106 415)	-	(2 976)	(164 434)
NET CARRYING AMOUNT	348 456	137 076	-	4 532	490 064

A register of land and buildings is available for inspection at the business address. The University is not permitted to dispose of or otherwise alienate its land and buildings without the approval of the Minister of Higher Education and Training. The University's land and buildings have a market value of R1 750 000 000 (2010: R 1 750 000 000).

2 PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

2010	Land and buildings R'000	Furniture, equipment and computers- owned R'000	Furniture, equipment and computers- leased R'000	Vehicles R'000	Total R'000
Opening cost as at January 1, 2010	348 885	185 007	5 961	6 057	545 910
Opening accumulated depreciation as at January 1, 2010	(46 432)	(79 893)	(3 615)	(2 043)	(131 983)
OPENING NET CARRYING AMOUNT AS AT JANUARY 1, 2010	302 453	105 114	2 346	4 014	413 927
Additions	41 240	27 420	-	966	69 626
Work-in-progress	8 081				8 081
Disposals	(3 671)	(396)	-	(28)	(4 095)
- cost	(5 115)	(3 004)	-	(104)	(8 223)
- accumulated depreciation	1 444	2 608	-	76	4 128
Depreciation charge	(4 935)	(14 607)	(1 490)	(306)	(21 338)
CLOSING NET CARRYING AMOUNT AS AT DECEMBER 31, 2010	343 168	117 531	856	4 646	466 201
AS AT DECEMBER 31, 2010					
- cost	393 091	209 423	5 961	6 919	615 394
- accumulated depreciation	(49 923)	(91 892)	(5 105)	(2 273)	(149 193)
NET CARRYING AMOUNT	343 168	117 531	856	4 646	466 201

3 INTANGIBLE ASSETS

2011	Right to internet usage* R'000	Computer Software R'000	Total R'000
Cost	6 332	7 494	13 826
Accumulated amortisation	(519)	(2 631)	(3 150)
OPENING NET CARRYING AMOUNT AS AT JANUARY 1, 2011	5 813	4 863	10 676
Derecognised during the year	(987)	-	(987)
Amortisation	(267)	(1 874)	(2 141)
CLOSING NET CARRYING AMOUNT AS AT DECEMBER 31, 2011	4 559	2 989	7 548
Made up as follows:			
Cost	5 345	7 494	12 839
Accumulated amortisation	(786)	(4 505)	(5 291)
NET CARRYING AMOUNT	4 559	2 989	7 548
2010			
Cost	7 409	7 494	14 903
Accumulated amortisation	(185)	(758)	(943)
OPENING NET CARRYING AMOUNT AS AT JANUARY 1, 2010	7 224	6 736	13 960
Derecognised during the year	(1 077)	-	(1 077)
Amortisation	(334)	(1 873)	(2 207)
CLOSING NET CARRYING AMOUNT AS AT DECEMBER 31, 2010	5 813	4 863	10 676
Made up as follows:			
Cost	6 332	7 494	13 826
Accumulated amortisation	(519)	(2 631)	(3 150)
NET CARRYING AMOUNT	5 813	4 863	10 676

*The intangible asset represents the right of use of Internet bandwidth in terms of an agreement with the Tertiary Education and Research Network of South Africa ("TENET") and was initially recognised at the present value of the future benefit to the University, discounted at 14.17% p.a. in terms of the agreement. It is amortised over a useful life of 20 years and the amortisation expense is included in 'depreciation and amortisation.' As at December 31, 2011 the remaining amortisation period is 17,5 years. The annual payments that have to be made in respect of the TENET agreement results in the derecognition of the portion of the intangible asset.

4 INVESTMENTS

	2011 R'000	2010 R'000
AT COST		
Listed shares at cost	58 048	75 027
Bonds, annuities and other	99 013	70 731
Foreign investments	15 666	9 166
Less: Cash investments transferred to cash and cash equivalents (note 9)	(34 326)	(22 743)
	138 401	132 181
AT VALUATION		
Market value of listed shares	106 708	128 047
Market value of bonds, annuities and other	78 220	59 501
Market value of foreign investments	17 847	9 203
	202 775	196 751

The University has investments in listed equity and debt securities. The fair value of the quoted debt securities and equity shares is determined by reference to published price quotations in an active market.

There were no impairment provisions on available-for-sale financial assets during 2011 or 2010.

The maximum exposure to credit risk at the reporting date is the fair value of the bond securities classified as available-for-sale. These financial assets are neither past due nor impaired.

Foreign investments are held by a portfolio manager and the equities are denominated in South African Rands.

5 TAXATION

The University, with the exception of its subsidiaries, is exempt from taxation in terms of Section 10 (1)(cA) of the Income Tax Act.

6 NON-CURRENT RECEIVABLES

	2011 R'000	2010 R'000
Student loans	47 678	41 522
Less: Fair value adjustment	(12 577)	(10 681)
	35 101	30 841
Less: Provision for impairment of student loans	(12 673)	(10 803)
	22 428	20 038
Loan receivable from TENET	1 475	1 296
	23 903	21 334

Student Loans

The repayment of the student loans commences after completion of studies and commencement of employment by the student.

The amount receivable each year is indirectly based on a formula determined by the National Students Financial Aid Scheme ("NSFAS") which is linked to the salary earned by the student and is net of the estimated uncollectable portion as supported by historical trends and experience. In determining the fair value of the student loans, the following key assumptions were made:

There will be no repayment for the first four years of the loan period in the case of a diploma student (being the three year period the student will be studying and an additional year to obtain employment).

There will be no repayment for the first three years of the loan period in the case of a post-graduate student (being the two year period the student will be studying and an additional year to obtain employment).

- A repayment period of 10 years (2010: 10 years), payments will be received equally over the 10 year period
- A discount rate of 9% (2010: 9%)

Student Loans (continued)

The uncollectable portion of the student loan has been estimated at 26.58% (2010: 25.80%). The fair value adjustment is presented in the income statement within "other losses net" in the period in which they arise. The impairment provision is indirectly based on the historical data provided by NSFAS.

Movement in the provision for impairment is as follows:

	2011 R'000	2010 R'000
At beginning of year	10 803	9 530
Raised during the year	1 870	1 273
Utilised during the year	-	-
AT END OF YEAR	12 673	10 803

Loan receivable from TENET

The loan receivable from TENET is carried at amortised cost using the effective interest rate method, less impairment, and has the following terms:

- The applicable discount rate is 14,17% p.a.
- In terms of the TENET agreement, the loan receivable is recoverable in the following ways:
 - cash
 - deduction of amounts owing by the University for internet services provided by TENET

7 INVENTORIES

	2011 R'000	2010 R'000
Consumables	1 588	1 326

Inventories include stationery, technical inventories and study materials. There were no write-downs of inventories during the year. The amount of inventories recognised as an expense during the year was R 5 340 235 (2010: R 6 112 328).

8 RECEIVABLES AND PREPAYMENTS

	2011 R'000	2010 R'000
Student debtors	198 845	229 354
Less: Provision for impairment	(166 541)	(159 792)
	32 304	69 562
NSFAS	71 231	-
Loans to employees	110	203
Other receivables	7 388	9 299
Prepayments	1 960	1 459
	112 993	80 523

All student debtors (after provision for impairment) at year-end are past due but not considered impaired. These student debtors are over 120 days. Amounts past due (after provision for impairment) are not considered impaired due to the University's experience in collecting amounts when students renew their registration in the next academic period. Amounts past due but not impaired represent fees billed in the current year. Other receivables impaired where necessary.

Movement in the provision for impairment of student receivables is as follows:

At beginning of the year	159 792	136 665
Raised during the year	14 547	23 127
Utilised during the year	(7 798)	-
At end of the year	166 541	159 792

The movement in the provision for impaired student receivables has been included in 'other operating expenses' in the statement of comprehensive income.

9 CASH AND CASH EQUIVALENTS

	2011 R'000	2010 R'000
Cash at bank and on hand	20 550	27 963
Short term deposits	493 629	385 189
	514 179	413 152

Cash at bank earns interest at floating rates based on daily bank deposit rates. Short-term deposits are made for varying periods of between one day and three months, depending on the requirements of the University, and earn interest at the respective short-term deposit rates.

10 BORROWINGS

NON-CURRENT BORROWINGS	43 383	50 171
State guaranteed loan	7 107	7 514
Development Bank of Southern Africa	28 824	30 499
Loan payable to TENET	3 151	4 580
Nedbank Limited	4 301	7 578
CURRENT PORTION OF BORROWINGS	18 807	8 915
Current portion of interest bearing borrowings in SOFP*	7 733	7 841
Current portion of non-interest bearing borrowings	11 074	1 074
TOTAL BORROWINGS	62 190	59 086

* The Investec Private Bank loan has been repaid in the current year: (2010: Current Portion (R1 476 107)).

10 BORROWINGS (CONTINUED)

NAME OF ENTITY	VARIABLE INTEREST RATE %	FIXED INTEREST RATE %	MATURITY
State guaranteed loans and state loans	-	13.5 - 17.0	1 July 2022
Development Bank of Southern Africa - Loan 1	-	5.0	31 March 2023
Development Bank of Southern Africa - Loan 2	-	8.7	31 March 2023
Investec Private Bank	(2010: 7.0)	-	1 June 2011
Loan payable to TENET	-	14.17	30 June 2014
Nedbank Limited	-	7.2	1 June 2014
NRF bridging finance	-	-	31 March 2012

State Guaranteed and Development Bank of Southern Africa loan

The State Loans, the State Guaranteed Loans and the Development Bank of Southern Africa loans are unsecured. The State Guaranteed loans, the subsidies of which range between 50% and 85% reflect the balance owing on loans raised to finance the acquisition of property, plant and equipment. The annual cost of interest and redemption, together with the state subsidy on these payments, are included in the surplus for the year in the statement of comprehensive income.

Loan payable to TENET

The TENET loan is carried as a financial liability at amortised cost, being the present value of all instalment amounts still owing to TENET as at December 31, 2011.

- The financial liability is discounted using the effective interest rate method.
- The applicable discount rate is 14.17% p.a.
- Repayments are expected to be paid in equal instalments over a five-year period, beginning June 30, 2009.

II RETIREMENT BENEFIT OBLIGATIONS

	2011 R'000	2010 R'000
STATEMENT OF FINANCIAL POSITION OBLIGATIONS FOR:		
- Pension benefits	56 599	66 670
- Post employment medical benefits	113 146	94 191
	169 745	160 861

II.1 Pension obligations - National Tertiary Retirement Fund ("NTRF")

DEFINED PENSION BENEFITS	56 599	66 670
MADE UP AS FOLLOWS:		
Defined benefit obligation	121 649	127 249
Plan assets at fair value	(65 050)	(60 579)
	56 599	66 670
Unrecognised past service cost	-	-
Unrecognised net (gain)/loss	-	-
NET LIABILITY (UNFUNDED PORTION)	56 599	66 670

The movement in the defined benefit obligation over the year is as follows:

At beginning of year	66 670	34 635
Interest and service costs	13 863	11 094
Contributions by plan participants	(4 462)	(4 593)
Actuarial (gain)/loss	(19 472)	25 534
AT END OF YEAR	56 599	66 670

The amounts recognised in the surplus for the year in the statement of comprehensive income are as follows:

Interest and service costs	13 863	11 094
Net actuarial (gain)/loss recognised during the year	(19 472)	25 534
TOTAL INCLUDED IN STAFF COSTS	(5 609)	36 628

II.1 Pension obligations - National Tertiary Retirement Fund ("NTRF") (continued)

The principal actuarial assumptions used were as follows:

	2011 R'000	2010 R'000
Discount rate	8.25%	8.50%
Expected return on plan assets	9.00%	8.50%
Future salary increases	6.50%	6.25%
Future pension increases	2.12%	2.36%

Assumptions regarding future mortality are set based on advice, published statistics and experience.

The movement in the defined benefit obligation for the year is as follows:

Beginning of the year	127 249	89 238
Service cost	3 922	2 589
Interest cost	9 941	8 505
Actuarial (gain)/loss	(15 001)	31 510
Top-ups allocated	(4 462)	(4 593)
END OF THE YEAR	121 649	127 249

The movement in the fair value of plan assets for the year is as follows:

Beginning of the year	60 579	54 603
Expected return on plan assets	5 149	5 187
Employee contribution	4 462	4 593
Top-ups allocated	(4 462)	(4 593)
Actuarial (gain)/loss	(678)	789
END OF THE YEAR	65 050	60 579
ACTUAL RETURN ON PLAN ASSETS	7%	11%

11.2 Post-employment medical benefits

	2011 R'000	2010 R'000
Defined post employment medical benefits	113 146	94 191
Made up as follows:		
Defined benefit obligation	113 146	94 191
Plan assets at fair value	-	-
	113 146	94 191
Unrecognised past service cost	-	-
Unrecognised net (gain)/loss	-	-
NET LIABILITY	113 146	94 191

Movement in the defined benefit obligation is as follows:

At beginning of year	94 191	89 243
Current service cost	1 824	1 842
Interest cost	8 744	8 903
Actuarial loss/(gain)	12 777	(1 775)
Benefits paid	(4 390)	(4 022)
AT END OF YEAR	113 146	94 191

The amounts recognised in the statement of comprehensive income were as follows:

Current service cost	1 824	1 842
Interest cost	8 744	8 903
Net actuarial loss/(gain) recognised during the year	12 777	(1 775)
TOTAL INCLUDED IN EMPLOYEE BENEFITS EXPENSE	23 345	8 970

The principal assumptions used are as follows:

Discount rate	8.60%	9.50%
Medical inflation	7.52%	7.35%

The effect of a 1% increase in the medical cost inflation rate is as follows:

Effect on current service costs	382	388
Effect on current interest cost	1 133	1 747
Effect on the obligation	15 329	11 927

11.2 Post-employment medical benefits (continued)

The effect of a 1% decrease in the medical cost inflation rate is as follows:

	2011 R'000	2010 R'000
Effect on current service costs	(305)	(308)
Effect on current interest cost	(945)	(970)
Effect on the obligation	(12 693)	(9 954)

12 EMPLOYEE BENEFIT LIABILITIES

Defined accumulated leave pay provision	20 266	32 414
MADE UP AS FOLLOWS:		
Defined benefit obligation	34 266	44 915
Plan assets at fair value	-	-
	34 266	44 915
Unrecognised past service cost	-	-
Unrecognised net (gain)/loss	-	-
Net liability at year end	34 266	44 915
Current portion of accumulated leave pay (disclosed under provisions)	(14 000)	(12 501)
	20 266	32 414

Movement in the defined benefit obligation is as follows:

Beginning of the year	44 915	58 582
Interest cost	3 286	4 535
Actuarial loss/(gain)	193	(264)
Benefits paid	(14 128)	(17 938)
END OF THE YEAR	34 266	44 915

The amounts recognised in the statement of comprehensive income are as follows:

Interest cost	3 286	4 535
Net actuarial loss/(gain) recognised during the year	193	(264)
TOTAL INCLUDED IN EMPLOYEE BENEFIT EXPENSE	3 479	4 271

12 EMPLOYEE BENEFIT LIABILITIES (CONTINUED)

The principal assumptions used were as follows:

	2011 R'000	2010 R'000
Discount rate	8.25%	8.50%
Inflation rate	5.50%	5.25%
Salary increase	6.50%	6.25%

Assumptions regarding future mortality are based on advice, published statistics and experience.

13 DEFERRED TAX

Deferred tax asset	542	1 141
Deferred tax liabilities	(5)	-
	537	1 141

The balance of the deferred tax is made up as follows:

2011	Balance 31/12/2010 R'000	Charged through statement of comprehensive income R'000	Balance 31/12/2011 R'000
Property, plant and equipment	116	388	154
Rent expense accrual	(6)	1	(5)
Assessed losses	1 031	(643)	
	1 141	(604)	537

The balance of the deferred tax is made up as follows:

2010	Balance 31/12/2009 R'000	Charged through statement of comprehensive income R'000	Balance 31/12/2010 R'000
Property, plant and equipment	(115)	231	116
Rent expense accrual	(60)	54	(6)
Assessed losses	-	1031	1031
	(175)	1316	1141

14 TRADE AND OTHER PAYABLES

	2011 R'000	2010 R'000
Trade payables	109 308	80 644
Student deposits	3 853	2 331
Other payables	15 147	13 792
TOTAL	128 308	96 767

Terms and conditions of the above financial liabilities:

- Trade and other payables are non-interest bearing
- Trade and other payables are normally settled on 30 day terms
- Other payables include an accrual for employee bonuses of R13.607 million (2010: R12.486 million)

15 PROVISIONS

Made up as follows:

Current portion of accumulated leave pay	14 000	12 501
Vacation leave pay	18 320	14 022
	32 320	26 523

Provision for accumulated leave and vacation leave pay

	2011 R'000	2010 R'000
Balance at beginning of year	26 523	29 248
Raised during the year	5 797	-
Utilised during the year	-	(2 725)
Reversed during the year	-	-
BALANCE AT END OF YEAR	32 320	26 523

15 PROVISIONS (CONTINUED)

The provision for leave pay represents the potential liability for leave days accrued, and not utilised by staff members at year-end. The current portion of the accumulated leave pay represents the estimated amount of the capped benefit to be paid out to employees during the following year.

16 INVESTMENT INCOME

16.1 Investment income

	2011 R'000	2010 R'000
Recurrent investment income	33 087	30 372
- Interest income from non-current investments	3 616	3 422
- Interest received - call accounts and short term deposits	22 277	21 216
- Interest received - TENET and student debtors	2 377	2 869
- Dividend income from investments	4 817	2 865
- Non-recurrent investment income	4 774	3 109
TOTAL INVESTMENT INCOME	37 861	33 481

16.2 Realised cumulative net fair value gains/(losses) from the disposal of investments

	2011 R'000	2010 R'000
- fair value gain on disposal	9 848	2 432
- fair value loss on disposal	(321)	(921)
	9 527	1 511

Realised cumulative net fair value gains from the disposal of investments are recognised in other income in the statement of other comprehensive income.

17. PERSONNEL (Staff costs)

Recurrent staff costs	623 816	605 118
Academic professional	318 303	309 264
Other personnel	270 293	263 773
Outsourced services (security and cleaning)	35 220	32 081
Non-recurrent staff costs	12 284	7 475
TOTAL STAFF COSTS	636 100	612 593

Average number of employees employed during the year:

Academic	635	608
Non academic	819	814
TOTAL	1 454	1 422

18 OTHER CURRENT OPERATING EXPENSES

The following have been charged in arriving at other current operating expenses:

	2011 R'000	2010 R'000
Supplies and services	130 854	126 523
Movement in the bad debts provision	7 103	25 322
Repairs and maintenance	33 153	29 266

Included in supplies and services are the following expenses:

- Auditors' remuneration	2 200	1 961
- Fees paid to internal auditors	1 493	1 728
- Fees paid to forensic auditors	317	203
- Operating lease expenses	37 325	28 777

19 OTHER LOSSES NET

	2011 R'000	2010 R'000
Fair value adjustment on student loans	1 896	1 482

The student loans (included in non-current receivables) relate to loans awarded to students and administered by NSFAS. This loan is expected to be repaid over a period of 10 years.

The fair value is determined based on the present value of expected future cash flows, using a discount rate of 9% p.a. (2010: 9% p.a.).

20 FINANCE COSTS

	2011 R'000	2010 R'000
Interest bearing borrowings	4 831	4 999

21 RISK MANAGEMENT

The University's principal financial instruments comprise available-for-sale investments, receivables, cash and cash equivalents, interest bearing borrowings and trade and other payables.

The University manages a substantial portfolio of financial assets with a long-term view of growing the portfolio in order to provide financial stability and support for new initiatives and strategic choices.

The main purpose of the interest bearing loans and borrowings is to raise finance for the University's infrastructure. The University's other financial assets and liabilities arise directly from its operations.

The main risks arising from the University's financial instruments are market risk, credit risk and liquidity risk.

Council, through its finance and investment committees, reviews and agrees policies for managing each of these risks and they are summarised below.

21.1 Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. The financial assets are invested in terms of a considered strategy adopted by the University's Council and as advised by the Investment Committee. Portfolios are then allocated to selected portfolio managers who operate under defined mandates. The investment decisions made and performances of these managers are closely monitored by the Investment Committee.

The Committee meets quarterly and receives reports from investment managers on a cyclical basis. In addition, the Committee may co-opt any individual, consultant or specialist in the event of additional expertise being required.

Internally, checks are performed regarding the income received and the purchase and sale of investments are reflected on the portfolio statements.

Price risk

The University and its subsidiaries are exposed to equity securities price risk because of listed investments held by the University and these are

Price risk (continued)

classified in the notes to the financial statements (Refer to Note 4). At December 31, 2011, if the JSE index increased/decreased by 10% with all other variables held constant and all the University's equity instruments moved according to the historical correlation with the index, funds would have been R 10 670 589 (2010: R12 804 704) higher or lower.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The University is not exposed to cash flow interest rate risk on borrowings as the majority of their borrowings have fixed interest rates. The University is not exposed to cash flow interest rate risk on funds on call as the rate of interest was fixed on these investments at the year-end.

As at December 31, 2011, if interest rates on the fixed term deposits had been entered into at rates 1% higher/lower, the surplus for the year would have been R 4 563 812 (2010: R 3 617 403) higher/lower as a result of higher/lower interest income.

The University has a number of receivables (i.e. student fees) where interest rates charged are at a fixed rate of 2% per month. The amounts of interest owed by staff are negligible.

The University holds a substantial amount of interest bearing investments and interest earning bank deposits. Interest risks relating to the University's investments are managed and monitored by the Investment Committee in the same manner as outlined above.



The following tables demonstrate the sensitivity of the University's financial assets and financial liabilities that are subject to interest rate risk to a reasonable possible change in interest rates, with all other variables held constant.

Interest rate changes on basis points (BP)

IMPACT OF INTEREST CHANGES ON FUNDS EMPLOYED IN R' MILLIONS					
-200BP	-100BP	-50BP	+50BP	+100BP	+200BP

Holdings at December 31, 2011

Local capital market interest bearing Investments

(1.56)	(0.78)	(0.39)	0.39	0.78	1.56
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Holdings at December 31, 2010

Local capital market interest bearing Investments

(1.19)	(0.60)	(0.30)	0.30	0.60	1.19
--------	--------	--------	------	------	------

Interest rate changes on basis points (BP)

IMPACT OF INTEREST CHANGES ON NET SURPLUS IN R' MILLIONS					
+200BP	+100BP	+50BP	-50BP	-100BP	-200BP

Holdings at December 31, 2011

Money market and call deposits
Cash and cash equivalents
Interest bearing borrowings

9.87	4.94	2.47	(2.47)	(4.94)	(9.87)
0.41	0.21	0.10	(0.41)	(0.21)	(0.1)
-	-	-	-	-	-

Holdings at December 31, 2010

Money market and call deposits
Cash and cash equivalents
Interest bearing borrowings

7.70	3.85	1.93	(1.93)	(3.85)	(7.70)
0.56	0.28	0.14	(0.14)	(0.28)	(0.56)
(0.03)	(0.01)	(0.01)	0.01	0.01	0.03

Foreign currency risk

Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The University enters into foreign currency transactions sporadically through the period however its exposure to foreign currency risk is limited and negligible.

21.2 Credit risk

Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. Potential concentrations of credit risk consist mainly of short-term cash, cash equivalent investments, trade receivables and other receivables.

The University places cash and cash equivalents with reputable financial institutions and a multi-manager approach to the management of investments is followed in order to limit investment risk.

Receivables comprise outstanding student fees and student loans. The University is exposed to credit risk arising from student loans and outstanding student fees. The risk relating to student fees is mitigated by requiring students to pay an initial instalment in respect of tuition and accommodation fees at registration, the regular monitoring of outstanding fees and the institution of debt collection action in cases of long outstanding amounts. In addition, students with outstanding balances from previous years of study are only permitted to renew their registration after either the settling of the outstanding amount or the conclusion of a formal payment arrangement.

The collection of student loans is administered by the National Students Financial Aid Scheme ("NSFAS").

Credit quality of financial assets

The credit quality of financial assets that are neither past due nor impaired can be assessed by reference to historical information about counterparty default rates:

Trade receivables

	2011 R'000	2010 R'000
COUNTERPARTIES WITHOUT EXTERNAL CREDIT RATING:		
Group 1 - NSFAS	71 231	-
Group 2 - Student loans	23 903	21 334
Group 3 - Student fees	32 304	69 562
Group 4 - TENET	1 475	1 296
Total trade receivables	128 913	92 192

Group 1 - Amounts outstanding in respect of NSFAS, no defaults in the past

Group 2 - 100% Student loans - no history of default available

Group 3 - Existing student accounts with some defaults in the past

Group 4 - TENET loan receivable - no history of default available

CASH AT BANK AND SHORT TERM DEPOSITS	514 179	413 152
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All cash and short-term deposits are held with major banks in South Africa.

21.3 Liquidity risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities.

The timing and nature of the University's cash inflows and outflows are such that liquidity problems are unlikely to arise. Furthermore, the University has access to funds through either its holding of short-term bank deposits or the un-endowed investments portfolio in the event that any unforeseen events occur. The cash flow position is monitored by management on a monthly basis by means of a cash flow statement. The University has minimised its liquidity risk by ensuring that it has adequate banking facilities and reserve borrowing capacity.

Banking facilities

The University has the following facilities with its banker, Standard Bank:

- Credit card facility of R120 000
- Performance guarantees of R4.149 million.
- Trading facility of R2 million

Contractual maturity profile

The table below summarises the maturity profile of the University's financial liabilities at December 31, 2011, based on contractual undiscounted payments:

	Less than 3 months R'000	3 to 12 months R'000	1 to 5 years R'000	Greater than 5 years R'000	Total R'000
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AT DECEMBER 31, 2011					
Borrowings	-	21 006	33 712	27 487	82 205
Trade and other payables	128 308	-	-	-	128 308

AT DECEMBER 31, 2010					
Borrowings	-	11 655	36 953	37 641	86 249
Trade and other payables	96 767	-	-	-	96 767

21.4 Fair value estimation

The fair value of financial instruments traded in active markets (such as available-for-sale securities) is based on quoted market prices at the reporting date. The quoted market price used for financial assets held by the University is the current bid price at year-end.

The carrying value less impairment provision of trade receivables and payables approximate their fair values. Where necessary trade receivables are discounted to approximate their fair value, on initial recognition.

Council is of the opinion that the carrying amounts of financial instruments approximate fair value.

Fair value hierarchy

The University uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

- Level 1** Quoted (unadjusted) prices in active markets for identical assets or liabilities.
- Level 2** Other techniques for which all inputs which have a significant effect on the recorded fair values are observable, either directly or indirectly.
- Level 3** Techniques which use inputs which have a significant effect on the recorded fair value that are not based on observable market data.

21.4 Fair value estimation (continued)

As at December 31, 2011, the following financial assets were carried at fair value:

	Level 1 R'000	Level 2 R'000	Level 3 R'000	Total R'000
Non-current investments	202 775	-	-	202 775

FINANCIAL ASSETS BY CATEGORY			
	Loans and receivables R'000	Available-for-sale R'000	Total R'000
DECEMBER 31, 2011			
ASSETS AS PER STATEMENT OF FINANCIAL POSITION			
Non-current investments	-	202 775	202 775
Receivables - current	112 993	-	112 993
Receivables - current	23 903	-	23 903
Cash and cash equivalents	514 179	-	514 179
TOTAL	651 075	202 775	853 850
DECEMBER 31, 2010			
ASSETS AS PER STATEMENT OF FINANCIAL POSITION			
Non-current investments	-	196 751	196 751
Receivables - current	80 523	-	80 523
Receivables - non-current	21 334	-	21 334
Cash and cash equivalents	413 152	-	413 152
TOTAL	515 009	196 751	711 760

22.4 Contingencies for Business Studies Unit ("BSU")

The University is currently engaged in negotiations with the former franchisee of BSU to recover expenses incurred by the University on behalf of the BSU, and claims made by the BSU for expenditure incurred on behalf of the University. At the financial statement date we have measured the potential contingent asset to be R 4,8 million and the contingent liability to be R 1,5 million. The University's attorneys have indicated that there is a reasonable prospect of success in its claim and in having the former franchisee's claim dismissed.

23 ASSOCIATED INSTITUTIONS PENSION FUND ("AIPF")

One hundred and two employees (2010: 106) of the University are members of the Associated Institutions Pension Fund. The AIPF is a state fund established in terms of the Associated Institutions Pension Fund Act No. 41, 1963 and is a defined benefit plan with the state being the sponsoring employer responsible for any shortfall of benefits payable to members of the fund. Accordingly, the University is not required to recognise any proportionate share of the AIPF's defined benefit obligation, plan assets and cost associated with the plan in the same way as for any other defined benefit plan.

24. COMMITMENTS

24.1 Capital commitments

Capital expenditure contracted for at reporting date but not recognised in the financial statements is as follows:

	2011 R'000	2010 R'000
Property, plant and equipment	33 179	2 815

Capital expenditure contracted as at December 31, 2011 related to additions and alterations to the Health Science, Biotechnology, Hotel School and the Ritson Campus buildings.

24.1 Capital commitments (continued)

As at December 31, 2010 Capital expenditure contracted related to the refurbishment of the lecture venues at Indumiso Hall, Pietermaritzburg Campus.

During the 2010 financial year the University received funding of R1 675 800 from the National Lottery Distribution Trust Fund for the Research of Curries and Surrounds Project ("ROCS") of which R1 39 284 was spent in the same year and R 506 250 in the 2011 financial year. The balance at the 2011 year end is R 1 030 266.

24.2 Operating lease commitments

The future minimum lease payments under operating leases are as follows:

	2011 R'000	2010 R'000
Not later than 1 year	6 393	19 285
Later than 1 year and not later than 5 years	7 310	2 374
	13 703	21 659

Operating lease commitments are in respect of rental agreements for residence properties, photocopy machines and other office equipment.

The average lease term for residential buildings is one to three years (2010: 1 to 3 years) with an average escalation clause linked to CPI (2010: CPI).

The average lease term for equipment is five years (2010: 5 years) with an average escalation clause of 10% (2010: 10%).

25 CASH GENERATED FROM OPERATIONS

Reconciliation of net surplus before taxation to cash generated from operations:

	2011 R'000	2010 R'000
Net surplus for the year	1 20 799	44 802
Adjustment for taxation	604	(1 316)
Net surplus for the year before tax	121 403	43 486
Adjustments for:		
Increase in retirement benefit obligation	8 884	36 983
Movement in employee benefit liability and provisions	(6 351)	(13 893)
Depreciation and amortisation	26 559	23 545
Loss on disposal of property, plant and equipment	210	4 095
Realised fair value loss on disposal of investments	(9 527)	(1 511)
Investment income	(37 861)	(33 481)
Finance costs	4 831	4 999
Operating surplus before working capital changes	108 148	64 223
Changes in working capital	(1 525)	(20 222)
- Receivables and prepayments	(32 804)	(27 594)
- Inventories	(262)	516
- Accounts payable and accruals	31 541	6 856
	106 623	44 001

26 RELATED PARTIES

Related parties exist between the University and its subsidiaries

NAME OF RELATED PARTY	NATURE OF RELATIONSHIP	NATURE OF TRANSACTION	TRANSACTIONS DURING THE YEAR		AMOUNT DUE FROM/(TO) RELATED PARTY	
			2011 R'000	2010 R'000	2011 R'000	2010 R'000
Maxelect Investments Proprietary Limited	Subsidiary	Interest received	(683)	(678)	-	-
		Rent paid	3 366	3 060	-	-
		Insurance paid	126	117	-	-
		Intercompany loan	(1 400)	-	23 042	23 633
Melrose Properties Proprietary Limited	Subsidiary	Rent paid	82	74	-	-
		Insurance paid	137	127	-	-
		Intercompany loan	(400)	-	4 212	4 474
Durban University of Technology Proprietary Limited	Subsidiary	Loans impaired	377	201	-	-
		Salaries re-imbursed (SEDA)	-	-	-	-
		Trade payables (Re-imbursed)	1 323	-	-	-
			-	-	(109)	-
DUT Guesthouse Proprietary Limited	Subsidiary	Loans impaired	31	123	-	-
Business Studies Unit	Division	Royalties received	-	(3 157)	-	-
		Trade payables at year end	-	-	1 350	-
		Intercompany loan	-	-	3 098	3 166

27 SENIOR MANAGEMENT COMPENSATION

The following disclosures relate to compensation paid to executive staff. Remuneration is based on the cost of employment to the University. These members of executive staff are considered to be key management personnel of the University.

Gross remuneration - 2011

DETAILS	OFFICE HELD	BASIC SALARY	EMPLOYMENT BENEFITS	OTHER ALLOWANCES	TOTAL COST
		R	R	R	R
EXECUTIVE MANAGEMENT:					
Prof A. Bawa	Vice Chancellor	1 624 104	278 815	122 000	2 024 919
Prof N. Gawe	Deputy Vice Chancellor - Institutional Support	1 301 520	381 596	183 822	1 866 938
Prof F.A. O. Otieno	Deputy Vice Chancellor - TIP	1 327 732	364 663	74 000	1 766 395
Prof N. S. Gwele	Deputy Vice Chancellor - Academic	1 359 156	163 823	2 000	1 524 979
		5 612 512	1 188 897	381 822	7 183 231
EXECUTIVE DEANS:					
Dr K. F. Netshiombo	Executive Dean - Arts	1 152 444	117 559	88 500	1 358 503
Prof T. N. Andrew	Executive Dean – Engineering	1 083 504	312 254	74 000	1 469 758
Prof T. Nepal	Executive Dean - Accounting & Informatics	1 029 100	284 907	2 252	1 316 259
Dr R. Balkaran	Executive Dean – Faculty of Management Science (Acting)	366 504	146 953	363 532	876 989
Prof D. Lortan	Executive Dean - Applied Sciences	1 000 264	315 399	2 000	1 317 663
Prof T. Puckree**	Executive Dean – Faculty of Health Sciences (Appointed April 2011)	732 720	199 204	2 000	933 924
		5 364 536	1 376 276	532 284	7 273 096
EXECUTIVE DIRECTORS:					
Ms N. Jappie*	Executive Director - Institutional Advancement	1 113 420	460 608	1 787 034	3 361 062
Prof R. L. Ngcobo	Executive Director - Midlands Campus	1 106 964	288 668	74 000	1 469 632
		2 220 384	749 276	1 861 034	4 830 694
GRAND TOTAL		13 197 432	3 314 449	2 775 140	19 287 021

* Ms N. Jappie : retrenchment effective as at October 2011.

** Prof T. Puckree: appointment effective as at April 2011.

27. SENIOR MANAGEMENT COMPENSATION (CONTINUED)

Gross remuneration - 2010

DETAILS	OFFICE HELD	BASIC SALARY	EMPLOYMENT BENEFITS	OTHER ALLOWANCES	TOTAL COST
		R	R	R	R
EXECUTIVE MANAGEMENT:					
Prof R. du Pre***	Vice Chancellor - Resigned	283 776	16 703	996 886	1 297 365
Prof A. Bawa****	Vice Chancellor	506 180	90 485	40 000	636 665
Prof N. Gawe	Deputy Vice Chancellor - Institutional Support	1 171 008	349 627	327 517	1 848 152
Prof F. A. O. Otieno*****	Deputy Vice Chancellor - TIP	896 823	226 604	54 000	1 177 427
Prof A. Jordaan	Deputy Vice Chancellor - TIP (acting)	823 992	278 416	30 912	1 133 320
Prof N. S. Gwele	Deputy Vice Chancellor - Academic	1 222 806	152 679	12 000	1 387 485
		4 904 585	1 114 514	1 461 315	7 480 414
EXECUTIVE DEANS:					
Dr K. F. Netshiombo	Executive Dean - Arts	1 038 312	104 405	246 333	1 389 050
Prof T. N. Andrew	Executive Dean - Engineering	1 014 120	295 689	85 423	1 395 232
Prof M. A. H. Wallis	Executive Dean - Management Sciences	1 089 504	35 046	347 120	1 471 670
Prof T. Nepal	Executive Dean - Accounting & Informatics	930 564	263 087	-	1 193 651
Prof D. Lortan	Executive Dean - Applied Sciences	904 836	289 483	-	1 194 319
Mr G. Bass	Executive Dean - Health Sciences (acting)	331 728	157 540	408 890	898 158
		5 309 064	1 145 250	1 087 766	7 542 080
EXECUTIVE DIRECTORS:					
Ms N. Jappie	Executive Director - Institutional Advancement	1 043 112	290 509	48 000	1 381 621
Prof R. L. Ngcobo	Executive Director - Midlands Campus	1 035 516	274 083	72 000	1 381 599
		2 078 628	564 592	120 000	2 763 220
GRAND TOTAL		12 292 277	2 824 356	2 669 081	17 785 714

*** Prof R. du Pre: resignation effective as at February 2010.

**** Prof A. Bawa: appointment effective as at September 2010.

***** Prof F. A. O. Otieno: appointment effective as at April 2010.

28 COUNCIL COMMITTEE COMPENSATION

Payments for attendance at meetings of the Council and its committees

2011

TO WHOM PAID	NUMBER OF MEMBERS	ATTENDANCE AT MEETINGS AGGREGATE AMOUNT PAID	RE-IMBURSEMENT OF EXPENSES AGGREGATE AMOUNT PAID
Chair of Council	1	12 000	-
Chairs of Committees	5	41 000	7 688
Members of Council	17	91 750	5 359
MEMBERS OF COMMITTEES	23	144 750	13 047

2010

TO WHOM PAID	NUMBER OF MEMBERS	ATTENDANCE AT MEETINGS AGGREGATE AMOUNT PAID	RE-IMBURSEMENT OF EXPENSES AGGREGATE AMOUNT PAID
Chair of Council	1	12 000	2 077
Chairs of Committees	3	32 750	4 287
Members of Council	15	101 633	8 566
MEMBERS OF COMMITTEES	19	146 383	14 930

29 EVENTS SUBSEQUENT TO YEAR-END

No material fact or circumstance has occurred between the year-end and the date of this report.

30 COMPARISONS

Certain comparative figures have been changed due to reclassifications. These changes are not considered material and have been made to achieve fair presentation.

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THIS REPORT WAS COMPILED BY THE DIVISION OF CORPORATE AFFAIRS

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