

Welcome to EBE

The Faculty of Engineering & the Built Environment (EBE) takes pride in its people – most especially its students, who become sought-after architects, planners, quantity surveyors, property valuers and professional engineers in a variety of areas, whether electrical, chemical, mechanical, electro-mechanical, civil, computer engineering or mechatronics.

Did you know?

- 1 In August 2015, faculty staff and students broke the world record for the greatest altitude achieved by a water rocket.
- 2 The faculty is home to 19 active research groups that span such diverse subjects as African urbanism, fuel cells, minerals and metals, and alternative energy.
- 3 EBE will soon be host to the Future Water Institute, a transdisciplinary research space that aims to address the water issues facing South Africa.
- 4 The faculty offers top-class infrastructure and equipment, giving students opportunities to explore many different areas of specialisation and research, and, ultimately, varied and fulfilling careers.



“At the heart of our vision is the desire to foster strong analytical skills, practical ingenuity and creativity, good communication and high ethical standards and professionalism, as well as the ability to be lifelong learners. One of the core aspects of our vision as a faculty is to develop outstanding graduates and scholars, who contribute to society and address socioeconomic challenges through their work. I believe that our UCT graduate engineers and professionals of the built environment are ideally equipped to rise to the complex challenges and global problems of the 21st century.”

PROF ALISON LEWIS
Dean of Engineering & the Built Environment


Opportunities

Drawn by the many exciting study options at undergraduate and postgraduate level, students from over 40 countries make up the EBE faculty's student body.

Undergraduate applications open in April of each year (students need strong academic results, particularly in mathematics and physical science). Postgraduate students can apply throughout the year (unless applying for taught master's degrees).

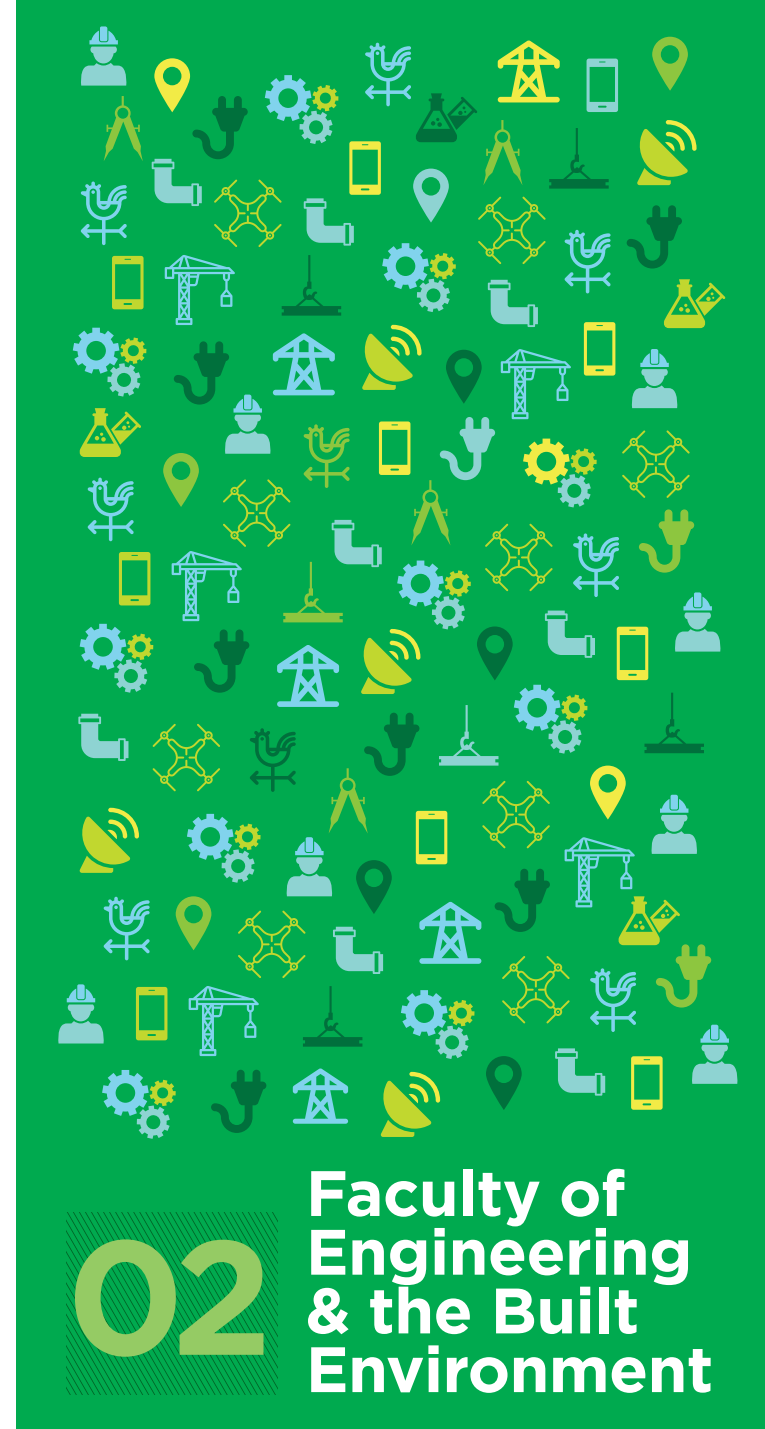
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Apply to study at UCT applyonline.uct.ac.za



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Faculty of Engineering & the Built Environment



UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

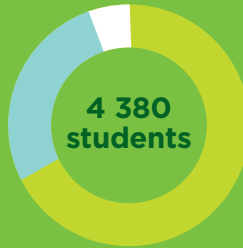
4 800+ people



A diverse student body



- 2 972 undergraduate (68%)
- 1 200 postgraduate (27%)
- 208 PhD students (5%)



World-renowned teaching staff

232

academic staff (54%)

199

professional, administrative, support and service staff (46%)



State-of-the-art facilities

EBE laboratories make use of the latest industry standards to support modern teaching and learning.



Internationally recognised research

EBE research is recognised for its relevance to the needs of industry, and offers great opportunities for postgraduate students.

19 active research groups



51 National Research Foundation-rated staff members

7 SARCHI chairs*



9 patents



60 filed patents

R135.42 million valued research contracts per year

Spin-off companies include DroneSAR, HyPlat, Hot Platinum and Elemental Numerics.

*The Department of Science and Technology and the National Research Foundation fund research positions (called SARCHI chairs) at universities across South Africa in order to strengthen the country's ability to produce high-quality research, innovation and students.

Six departments



Architecture, Planning and Geomatics offers degrees that give graduates access to career opportunities in architecture, landscape architecture and urban planning. Geomatics involves the integrated measurement, analysis and management of spatial data.



Chemical Engineering focuses on teaching students the instrumental processes of converting raw (and sometimes recycled) materials into finished products. Graduates gain access to careers in the chemical, metallurgical and process industries.



Civil Engineering offers a fully integrated undergraduate civil engineering programme comprising up-to-date courses in all the traditional branches of civil engineering, such as structures, steel and concrete materials, geotechnics, hydraulics, water supply, wastewater treatment and transportation.



Construction Economics and Management aims to produce graduates with theoretical, entrepreneurial and business skills that will ensure their leadership positions within the construction, property and built environment industries.



Electrical Engineering has three programmes. Electrical engineering covers both "light current" electronics and "heavy current" power. Electrical and computer engineering is an interdisciplinary branch combining electrical and computer science. Mechatronics is an interdisciplinary branch that combines electrical and mechanical engineering.



Mechanical Engineering has two programmes: mechanical and electro-mechanical engineering. The programme is structured around the study of mathematics, physics, chemistry, materials, mechanical engineering, basic electrical engineering, the design process and management studies.

Research

The complex challenges facing Africa and the global community – water scarcity, alternative energy, urbanisation and sustainability – demand collaborative solutions. The EBE faculty houses a number of interdisciplinary research units concentrating on these challenges.

- 1 **African Centre for Cities** focuses on the dynamics of unsustainable urbanisation processes in Africa, with an eye on identifying systemic responses.
- 2 **The Energy Research Centre** provides research, education and capacity building programmes in areas of energy technology, policy and sustainable development.
- 3 **HySA/Catalysis** is tasked with the establishment of a technical and scientific base for distinctly South African contributions to global hydrogen and fuel cell technology know-how.
- 4 **Future Water** seeks to generate new ways of managing water that meet the needs of all South Africans.



"My ultimate goal is to confront Africa's electrification challenges by running a solar technology distribution company – Hope Rises Solar – managed by women in rural areas to electrify at least one million households in ten years. After completing the Mandela Washington Fellowship, I will continue my work in growing Africa's renewable-energy sector, while building my organisation that brings light and clean energy to Africa's darkest countries."

ADELE BOADZO

2015 electrical engineering master's graduate, selected as a 2016 Mandela Washington Fellow