

Bachelor of Engineering Technology Honours in Power Engineering: BEng.Tech (Hons)

Purpose Statement

The Bachelor of Engineering Technology Honours degree in Power Engineering is a graduate specialisation qualification designed to prepare students for postgraduate study and work in the industry at higher cognitive levels. This programme is designed specifically to follow the Bachelor of Engineering Technology in Electrical Power Engineering, as offered at the Durban University of Technology.

The qualification consolidates and deepens the graduate's expertise in a specialised area of Power Engineering and develops research capacity in the methodology and techniques of this discipline while equipping them to undertake more specialised and intensive learning.

Programmes leading to this qualification allow students to work independently and responsibly, applying original thought and judgment to technical and risk-based decisions in complex situations. Graduates of this qualification would be prepared to enter niche roles in the labour market with the option of further studies at the Master's degree level.

The purpose of this programme is to further the necessary knowledge, understanding, abilities and skills required towards becoming a competent practising Electrical Power Engineer.

This qualification provides:

- Preparation for careers in engineering itself and areas that potentially benefit from engineering skills.
- A pathway for achieving technological proficiency in the discipline of Electrical Power Engineering.
- A means to contribute positively to the economy and national development.
- Entry to NQF Level 9 Masters programmes and the ability to then proceed to a Doctoral programme.

Admission requirements

The number of students enrolled each year will be determined by the University and the departmental growth policies. The minimum entry requirement will be the Bachelor of Engineering Technology in Power Engineering (NQF Level 7) or equivalent. This is in line with the DUT General Rules handbook, for registration for a Bachelor's Honours Degree (Rule G23C). Applicants that complete a BEng Tech

(Electrical) or equivalent at other institutions (private or public) will be evaluated on an individual basis after fulfilling the following criteria:

- The undergraduate program must be ECSA accredited.
- The applicant must show evidence of graduate attribute assessment in the undergraduate qualification as per ECSA guidelines.
- There must be a minimum of 80% overlap in terms of the knowledge area of Mathematics.
- The applicant must show evidence of a final design project

Foreign applications must approach the International Office for guidance on the application process

Applicants with a B.Tech in Electrical Engineering are allowed to apply but need to note that the program is run full-time and on campus. This information will be updated if provision is made for part-time or evening class applications.

In instances where the number of applications exceeds the enrolment plan, the following selection criteria would apply:

1. DUT Graduates (BEng.Tech/BTech Electrical), and
2. Other BEng.Tech (Electrical) Graduates.

Ranking Criteria

- (1) Completion in minimum time;
- (2) Average pass rate of 65% and above.

Duration of Study

The qualification is a 1-year full-time, 152-credit qualification.

Credits Applications

No credits are allowed from any non-HEQSF-aligned and non-accredited engineering qualifications. All credit applications will follow the Credit Application Process and will be evaluated for content coverage, NQF level offering and ECSA Graduate Attribute assessment.

Curriculum Structure

All applications for the program take place in the preceding year of registration and all registrations take place at the beginning of the year. There is no mid-year intake for the program.

Programme Structure

Modules titles	Pre-requisite / Co-requisite modules	Number of SAQA Credits allocated	NQF Level
Compulsory Modules			
Semester 1			
Power System Engineering 1	N/A	12	8
Electromagnetic Field Theory	N/A	8	8
Engineering Design Project*	N/A	32	8
Engineering Research Project**	N/A	36	8
Statistics and Probability 4A	N/A	8	7
Semester 2			
Power System Engineering 2	N/A	12	8
Innovation Management and Entrepreneurship	N/A	12	8
Subtotal		120	
Elective Modules			
Semester 1			
Electrical Protection Engineering	N/A	8	8
Electrical Machines and Drives	N/A	8	8
Renewable Energy Technology	N/A	8	8
Automation	N/A	8	8
Semester 2			
PV and Energy Storage Systems	N/A	8	8
DC Distribution Systems	N/A	8	8
High Voltage Engineering	Electromagnetic Field Theory (Prerequisite)	8	8
Control Systems	Automation (Prerequisite)	16	8
Subtotal		32	
Total credits for the qualification		152	
Qualification Rules: (Choice of modules and credits)			
Students are required to register for all compulsory modules and select a minimum of 16 credits from the 4 elective modules available in the first semester, and a minimum of 16 credits from the 4 elective modules available in the second semester.			
*Engineering Design Project and Engineering Research Project are yearly modules conducted across both semesters.			
**Engineering Research Project will overlap several knowledge areas however the core will be engineering science.			
A minimum of 152 credits is required to obtain the qualification.			

Classifying Student Performance

This refers to the composite evaluation result for each subject.

75% and above: Distinction

50% and above: Pass

45% – 49%: Eligible for re-assessment. (e.g. Supplementary Examination)

44% and below: Fail

Contact:

BEngTech(Hons) Program Coordinator

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Note:

- 1. Fill out and email the attached Application Form.**
- 2. The closing date for all applications is 10th December 2022.**
- 3. Space is limited, so students are encouraged to apply early.**