Bachelor of Engineering Technology (*B. Eng Tech)* in Electrical Engineering

The B.EngTech in Electrical Engineering **(B6EL1Q)** is a *three*-year engineering degree (at **NQF level 7** and with **443. 2 credits)** fully accredited by the Engineering Council of South Africa (ECSA). This programme offers a unique opportunity to prospective students to acquire sound theoretical knowledge and technical skills necessary for onward professional engineering work.

Job Opportunities

The B.EngTech programme provides required educational foundation for registration as professional engineering technologist (PrTechEng) with ECSA or as incorporated, associate or field engineer (IEng, AEng, FEng) with professional engineering bodies in many other countries around the world (UK, EU countries, USA, Australia, Canada, etc.). Graduates from this programme may work in the design and implementation, analysis and instrumentation control, maintenance and management of electrical machines, power grids, telecommunication and/or data systems.

Are you interested in:

1. Learning how smart electronic and electrical designs can make lives better?
2. Understanding how software systems can make devices do exciting and incredible things?
3. Learning how communication systems can enhance human interactions?

Candidates with interests in this programme should pay attention to the entry requirements below:

Minimum Entry Requirements

As per Faculty Regulations for B.EngTech Admissions:

(a) **Senior Certificate (SC)** with complete or conditional exemption.

(b) National Senior Certificate (NSC) with admission to a bachelor's degree endorsement, **(APS Score of 30 or higher)***

(c) **Technical and Vocational Education or Training (TVET) qualifications** i.e. National Technical N certificates/diplomas. Students are enrolled into the extended programme.

(d) Students holding a **National Diploma (NQF6)** are credited for the first year of the B.EngTech programme.

*Note the acceptable APS score in the Table below

Subjects	*Mathematics*	*Physical Sciences*	*English*
APS Score	5	5	4

Bachelor of Engineering Technology Programme (B6EL1Q/B6L1XQ; NQF 7)

Overall Graduation Requirements for Degree Completion: *Completion of a total of 443.2 credits, in addition to compliance with all GA requirements* as stipulated.*

FIRST YEAR (*Total credits to be completed in the FIRST year* = 154.2)

SEMESTER ONE (S1): 70.9 NQF Credits

CODE	MODULE NAME	NQF Credits	HEQSF LEVEL
ALGELA1	Algorithms/Programming 1A	7	5
ELTENA1	Electrical Engineering 1A	14.1	5
CETE1A1	Engineering Chemistry	14.6	5
MATE1A1	Engineering Mathematics 1A	14.1	5
PHYE1A1	Engineering Physics 1A	14.1	5
WKSELA1	Workshop Skills 1A	7	5
	TOTAL	70.9	

SEMESTER TWO (S2): 83.3 NQF Credits

CODE	MODULE NAME	NQF Credits	HEQSF LEVEL
ALGELB1	Algorithms/Programming 1B	7	6
DIGSTB1	Digital Systems 1B	13.9	5
ELCELB1	Electronic Circuits 1B	14.1	6
ELTENB1	Electrical Engineering 1B	14.1	6
MATE1B1	Engineering Mathematics 1B	13.1	6
PHYSCB1	Engineering Physics (Electrical) 1B	14.1	6
WKSELB1	Workshop Skills 1B	7	6
	TOTAL	83.3	

*https://www.ecsa.co.za/education/EducationDocs/E-08-PN.pdf

SECOND YEAR (*Total NQF credits to be completed in the SECOND year* = 141.8)

SEMESTER THREE (S3): 77.5 NQF Credits

CODE	MODULE NAME	NQF Credits	HEQSF LEVEL
DIGSTA2	Digital Systems 2A	14.1	6
ELCELA2	Electronic Circuits 2A	14.1	6
MATE2A2	Engineering Mathematics 2A	14.2	7
SENELA2	Sensors And Devices 2A	7	6
SWEELA2	Software Engineering 2A	14.1	6
SIGSTA2	Signals & Systems 2A	14	6
	TOTAL	77.5	

SEMESTER FOUR (S4): 64.3 NQF Credits

CODE	MODULE NAME	NQF Credits	HEQSF LEVEL
AFINSA1	African Insights	15	6
DIGSTB2	Digital Systems 2B	14.1	7
PJEELB2	Electrical Project 2B	7	7

		NQF Credits	
MCCELB2	Mechatronics & Control 2B	**14.1**	**7**
NETELB2	Networks 2B	**14.1**	**7**
	TOTAL	**64.3**	

THIRD YEAR (*Total NQF credits to be completed in the THIRD year = 147.2*)

SEMESTER FIVE (S5): 77 NQF Credits

CODE	MODULE NAME	NQF Credits	HEQSF LEVEL
INCEL3A	Instrumentation and Control 3A (Only 2023)	**14**	**7**
AUTELA3	Automation 3A (phasing out with INCEL3A in 2023)	**7**	**7**
CPS3AA3	Complementary Studies 3A	**6.7**	**7**
PJEELA3	Electrical Project 3A	**7**	**7**
EMAELA3	Machines 3A	**14.1**	**7**
POWSTA3	Power Systems 3A	**14.2**	**7**
PCAELA3	Process Automation 3A (phasing out with INCEL3A)	**7**	**7**
PJMELA3	Project Management (Electrical) 3A	**7**	**7**
SIGSTA3	Signals & Systems 3A	**14**	**7**
	TOTAL	**77**	

SEMESTER SIX (S6): 70.2 NQF Credits

SUBJECT CODE	MODULE NAME	NQF Credits	HEQSF LEVEL
CTLELB3	Control Systems 3B	**14.1**	**7**
PJEELB3	Electrical Project 3B	**28**	**7**
POWELB3	Power Electronics 3B	**14.1**	**7**
TMGELB3	Technology Management 3B	**14**	**7**
	TOTAL	**70.2**	