Stellenbosch University (SU) has set itself the vision to be established as a leading research-intensive university on the African continent by pursuing excellence and remaining at the forefront of its chosen research focal areas, by gaining national and international standing on the basis of its research outputs, by being relevant to the needs of the community, and by being enterprising, innovative and self-renewing.

In 2011, the official 2010 research output data received from the Department of Higher Education and Training (DHET) again confirmed SU’s standing as the most research-productive academic institution at the national level. The weighted research output per SU staff member (publications and postgraduate students) was 2,37 the highest of all universities in the country for the third year running. There has been a further shift towards publication in international journals, with 72,5% of our accredited journal articles published in international journals. The amount in DHET subsidy on books and chapters in books, and on conference proceedings received by the University increased by 25,5% and 24,5% respectively from 2005 to 2010.

Significant contributions to the four institutional focuses have been made through the provision of professional support services to the University’s research community by the Division for Research Development (DRD), the Library and Information Services (LIS), and the Postgraduate and International Office (PGIO).

**RETENTION AND BROADENING OF OUR INSTITUTIONAL KNOWLEDGE BASE**

The centre of responsibility’s main contributions to this focus include:

- the development and management of research partnerships with industry and government;
- the building of international academic networks; and
- facilitating access to resources to support research and postgraduate training.

These contributions are of course also inextricably linked to the institutional focus on sustainability and student success particularly at postgraduate level.

The DRD is responsible for the management of all research and research-related contracts, as well as formal partnerships with national government agencies and the science councils. A total number of 650 new research contracts were processed in 2011. The research contracts signed in 2011 amounts to a total monetary value of R465 million, with several contracts still in negotiation to be finalised soon. Through THRIP (the Technology and Human Resources for Industry Programme) our partnerships with industry were further strengthened through the submission of 42 THRIP funding applications from SU, resulting in a submission success rate of 98% and additional funding of R16,5 million awarded to SU.

The DRD also facilitated the submission of 14 new proposals for European Union (EU) funding – a competitive funding programme which requires strong international research partnerships. The total number of successful EU proposals involving Stellenbosch University researchers in 2011 was 27, representing a total grant income of ca €5,3 million. The DRD also played a key role in the submission to the National Research Foundation (NRF) of 47 proposals in response to the call for 62 new SARChI chairs at national level, of which the outcome is pending. It also facilitated the submission of four proposals to the Department of Science and Technology’s (DST) Global Change, Sustainability and Society (GCSS) call in 2011, of which three were successful, totalling a grant income of ca R15 million over the next three years.

The retention and expansion of our knowledge base also depends on building on our reputation as a research partner of choice. The annual institutional research report, Research@Stellenbosch, as well as a video compiled by the DRD on research at SU, received excellence awards at the 2011 MACE (Marketing, Advancement and Communication in Education) conference. The DRD also played a key role in the successful co-hosting, with the University of Cape Town and the University of the Western Cape, of the DST Minister’s budget speech dinner in 2011.

The Postgraduate and International Office (PGIO) supports international staff and student mobility. The Confucius Institute at Stellenbosch University also forms part of the PGIO and saw the appointment of a new Director this year and the expansion of its activities, which are focussed on promoting Chinese language and culture in the broader Stellenbosch community in collaboration with the University’s Schools Partnership Initiative.

Joint and double degree programmes were expanded to the master’s level. A double degree in German offered by the University of Leipzig and Stellenbosch University saw its first intake of students, and further joint PhDs were approved or are in the pipeline. Outgoing student mobility was increased, with postgraduate participation outnumbering undergraduate participation. Stellenbosch was part of three Erasmus Mundus Action 2 programmes in the first award cycle for postgraduate scholarships to
South African students. These programmes were Sapient (coordinated by Radboud University, Nijmegen), ema2sa (coordinated by KU Leuven) and EUROS A (coordinated by the University of Antwerp).

Forty-three Stellenbosch University students attended 12 different summer schools globally, of which the AC 21 Student Forum, the Lott Summer Fellows Institute (University of Mississippi) and the Natural Science Summer School (University of Hohenheim) were new additions to the menu. Locally, the Global Citizenship project was launched to enhance awareness about internationalisation in higher education and the possibilities for study abroad amongst local students. New exchange agreements focused on partnerships with institutions in the USA and Asia. Seven tailor-made international programmes served 100 visiting students from various institutions, among them two new programmes for Rensselaer Polytechnic Institute and the University of Warwick, in close collaboration with the Faculty of Engineering and the Division for Community Interaction respectively.

The PGIO facilitated an application for funding for the Transdisciplinary Training for Resource Efficiency and Climate Change Adaptation in Africa (TRECCAfrica) consortium (see page 79). The application was successful and sees the establishment of a major new African network in which Stellenbosch University is the leading institution. TRECCAfrica is a European Union intra-ACP (Africa, Caribbean and Pacific) academic mobility programme that creates a framework for postgraduate study opportunities for 72 postgraduate students, as well as active academic collaboration addressing climate change and resource depletion in Africa. Both the DRD and PGIO have played instrumental roles in the USAID-funded Periperi U, the Partners Enhancing Resilience to People Exposed to Risks network, creating a platform for university partnership to reduce disaster risks in Africa, with a special focus on advancing university action on the reduction of risk and vulnerability (see page 66).

The Library and Information Services (LIS) has successfully established the new Research Commons in the JS Gericke library, in support of the institutional academic endeavour, and in particular collaborative and postgraduate research. This world-class facility was officially opened in May, and named as the Carnegie Research Commons in November 2011. The naming ceremony also celebrated the University’s century-long relationship with the Carnegie Corporation of New York. Several search strategy and author workshops were presented through the LIS, within the ambit of an existing Stellenbosch University/Elsevier partnership aimed at promoting research outputs and postgraduate training.

At the heart of the LIS’s service is its aim to acquire resources and tools to grow, sustain and manage research output at the institution. The number of electronic journals in the collection increased from 51 100 titles to 60 900. Electronic books increased from 7 600 titles to 8 900. The Elsevier partnership has provided the University with online content and events to promote quality scholarship at the institution. In May, participants attended The changing landscape of academic research and publishing workshop to discuss trends in academic research and how to publish in international journals. In July the Library hosted a Research Performance Evaluation workshop to explore and benchmark the University’s research strengths.

The LIS hosted an open access seminar in October. Eleven open access journal titles were launched that will be published via the SUNJournals project. In keeping with the principle of openly sharing the University’s research output, the Library has exponentially grown its institutional repository, SUNScholar: The repository now has almost 16 000 items. Earlier this year the Library applied for and was granted funding from the University’s Strategic Fund to develop an Open Access Fund for the institution. This Fund is used to support Stellenbosch University researchers publishing in open access journals.

DIVERSITY OF STAFF AND STUDENTS

In close collaboration with the faculties, the new Mellon Early Research Career (MERC) development programme was launched by the DRD in 2011, formally linking up 60 young researchers with experienced research mentors. The aim of this programme is the development of a next generation of research-productive academics, which will be more representative of our country’s demography. A successful suite of skills-development workshops and symposia were also offered by the DRD, PGIO and LIS, focusing on the development of generic research skills for postdoctoral fellows and academic staff, which will also contribute to the rejuvenation and diversification of our researcher corps.

STUDENT SUCCESS

Initiatives undertaken in 2011 by the PGIO and LIS strongly supported student success, across the full student spectrum (in the case of the LIS), but also in particular at postgraduate student level, which is the dedicated focus of the PGIO.

Through the PGIO, the postgraduate portal (Stellenbosch Postgrad) was officially launched in 2011, and the website for prospective postgraduate students has added value to and simplified the postgraduate student application process. Postgraduate skills development courses and interventions were placed within a coordinated postgraduate development plan called on track. Through this plan, postgraduate students are gaining access to an unprecedented offering of courses, seminars and workshops that are generically focussed on the core skills required to successfully complete a research degree.

The Postgraduate and International Student Funding (PGISF) office in PGIO administers departmental and
private bursaries, scholarships from national funding bodies (e.g. the NRF and the CSIR) and substantial scholarships from the HB Thom Trust, the Harry Crossley Trust and the Wilhelm Frank Trust. A total of R14.2 million was awarded to postgraduate students from central University funds, of which R5.3 million was awarded as support scholarships based on financial need.

The LIS has officially launched the Learning Commons, developed to support student-centred learning, as a HOPE Project initiative on 16 February 2011 (see page 9). Since becoming operational, the Learning Commons has proven itself to be a resounding success, with thousands of students visiting the facility. The Research Commons, opened in May, provides dedicated space for postgraduate students. The availability of these areas makes an important contribution to the success of both undergraduate and postgraduate students. Complementing the investments that were made with the construction of the Learning and Research Commons, excellent progress was made with the further development of information literacy programmes by the LIS, aimed at increasing the student throughput rates and research outputs. A total of 160 training sessions were conducted during 2011, attended by 4,072 students.

A successful postgraduate training programme was also developed.

**SYSTEMIC SUSTAINABILITY**

In addition to several aspects related to sustainability already reported above, the centre of responsibility has made a number of contributions in support of systemic institutional sustainability. In collaboration with the Finance Division, the DRD facilitated successful audits by USAID and NUFFIC, allowing direct research grant funding to the University by these funding agencies in the future. The two divisions also jointly played a leading role in the national discussion on the implementation of the full costing of research projects.

An institutional research integrity officer (RIO) was appointed by the DRD in 2011. This post will strengthen the Division’s mandate to promote and advocate responsible and ethical research practices, which are vital to the sustainability of the institutional research endeavour.

An institutional procedure for the investigation of research misconduct was approved by the SU Senate and Council in order to address potential research-related reputational and financial risks.

**8. Institute for Mathematics and Science Teaching**

The Institute for Mathematics and Science Teaching (IMSTUS), which was established in 1977, was included formally as a hope-creating initiative of the HOPE Project in 2011. IMSTUS runs an extremely successful bridging programme, SciMathUS. A structured programme, this offers 100 matriculants from previously disadvantaged schools who do not meet the requirements for higher education, but nevertheless show potential, a chance to improve their Grade 12 marks in Mathematics and either Physical Sciences or Accounting. By providing a year of intensive teaching, the programme creates the opportunity for students to gain access to the University. In the programme, presented in both English and Afrikaans, the students also acquire other skills – such as life skills, study and thinking skills, computer literacy and academic language skills. The programme boasts a pass rate of 100% and to date has produced more than 600 graduates. Many of them have become doctors, physiotherapists, engineers, teachers, bookkeepers or fund managers.