

## Bachelor of Engineering in Electronics and Communication Engineering

### Programme details:

The Bachelor of Engineering (BEng) in Electronics and Communication program is a comprehensive five-year, 600 credits undergraduate program designed to equip students with a deep understanding of electronic systems and communication technologies. Through a blend of theoretical knowledge, practical skills, and hands-on experience, students will develop the expertise necessary to thrive in the dynamic field of electronics and communication engineering.

### Core modules:

- E5-PH1-23: Physics-1 (15)
- E5-CC1-23: General Chemistry -1 (15)
- C5-CE1-20: Computer and its essentials 1 (10)
- E6-EEW-24: Electrical and Electronics Engineering Workshop (10)
- E5-PCM-23: Precalculus for Mathematics (10)
- E5-PH2-23: Physics -2 (15)
- E5-CC2-23: General Chemistry -2 (15)
- E6-LAM-23: Linear Algebra (10)
- E5-EM1-23 Engineering Mathematics 1 (10)
- C6-CE2-20: Computer and its essentials - II (10)
- E6-PPC-23: Procedural Programming in C and Python (10)
- D6-AWS-20: Academic writing for STEM (10)
- E6-EME-23: Engineering Mathematics 2 (10)
- E6-END-23: Engineering Drawing (10)
- E6-ECA-23: Electrical circuit Analysis (10)
- E6-EDC-23: Electronic Devices and Circuits (10)
- E6-EWP-23 Engineering Workshop Practice (10)

- E6-EM3-23 Engineering mathematics – 3 (10)
- E6-DET-23 Digital Electronics (10)
- E6-AET-23 Analogue Electronic Circuit Design (10)
- E6-ADE-23: Analogue and Digital Electronics Lab (10)
- E6-EMW-23: Electromagnetism & Waves (10)
- E7-CME-24: Communication Engineering (10)
- E6-SAS-23: Signals and System Design (10)
- E7-DCE-24: Data Communication and Network Engineering (10)
- E6-EM4-23: Engineering mathematics – 4 (10)
- E7-DCM-24: Digital communication (10)
- E7-CML-24: Communication lab (10)
- E7-DG1-24: Design Group project – 1 (10)
- E7-LIC-24: Linear integrated circuits Design (10)
- E7-MML-23: Microprocessor & Microcontrollers Design Lab (10)
- E7-MMD-23: Microprocessor & Microcontrollers (10)
- E7-WCN-24: Wireless communication and networks (10)
- E7-TLW-24: Transmission lines and wave guides (10)
- E7-DSP-23: Digital signal processing (10)
- C7-CSE-24: Control System Engineering Design (10)
- E7-AWP-24: Antenna and wave propagation (10)
- E8-RMS-24: Research Methods in STEM (10)
- E8-ESD-23: Embedded system Design (10)
- E7-DG2-24: Design Group project – 2 (10)
- E8-MOS-24: Millimeter wave Optical Communication Systems (10)
- E8-RME-24: RF Microelectronics and Microwave engineering (10)

- E8-OML-24: Optical and microwave engineering laboratory (10)
- E8-PR1-23: Research Project 1 (10)
- E8-VLD-24: VLSI Design (10)
- E8-EIS-24: Engineers in Society (10)
- B8-ENI-20: Entrepreneurship & Innovation (20)
- E8-PR2-23: Research Project 2 (10)
- E8-PPR-23: Professional Practice (60)

**Elective Modules:**

- E7-SCS-24: Security in communication systems (10)
- E7-DST-24: Digital Switching and Transmission (10)
- E7-EIM-24: Electronic Instrumentation and Measurement (10)
- E7-IES-24: IoT Enabled Systems (10)
- E8-RAA-24: Robotics and Automation (10)
- E8-BME-24: Bio Medical Engineering (10)
- E8-AWC-24: Advanced Wireless Communication (10)
- E8-CAI-24: CMOS Analog IC Design (10)
- E8-SAC-24: Satellite Communication (10)
- E8-OEN-24: Opto Electronics and networks (10)
- E8-MEM-24: MEMS (10)
- E8-EMI-24: Electromagnetic Interface and Compatibility (10)

**Semester 1**

- E5-PH1-23, E5-GC1-23, C5-CE1-20, E6-EEW-24, E5-POM-23

**Semester 2**

- E5-PH2-23, E5-GC2-23, E6-LAM-23, E5-EM1-23, C6-CE2-20

**Semester 3**

- E6-PPC-23, D6-AWS-20, E6-EME-23, E6-END-23, E6-ECA-23, E6-EDC-23

\* The programmes offered in this document are accredited by BQA and offered at Botho University at the time of print. Please refer to your offer letter from the admissions department for any changes in programme name or duration that may occur due to regulatory requirements.

**Semester 4**

- E6-EWP-23, E6-EM3-23, E6-DET-23, E6-AET-23, E6-ADE-23, E6-EMW-23

**Semester 5**

- E7-CME-24, E6-SAS-23, E7-DCE-24, E6-EM4-23, E7-DCM-24, E7-CML-24

**Semester 6**

- E7-DG1-24, E7-LIC-24, E7-MML-23, E7-MMD-23, E7-WCN-24, E7-TLW-24

**Semester 7**

- E7-DSP-23, C7-CSE-24, E7-AWP-24, E8-RMS-24, E8-ESD-23, E7-DG2-24

**Semester 8**

- E8-MOS-24, E8-RME-24, E8-OML-24, E8-PR1-23, E8-VLD-24

**Select any one:** E7-SCS-24, E7-DST-24, E7-EIM-24, E7-IES-24, E8-EIS-24, B8-ENI-20, E8-PR2-23

**Select any two:** E8-RAA-24, E8-BME-24, E8-AWC-24, E8-CAI-24, E8-SAC-24, E8-OEN-24, E8-MEM-24,

- E8-EMI-24

**Semester 9**

- E8-PPR-23

**Admissions Criteria**

**1)** BCCSE/equivalent with 5 Passes including Mathematics and Physics/Double Sciences/Physics + Chemistry.

**2)** Applicants in possession of a Diploma or Higher Diploma in related field will be given exemptions based on the credit point equivalency.

**3)** For enquiries and more information please visit our website: [www.bothouniversity.com](http://www.bothouniversity.com)