The June exams are over and mid-year graduation took place on 12 June with 134 EBE students graduating, including six PhDs and 65 Masters students.

One of the Faculty’s strategic priorities for 2009 is to raise the profile of safety, health and the environment. We will be holding a faculty-wide Safety Week from 27-31 July where each department arranges a safety programme which is relevant to their discipline. John Holt, Head of Safety for Anglo American plc, will address staff and students on safety issues and what students should know before they enter the workplace.

I am pleased to report that the Department of Education has agreed to fund R80 million towards the development of a new engineering building and R27.2 million for the retrofitting of the Centlivres Building which houses the School of Architecture and Planning, and the Department of Construction Economics and Management. These new developments will assist us in alleviating space constraints and ensure that our students continue to have access to world-class facilities.

The Faculty will be embarking on a major fundraising campaign for the balance of the funding. We hope to start the development of the new building in early 2010.

The Department of Education is also donating R5 million towards a Chair in Nuclear Engineering, which will assist us in attracting a world-class academic to develop and run the programme.

In May I hosted a breakfast for the Western Cape government and industry partners to update them on the new developments in the Faculty and to discuss the development of strategic partnerships. One of the areas discussed was how to attract and retain good academic staff. I suggested that our future approach could include secondment of staff, a dual appointment system or temporary exchange of staff from industry.

I greatly value these interactions and look forward to ongoing discussions.

Recently, the press has reported on various higher education institutions that are experiencing a range of problems in their academic departments. We wish to assure you that all the programmes offered in the Faculty are locally and internationally accredited. The departments continually look at their curricula and update or restructure where necessary. High profile members of industry and government sit on our advisory boards and play an active role in guiding us with these changes.

In each newsletter we will update you on a particular department in the Faculty.

Best wishes

FW Petersen
Dean: EBE

On the 16th of May we were delighted to host Clem Sunter as part of our Values and Culture programme. Clem very kindly gave up his time to come and talk to staff and students on: “The World and South Africa in 2010s – latest scenarios.” In his conclusion he said that South Africa is not a bad place to be during these hard times and that as South Africans – we need to celebrate EXCELLENCE!

The Values and Culture project is another 2009 strategic priority for the Faculty. A programme arranged for staff and students to develop a set of shared values in order to create an enabling environment where everyone feels welcome and wants to stay.
PORTIA GAMA: ALUMNI EBE POSTGRADUATE SCHOLARSHIP STUDENT IS A RISING STAR

Portia Gama was the first recipient of the Alumni Postgraduate Scholarship which was established in 2007 by Dr Mthembu. She graduated in 2008 with a BSc in Electrical Engineering from UCT and this year she is doing her Masters in Engineering Management.

Portia has been active in student societies on campus. In 2007 she was the chair of the EBE Undergraduate Student Council and she was elected onto the 2009 SRC as the Secretary General.

As a SADC student (she is from Swaziland), Portia has found there is very little funding available to further her studies.

“I am so grateful for the scholarship which will go towards my fees and hope that one day I will be able to do the same for a postgraduate student in need,” she said.

DEPARTMENTAL PROFILE: THE DEPARTMENT OF CONSTRUCTION ECONOMICS AND MANAGEMENT

The medium to long-term outlook for the department is excellent, with a major (R40 million) refurbishment of the facilities planned for implementation in two years’ time.

The department offers degree programmes in the fields of construction, property, quantity surveying and project management. All programmes are accredited both locally and internationally by professional institutions.

Keeping up with local and international trends, the department’s curricula were recently restructured to the 3+1 model (BSc followed by one year BSc Honours) which has had two beneficial effects:

- It enabled a radical revision of content to occur that brought the programmes into alignment with modern trends in the field;
- It allows students to enter the Honours year with a complete undergraduate record and thus enables the department to teach Honours students using a challenging research-led approach.

The Faculty has responded positively to the substantial growth in student numbers in the department from 273 in 2000 to 653 in 2008, by increasing the staff complement by 50% over the past four years.

The department adopts excellent teaching practices and supports this through the inclusion on the staff of a dedicated Academic Development Lecturer. The function of this staff member is to analyse throughput and output data to ensure that the courses with high failure rates are identified, that the causes are understood, and that solutions are developed in conjunction with the head of department and lecturers concerned. Such solutions may range from specific support interventions to reconsideration of the curriculum.

All such decisions are considered by a full Programme Committee, which comprises the programme lecturers, service course lecturers, student representatives, industry representatives and external examiners (the latter comprising one international academic and a local practitioner).

The department was recently visited by the President of the Royal Institute of Chartered Surveyors, Mr Peter Goodacre, who commented that the department is “up there with the best in the world”.

CHANCELLOR’S CHALLENGE MAKES A DIFFERENCE

The Chancellor’s Challenge Scholarship Programme has its roots in UCT’s 175th anniversary in 2004, when the call first went out to all members of the UCT community to help raise funds to put needy students through university.

Thanks to generous donations from many of our alumni, the EBE Faculty received R176 000. Heads of departments were invited to nominate one postgraduate student to receive a Chancellor’s Challenge scholarship.

The students were nominated on the basis of academic merit and financial need. Only full-time, postgraduate students were nominated from any postgraduate degree programme in the EBE Faculty. The award was not restricted to South African students and staff were asked to consider SADC students, who find it extremely difficult to secure bursary funding.

THE RECIPIENTS ARE:
Chemical Engineering:
Patrick Mogorosi

Civil Engineering:
Vandy French

Construction Economics:
Nthatisi Khatleli

Geomatics:
Bolelang Sibolia

Mechanical Engineering:
Portia Gama

Vandy French (pictured below) is from Sierra Leone and is in the second year of his Masters degree in Civil Engineering. He expressed his delight at being one of the students selected.

“I am very appreciative and honoured by this scholarship. It has taken care of my financial worries and I am now able to concentrate on completing my degree.”

Vandy French.
In May, the Faculty held its first awards evening as the guest speaker. Students were recognised for their excellent academic achievements and for their involvement in development and the upliftment of others.

Mike Marsden from the City of Cape Town said: “The achievements of the students are very inspiring. The City will continue to support this event”.

Benjamin Lunsky received the ECSA medal for the best student graduating with the degree of BSc(Eng) in 2008. Benjamin also received a Cape Town Corporation Medal and the fourth year class medal.

The Faculty values and recognises the contribution students make to development and the students awarded the special faculty awards have shown extraordinary commitment to social responsiveness. They are:

- Naadiya Moosajee, who, together with Mabohtlane Mampuru, started South African Woman in Engineering (SAWOMeng) – a student-run organisation based at UCT. Its main aim is to promote the retention of women in engineering by starting at grass root levels and attracting females into the field through what is called the Girl-Eng initiative.

- Brennan Hodkinson, who has been committed to starting a UCT branch of Engineers without Borders (EWB). EWB is an international association with member groups all over the world who share a similar mission, which is to partner with disadvantaged communities to improve their quality of life through education and the implementation of sustainable engineering projects.

- Malebogo Ngoepe, who developed the South African Science Foundation for Youth which aims to increase the number of students opting to pursue science-related careers in South Africa.

Michael Tladi received a special faculty award in recognition of a student who has overcome all odds to graduate. Michael joined the Faculty through the Foundation Programme in 2001. He was abandoned from the age of five and grew up on the streets but determination and the realisation that education is the key to success, motivated Michael to move from the streets to graduate from UCT with a BSc in Electro-Mechanical Engineering. Michael was honoured with the award and said: “This award has brightened my day and regenerated my soul’s smile.”

He is presently working for the Western Cape Government in the Department of Transport and Public Works.

The EBE’s Danielle Reimers took top honours at the recent Corobrik regional finals with her entry entitled ‘Khayelitsha – a playground for change and exchange.’ Danielle proposes a public space to support community activity and events in the township of Khayelitsha.

“My thesis was sparked by a perception that townships are dangerous and criminal places so I chose to develop a sense of spatial and social integration between Khayelitsha and Cape Town that will ultimately open up the township with the rest of the Cape Metropol,” she said.

The annual EBE Cultural evening is organised by the EBE postgraduate student council to celebrate the diversity in the Faculty.

Staff and students dress in their traditional dress and enjoy foods from different countries and are entertained with music, song and dance. One of the highlights of the evening this year was Professor Mike Inggs (pictured above right) from Electrical Engineering, who participated with bagpipes and drums. Mike has performed at the Edinburgh Tattoo and is a member of the Drums and Pipers of the Cape Town Highlanders.
SASOL ADVANCED FUELS LABORATORY AT UCT

Researchers from the Sasol Advanced Fuels Laboratory (SAFL) at the University of Cape Town are using and developing the most advanced technologies to find out exactly what makes Sasol fuel so special.

“We know Sasol fuels are different, but we want to know exactly why,” explains Professor Andy Yates, head of the SAFL. “We are also developing the fuels of the future. Clean-burning, synthetic fuels are the obvious next step as crude runs out.”

In 2002, Sasol approached UCT to move its future-focused research group onto the UCT campus. The company bears the entire cost of the laboratory. This has been a success, with UCT’s engineering department enriched by the lecturers and researchers in the laboratory while laboratory staff benefit from being able to publish their findings in mainstream academic journals.

On Friday, 26 June 2009, Sasol’s technology and innovation group business, Sasol Technology, opened a R70-million fuels application centre in Muizenberg. This will compliment the work done at the SAFL.

An afternoon’s testing can lead to three weeks’ analysis for the researchers to be able to interpret and understand what they have seen.

The work of SAFL is not only of interest to Sasol in its national and international operations.

“We can’t do this kind of work in isolation,” Prof Yates explains. “We work in partnership with engine manufacturers such as Daimler for the truck and car engines as well as Rolls Royce, General Electric Pratt and Whitney and Honeywell for the jet engines we are using to test the Sasol jet fuel.

“The jet engine manufacturers are under huge pressure to clean up their emissions, and they are really excited about the potential offered by Sasol’s synthetic jet fuel. It will allow them to maintain their safety and reliability and there’ll be no need for a change in engine design.”

According to Prof Yates, the real heroes at SAFL are the students whose cutting edge research is helping to establish the laboratory as a world leader in its field.

TEACHERS’ MINING RESOURCE PACK DEVELOPED IN PARTNERSHIP WITH INDUSTRY

Staff in the Department of Chemical Engineering have developed a Mining Resource Pack for grade 11 science teachers to assist them in teaching the new knowledge area of Chemical Systems, which in grade 11, focuses on Mining and Minerals Processing. Teachers do not have previous teaching experience in this field and have welcomed the development of the pack.

Rene Toerien, herself a former science teacher, has been working with teachers, subject advisors, academic staff and industry to produce the resource pack. The material has been tested at schools and modified to ensure it meets the curriculum and the teachers’ needs.

The pack includes posters, research material for learners, curriculum material and four DVDs which cover six lessons, mining footage for learners to experience the mining environment and other teaching aids.

Rene is working with provincial Departments of Education to get the resource pack distributed to all schools. She is running workshops across the country for subject advisors on the material so they can assist the teachers in their areas.

The development of this material has taken two and a half years and been funded by Anglo Platinum, Anglo American, Anglo Coal and Kumba Iron Ore.

Margaret van der Berg (Anglo American), Rene Toerien, Paul Dempsey (Anglo American), Francis Petersen (Dean of EBE), Jenni Case (Chemical Engineering) and Neville Plint (Anglo Platinum).