

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.



“The Fourth Industrial Revolution will bring unique opportunities for engineering and built environment professionals to address environmental issues and redesign how we manage our global environment.

To deal with the changes, the faculty must take responsibility for preparing our students for the new world of work. New jobs will be created in the areas of architecture, engineering and the built environment. Intelligent cities, artificial intelligence, autonomous vehicles, drones, the internet of things, 3D printing, biotechnology – all provide exciting new research opportunities.

We are developing new curricula and upskilling staff to prepare graduates to be innovative and creative and have the skills they need to succeed and adapt to ongoing technological change.”

PROFESSOR ALISON LEWIS
Dean of Engineering & the Built Environment

Did you know?

- 1 EBE is host to Hy/SA Catalysis, a national hydrogen and fuel cells technologies flagship project.
- 2 The faculty is home to 20 active research groups that span such diverse subjects as African urbanism, fuel cells, minerals, biomedical engineering, robotics and alternative energy.
- 3 Future Water is a transdisciplinary research space that aims to address the water issues facing South Africa.
- 4 The African Centre for Cities is an interdisciplinary research and teaching programme focused on quality scholarship regarding the dynamics of unsustainable urbanisation processes in Africa, with an eye on identifying systemic responses.
- 5 ShanghaiRanking's Global Rankings of Academic Subjects 2017 placed UCT's mining and mineral engineering in 8th position.

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Apply to study at UCT
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Faculty of Engineering & the Built Environment



UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

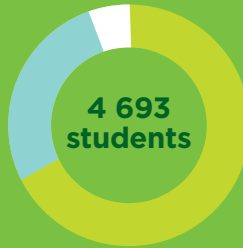
5 000+ people



A diverse student body



- 3 256 undergraduates (69%)
- 1 199 postgraduates (26%)
- 238 PhD students (5%)



World-renowned teaching staff

242

academic staff (55%)

201

professional, administrative support and service staff (45%)



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.

20 active research groups



66 National Research Foundation-rated staff members

7 SARCHI chairs*



25.5% increase in accredited journal output units in 2017

R180.93 million in research income

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 prepares students for lifelong professional growth and a dynamic range of careers. The fundamentals of science and the principles of process engineering are integrated into multidisciplinary teaching and research programmes aimed at producing world-class graduates and internationally competitive research.



Civil Engineering prepares graduates for the planning, design, construction and development of building and infrastructure projects, the management and distribution of water resources, the optimisation of traffic and transport services and the creation of sustainable and energy-efficient cities and communities.



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 offers three creative and stimulating degree programmes where students learn to solve known problems and conceive responses to challenges that have not yet been recognised. New technologies and applications, once unimaginable and achieving what once seemed impossible, are emerging every day.



Mechanical Engineering offers two well-recognised degrees, excellent research facilities and collaboration with world-class departments. A wide range of research opportunities that are addressing global challenges are available – from bioengineering and energy efficiency to robotics, computational fluid dynamics and many more.

Research

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

EBE RESEARCH: MAKING THE WORLD A BETTER PLACE



WATER

Future Water
Urban Water
Waste Water
Bioprocessing
Crystallisation and Precipitation



URBANISATION

African Centre for Cities
Informal Settlements
Low-cost Housing
Transport
Spatial Planning



ENERGY

Energy Research Centre
Energy Efficiency
Fuel Cells
Radar
Renewable Energy



INNOVATION

Bioengineering
Materials
Robotics
Spin-off Companies
Patents



INFRASTRUCTURE

Transport Planning
Urban Environmental
Land Surveying
Environmental and Process Systems
Telecommunications



ENVIRONMENT

Sustainable Mining
Acid Mine Drainage
Green Buildings
Sustainable Cities
Renewable Energy
Climate Change



#WomenInEngineering

"There's no monopoly on who can excel in the engineering field. Women's insight and creativity can be a great advantage."

ZARMEEN GHOOR

Civil Engineering master's student