

Bachelor of Engineering Technology (BEngTech): Mechanical Engineering

What is Mechanical Engineering Technology?

Mechanical Engineering Technology Mechanical engineers design, manufacture and maintain industrial machines and engines. They are involved in a range of products ranging from spacecraft and air conditioning systems to automobiles, washers and dryers. Mechanical engineering technology involves applying scientific and engineering theories to technical areas such as product design and development, production, manufacturing, power and control of machinery, materials, quality control and cost analysis. The programme focuses on mechanical engineering skills in relation to key industry sectors such as mining, manufacturing and design.

What is the purpose of the BEngTech programme?

The purpose of the BEngTech in Mechanical Engineering is to build the necessary knowledge, understanding, abilities and skills required for further learning towards becoming a competent practicing Mechanical Engineering Technologist. Specifically, the qualification provides graduates with:

- Preparation for careers in engineering itself and areas that potentially benefit from engineering skills, for achieving technological proficiency and to make a contribution to the economy and national development;
- The educational base required for registration as a Professional Engineering Technologist with ECSA.
- For graduates with an appropriate level of achievement, the ability to enter NQF level 8 programmes and then proceed to master's degrees. • For certificated engineers, the education base for achieving proficiency in mechanical engineering / plant operations and occupational health and safety.

Minimum admission requirements

Admission to BEngTech (Mechanical) is as per the Faculty Rules and Regulations EB3 on the undergraduate yearbook as shown below:

- a) A Senior Certificate or an equivalent qualification of an equivalent standard.
- b) Refer to Faculty Regulation E3 for the minimum admission requirements for the Senior Certificate (until 2008) and the National Senior Certificate (from 2009). Students should have a minimum APS score of 30 consisting of a minimum of 5 for Mathematics and Physics, 4 for English, in order to be admitted.
- c) N3 Certificate, with a minimum pass of 60% in Mathematics and Physical Science, and a pass in two languages.
- d) Students who have passed suitable access programmes may be exempted from the minimum requirements.

Extended programme: Students who have a minimum APS score of 24 are admitted into Extended BEngTech, which takes a duration of 4 years.

Course/Modules to enrol for in BEngTech Mechanical Engineering

All the modules are compulsory for the degree.

Curriculum for BEngTech in Mechanical Engineering			
First Year			
Semester 1: Compulsory Courses/Modules		Semester 2: Compulsory Courses/Modules	
AFINSA1	African Insights	ACDMIB1	Autocad 1B
CPSELA1	Computer Skills 1A	ECS1BB1	Engineering Communication Skills 1B
ELTELA1	Electrotechnology 1A	MATE1B1	Engineering Mathematics 1B
ECS1AA1	Engineering Communication Skills 1A	PHYE1B1	Engineering Physics 1B
MATE1A1	Engineering Mathematics 1A	WKSM1B	Material Science and Manufacturing 1B
PHYE1A1	Engineering Physics 1A	WKSPIB1	Workshop Practice 1B
MDRMIA1	Mechanical Engineering Drawing 1A	STRMIB1	Strength Of Materials 1B
Second Year			
Semester 3: Compulsory Courses/Modules		Semester 4: Compulsory Courses/Modules	
ELTELA2	Electrotechnology 2A	ASMMIB2	Applied Strength of Materials 2B
MATE2A2	Engineering Mathematics 2A	EMVMNB2	Environmental Management 2B
FLMMIA2	Fluid Mechanics 2A	HYMMIB2	Hydraulic Machines 2B
WKSMIA2	Manufacturing and Materials Technology 2A	SPLMIB2	Steam Plant 2B
WKSPIA2	Workshop Practice 2A	TMAMIB2	Theory Of Machines 2B
TRDMIA2	Thermodynamics 2A	MADMIB2	Machines Design 2B
MDSMIA2	Mechanical Engineering Design 2A	-	-
Third Year			
Semester 5: Compulsory Courses/Modules		Semester 6: Compulsory Courses/Modules	
FLMMIA3	Fluid Mechanics 3A	AUCMIB3	Automatic Control 3B
MEMMIA3	Mechanics Of Machines 3A	RACMIB3	Refrigeration And Air Conditioning 3B
STRMIA3	Strength Of Materials 3A	SANMIB3	Stress Analysis 3B
TRDMIA3	Thermodynamics 3A	TRMMIB3	Turbo Machines 3B
PJMMI3B	Mechanical Engineering Design Project 3		

