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, land surveyors, GIS specialists, 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. The Menzi Design Laboratory is a space for students and researchers to transform their ideas into prototypes and IP, and ultimately take them into production.
2. In a novel transdisciplinary project researchers in electrical engineering are using robotics and AI to monitor the health status of wildlife – a game-changer for the fields of ecology and conservation management in South Africa.
3. The departments of Civil, Chemical and Electrical Engineering are working together with Oceanography, to unravel the complex processes in the Antarctic marginal ice zone.
4. The S+CUBE team in the Department of Construction Economics and Management collaborates with local experts across the architectural, engineering, energy and humanities disciplines to design national net-zero sustainable innovative affordable net-zero houses for different climatic zones in South Africa.
5. In the 2022 annual QS World University Rankings for engineering and technology, UCT was ranked as the best engineering university in South Africa.

"The fields of engineering and the built environment are constantly evolving and changing. In EBE, we aim to stay ahead of the curve and prepare students for the future.

Engineers and built environmental professionals need a deep understanding of the human experience and a keen awareness of how technology affects it. To imagine, create and sustain the future for generations to come, our students will put themselves in the shoes of the people they are designing for to understand their needs and how they interact with the world around them.

Interdisciplinary collaboration provides unique opportunities, and EBE researchers work in partnership with chemists, physicists, microbiologists, lawyers, doctors, sociologists, and social anthropologists. The work in the faculty ranges from health to energy, sustainable housing, circular economy, robotics and AI, water scarcity, and so much more."

PROFESSOR ALISON LEWIS
Dean of Engineering & the Built Environment

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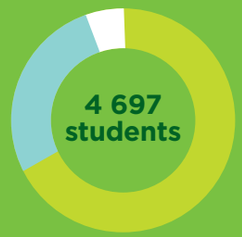
Faculty of Engineering & the Built Environment

UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

5 000+ people

A diverse student body

- 3 166 undergraduates (67%)
- 1 282 postgraduates (27%)
- 249 PhD students (5%)



World-renowned teaching staff

264 academic staff (55%)

176 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	**63** National Research Foundation-rated staff members	8 SARChI chairs*
R21.8 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

IMAGINE. CREATE. SUSTAIN.

WATER
- Future Water
- Urban Water
- Waste Water
- Bioprocessing
- Crystallisation and Precipitation

URBANISATION
- African Centre for Cities
- Innovative affordable housing
- Building future cities
- Transport
- Spatial Planning

ENERGY
- Energy Efficiency
- Fuel Cells
- Radar Renewable
- Renewable Energy
- Reduced carbon footprint

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
- E-waste
- Climate Change

"I chose engineering because I wanted to be a part of creating Afrocentric technology solutions that help make technology more accessible in our country."

KHAYA MXENGE
Mechatronics graduate