

SELF-ASSESSMENT REPORT (SAR) 2026

EXECUTIVE SUMMARY

BS Electrical Engineering Technology

Government College of Technology (GCT), Peshawar

1. Purpose and Scope

This Executive Summary presents a consolidated overview of the Self-Assessment Report (SAR) 2026 prepared by the Department of Electrical Engineering Technology, Government College of Technology (GCT) Peshawar, for the BS Electrical Engineering Technology program. It has been developed to assist the National Technology Council (NTC) / Higher Education Commission (HEC) accreditation review team in obtaining a concise, evidence-based understanding of the program's compliance with the nine accreditation criteria under the Outcome-Based Education (OBE) framework, prior to a detailed review of the full SAR.

2. Institutional Profile

Established in 1953. Now the organization is headed under the Technical Education and Vocational Training Authority (TEVTA), Khyber Pakhtunkhwa, GCT Peshawar as an autonomous body. The college being the largest technical institute in the province, situated on a 24-acre campus on Kohat Road, Peshawar, with almost 3000+ students enrolled. The College offers diploma in seven Technologies, Moreover, the college offers degree-level programs in Electrical, Civil, and Mechanical Engineering Technology, supported by dedicated academic blocks, laboratories, workshops, a library, hostels, and allied welfare facilities.

Item	Detail
Institution	Government College of Technology (GCT), Peshawar — established 1953; operates under TEVTA, Khyber Pakhtunkhwa
Program under review	BS Electrical Engineering Technology
Accrediting bodies	National Technology Council (NTC) / Higher Education Commission (HEC)
Program duration / structure	Four-year, full-time program; 138 total credit hours (2016 curriculum) / 129 credit hours (NTC 2022 curriculum)
OBE transition	Implemented from Spring 2022, guided by the QEC (established 2022) and Departmental OBE Committee (DOBEC)/Program Team (PT)
PEOs / PLOs	3 Program Educational Objectives; 12 Program Learning Outcomes (per NTC Accreditation Manual 2018)
Faculty (EET Department)	7 dedicated teaching faculty; Student–Teacher Ratio 8:1 (well within the NTC benchmark of 20:1)
Laboratories	Six dedicated laboratories/workshops for the Electrical program, plus shared computing, drawing and library facilities
Industrial engagement	MoUs signed with 30+ industrial partners; regular industrial visits and an active Institute Management Committee (IMC)
Compulsory field training	32 weeks of Supervised Industrial/Field Training; 6-credit-hour capstone Final Year/6th-Semester Design Project

FY 2024–25 budget	PKR 74.71 million (approx.), funded through Government allocation, KP-TEVTA, and self-finance (2nd shift) income
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3. Outcome-Based Education (OBE) Implementation

The Department transitioned to the OBE system in Spring 2022 under the guidance of the Quality Enhancement Cell (QEC, established January 2022) and a dedicated Departmental OBE Committee (DOBEC). Implementation followed a structured Design–Measure–Analyze–Inspect–Control (DMAIC-based) methodology, executed through an eight-step conversion process — from stakeholder awareness sessions and gap analysis to formulation of Course Learning Outcomes (CLOs), assessment mechanisms and Key Performance Indicators (KPIs), and final SAR compilation. Fourteen distinct implementation gaps were identified and systematically closed, including revision of the vision/mission statements, adoption of the twelve NTC-mandated PLOs, redefinition of assessment weightages (Final Exam 40%, Midterm 30%, Quizzes 15%, Assignments 15%), and introduction of standardized OBE evaluation sheets.

4. Criterion-Wise Summary

Criterion 1: Mission and Program Educational Objectives (PEOs)

- The Department mission is clearly aligned with the College's vision and mission and with the KP-TEVTA mandate.
- Three revised PEOs address graduate employability and technical competence, problem-solving/analysis capability, and communication, ethics and lifelong learning.
- PEOs are mapped to the institutional vision/mission and evaluated via alumni and employer surveys on a 3–5-year cycle, supported by defined KPIs (e.g., $\geq 80\%$ graduate employment within 6 months; $\geq 4/5$ employer satisfaction).
- A formal, stakeholder-driven PEO revision process is in place, triggered by NTC observations, periodic review cycles, or stakeholder feedback.

Criterion 2: Program Learning Outcomes (PLOs)

- All twelve NTC-mandated PLOs have been adopted and are systematically mapped to the three PEOs and to Course Learning Outcomes (CLOs) across all eight semesters.
- PLO attainment is evaluated through direct assessment ($\geq 60\%$ of students achieving $\geq 50\%$ per PLO) and indirect assessment (surveys), measured at the end of each semester and at graduation.
- A defined escalation framework addresses individual and cohort-level underperformance (cohort failure = $> 40\%$ of a class failing to reach the 60% threshold), triggering root-cause analysis and corrective action.
- PLO attainment reports (CLO-wise, PLO-progress, and PLO-achievement) are generated each semester/year to support continuous monitoring.

Criterion 3: Curriculum and Learning Process

- The curriculum (2022 NTC-aligned version) is benchmarked against HEC/NTC guidelines, with a 73%:27% technology-to-non-technology credit-hour split consistent with national norms.
- Delivery combines lecture, laboratory, and open-ended/broadly-defined engineering problems, reinforced by Bloom's Taxonomy-based CLOs spanning cognitive, affective and psychomotor domains.

- Compulsory 32-week Supervised Industrial/Field Training and a 6-credit-hour, two-semester Design Project (with structured proposal defense, progress presentations, and viva voce) ensure practical, industry-linked competency development.
- Course-to-PLO mapping is documented for all semesters, providing full curricular traceability from CLOs to PLOs to PEOs.

Criterion 4: Students

- Admission is strictly merit-based (DAE/HSSC Pre-Engineering with $\geq 50\%$ marks, ETEA entry test/HEI Test), with a transparent seat allocation and district-eligibility structure and defined quota/ward provisions.
- Comprehensive academic regulations govern attendance ($\geq 75\%$ required), grading (absolute grading, A–F scale), probation/relegation, course withdrawal, semester freezing, and unfair-means handling.
- Distinction and Gold Medal policies incentivize academic excellence, and dedicated batch tutors provide academic and career counseling.
- Enrollment has grown steadily from 132 applicants (Fall 2020) with an intake capacity of 20 students per session.

Criterion 5: Faculty and Support Staff

- The Electrical Engineering Technology Department is served by 7 dedicated teaching faculty (MS/PhD-qualified) supplemented by shared faculty from other programs, giving a Student–Teacher Ratio of 8:1 — well within the NTC benchmark of 20:1.
- Faculty workload is capped at a minimum of 6 credit hours per semester to allow time for MS/PhD pursuit and research, supported by structured promotion and skill-upgradation pathways through KP-TEVTA.
- Qualified lab assistants and technical staff support all laboratory sessions, and teaching effectiveness is evaluated each semester through student feedback and course-review reports.

Criterion 6: Facilities and Infrastructure

- Six specialized laboratories/workshops (Advance Machines & Power Transmission, Industrial Control & Digital Electronics, High Voltage, Instrumentation & Telecom, Advance Electronics, Computer) support the curriculum, in addition to a Drawing Shop and dedicated lecture rooms with multimedia facilities.
- The main and departmental libraries hold over 5,000 relevant titles, with 20 computers for digital/e-resource access.
- Hostel accommodation (up to 200 students), transport, sports, medical, and counseling facilities support student welfare, alongside a placement-support function linking students to internship and employment opportunities.

Criterion 7: Institutional Support and Financial Resources

- The program is financially sustained through Government/AG Office funding, KP-TEVTA allocations, and self-finance (2nd shift) income, with a total FY 2024–25 budget of approximately PKR 74.71 million.
- 98% budget utilization in the current fiscal year reflects consistent expenditure discipline, with continued investment in faculty retention, infrastructure upgrades, and laboratory modernization.
- Performance-based incentives (e.g., Best Faculty Award) support faculty retention and quality delivery.

Criterion 8: Continuous Quality Improvement (CQI)

- A formal, three-tier CQI mechanism operates across CLOs (each semester), PLOs (each program cycle/year), and PEOs (3–5 years post-graduation), each with defined direct/indirect assessment tools, KPIs, and corrective-action pathways.
- The Quality Enhancement Cell (QEC), established January 2022, coordinates feedback collection (student, alumni, employer), course-file review, and OBE training, and oversees a dedicated OBE Cell for PEC/NTC-aligned implementation.
- All CQI actions are documented and tracked through Program Assessment Committee (PAC) meetings and the Board of Studies for institutional accountability.

Criterion 9: Industrial Linkages

- The Department maintains active Memoranda of Understanding (MoUs) with over 30 industrial, construction, engineering-consultancy, and government organizations, supporting internships, faculty-industry collaboration, and curriculum relevance.
- Twelve industrial visits have been conducted to date, complemented by invited industry lectures and industry-linked Final Year Design Projects.
- The 11-member Institute Management Committee (IMC), comprising industry, alumni, and parent representatives, formally guides PEO development, curriculum recommendations, and program strategy.

5. Key Outcomes and Institutional Commitment

- Improved alignment of the curriculum with industry and NTC/HEC requirements following the 2022 OBE conversion.
- A reported 15% improvement in target PLO attainment in the most recent assessment cycle.
- Strengthened industrial linkages, providing enhanced practical exposure and post-graduation placement support for students.
- An institutionalized, cyclical CQI framework connecting CLOs, PLOs, and PEOs to concrete corrective actions, ensuring the program is positioned for sustained compliance and continuous improvement.

The Department of Electrical Engineering Technology remains committed to continuous quality improvement and to aligning the BS Electrical Engineering Technology program with national and international accreditation standards, in order to produce competent, industry-ready technologists capable of contributing to Khyber Pakhtunkhwa's and Pakistan's socioeconomic development.



Principal