

engineering

BUILDING

The course is structured to provide a career-oriented technological education and to prepare students for supervisory level employment in the construction management, quantity surveying and allied industries in the built environment.

CARTOGRAPHY

This field involves the design, production and revision of maps. A graduate would be employed by concerns such as the Chief Director of Surveys and Mapping, municipalities, land survey offices, air survey companies and the SA Navy. The work involves the collection of spatial data, analysis of air photographs and computerised mapping and data processing with geographic information systems.

CHEMICAL ENGINEERING

This field of study is concerned with converting raw materials into products with a higher economic value through physical, thermal and chemical changes. In South Africa, chemical engineers are largely involved in the manufacturing of liquid fuels and chemicals from coal, petroleum refining, the manufacture of fertilisers, cement, explosives, plastics, a variety of fine chemicals and recovering valuable minerals from ore. Chemical Engineers are increasingly involved in solving environmental problems related to air and water pollution, and industrial solid waste.

CIVIL ENGINEERING

Civil Engineering is divided into two basic activities: planning and design on the one hand, and construction and maintenance on the other. Typical projects include bridges, dams, building structures of all descriptions, railways, roads, harbours, sewers, pipelines, etc. A graduate would provide in-depth support to the engineering team.

CLOTHING MANAGEMENT

This course equips students to work effectively in various technical and management positions in both the manufacturing and retail sectors of the clothing industry in South Africa and abroad. Graduates are often employed as clothing technologists, clothing buyers and planners, production managers, quality managers, work study officers, product developers, stylists and technical training managers.

ELECTRICAL ENGINEERING

This challenging field is the driving force behind the technological age. A graduate would work in one of the following specialist fields: Communication Electronics (radio, television), Industrial Electronics (automation, robotics), Power Engineering (generation, distribution)

or Computer Systems (hardware, software, networks and embedded systems).

INDUSTRIAL ENGINEERING

This field involves productivity, i.e. the best utilisation of men, machines, space, materials and money. A graduate is usually employed by manufacturing firms. The industrial engineer would undertake investigations and advise management on systems, manufacturing models, plant layout, materials handling, production control, purchasing and stock control, quality control, work standards, industrial economics, integrated manufacturing and logistics management.

MARITIME STUDIES

As an officer you are employed by the Merchant Navy as a Navigator. The tasks include navigating duties, supervising cargo operations in ports and maintaining the safety equipment. This qualification is recognised internationally and provides the opportunity for young South Africans to sail as a Navigating Officer, and ultimately Ship's Master, world wide.

MARINE ENGINEERING

A marine engineer is an officer employed by the Merchant Navy. The tasks include Marine Engineering watchkeeping duties, programmed maintenance of the marine engineering propulsion plant and its auxiliary equipment. This qualification is recognised internationally and provides the opportunity for young South Africans to sail as an Engineer Officer, and ultimately Chief Engineer Officer, world wide. Students qualifying as a Chief Engineer Officer may register with the Engineering Council of South Africa (ECSA) as a Professional Certificated Engineer (Pr Cert Eng).

MECHANICAL ENGINEERING

A graduate would be involved in the design, construction, marketing, installation and maintenance of mechanical equipment, working with engineers, designers and draughtsmen. The work is largely intellectual, demanding the capacity to think and to supervise technical and administrative work.

MECHATRONICS

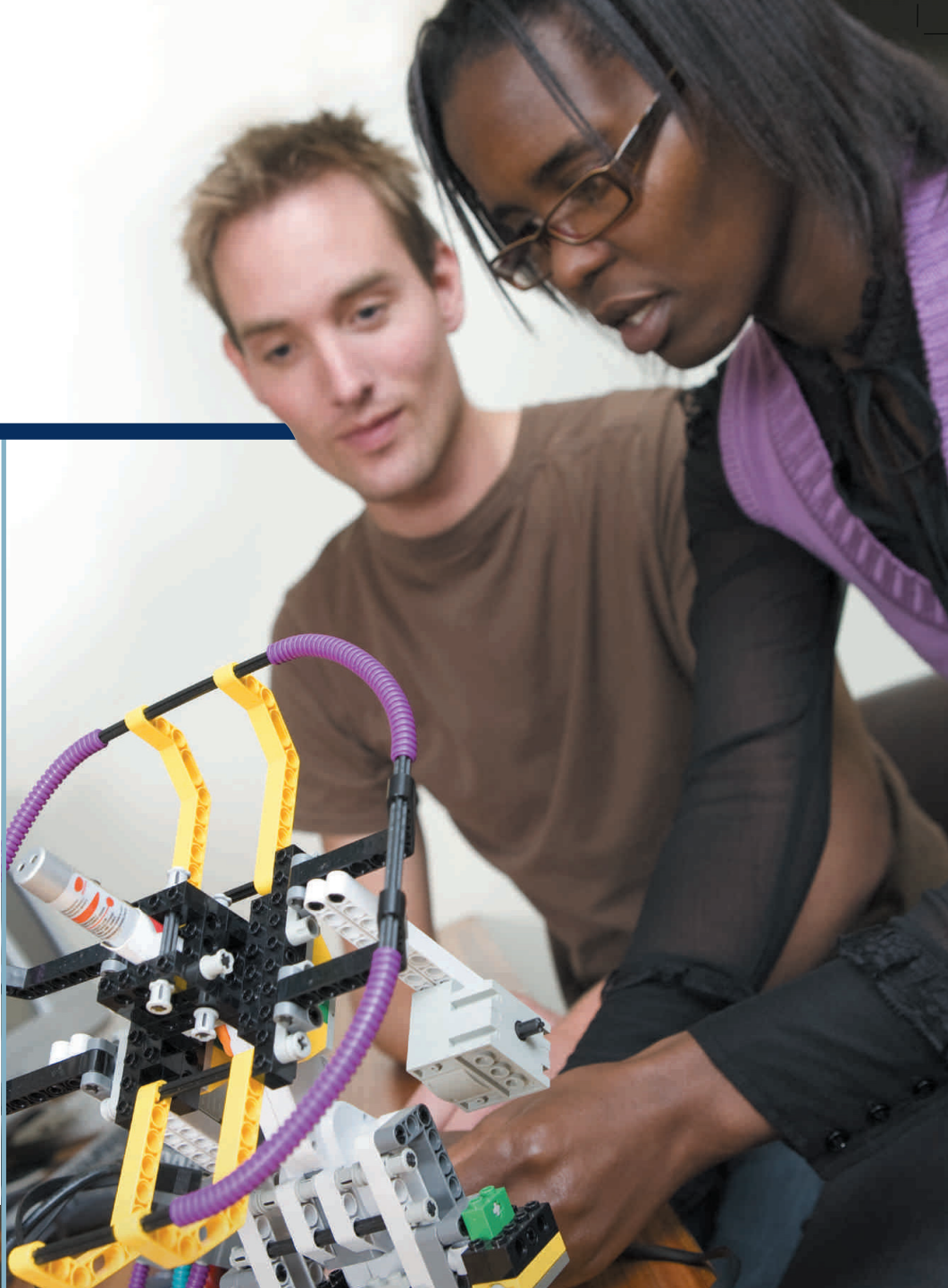
Mechatronics is an inter-disciplinary field, integrating aspects of mechanical and electrical engineering with computer technology and programming for the development of intelligent machines and automated manufacturing processes. Students gain practical experience and develop relevant skills by using industrial equipment in a interactive environment where the emphasis is on self-learning through projects supported up by instruction in the relevant theory.



BELLVILLE CAMPUS
CAPE TOWN CAMPUS

Tel +27 (0)21 959 6653 Fax +27 (0)21 959 6662
Tel +27 (0)21 460 3032 Fax +27 (0)21 460 3076

www.cput.ac.za



OPERATIONS MANAGEMENT

Graduates function as members of the production team, executing technical tasks. Graduates are also proficient in the identification and solution of industrial engineering problems.

SURVEYING

A surveyor will collect spatial data (natural and man-made features on the earth) in order to design and maintain spatial reference systems and databases for planning and land development. A surveyor may also control the construction of engineering works and land developments, and design and perform precise monitoring surveys of structures.

TEXTILE TECHNOLOGY

The Western Cape has one of the largest concentrations of textile manufacturers and retailers in the country, which provides a variety of career opportunities to suitably qualified technologists and managers. In addition, industrial and medical textiles are growing sectors of the textile industry. Only a third of textiles produced are used in apparel (clothing), the majority are used in applications relating to interior, civil, maritime, automotive, mining, defence, engineering and construction.



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Business
Education and Social Sciences

Engineering
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