ENGINEERS BOARD OF KENYA
Enhancing Professionalism

EAC KENYA | Engineering Accreditation Committee, Kenya

REPORT ON TRAINING OF ENGINEERING LECTURERS ON OUTCOME-BASED EDUCATION (OBE) STANDARDS

RIFT VALLEY REGION

Venue: University of Eldoret

Dates: 12th – 14th May 2026

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1. EXECUTIVE SUMMARY

The Board successfully conducted a three-day training workshop for engineering lecturers on Outcome-Based Education (OBE) standards. The training was held at the University of Eldoret from 12th to 14th May 2026, targeting universities within the Rift Valley cluster.

The workshop brought together engineering lecturers, heads of departments, and academic administrators from four (4) universities offering engineering programmes within the Rift Valley region.

The training aimed to strengthen the capacity of university lecturers and academic leaders in the design and implementation of Outcome-Based Education curricula, in line with EBK Engineering Accreditation Standards and the requirements of the Washington Accord, to which Kenya gained provisional signatory status in June 2025.

The workshop was facilitated by international and local experts, including a representative from the Board of Engineers Malaysia, who shared global best practices in engineering education accreditation and OBE curriculum design.

Key thematic areas covered during the training included alignment of programme vision with institutional vision and mission, development of Programme Educational Objectives (PEOs), mapping of PEOs to Programme Outcomes (POs), mapping of Course Outcomes (COs) to POs, development of assessment methods, gap analysis using the EBK Excel template, and Self-Assessment Report (SAR) structure.

A significant component of the training was the practical gap analysis exercise, where participating universities used the provided excel template to score their programmes across nine assessment areas. The results showed that Moi University (81.98%) is ready for WA-aligned accreditation, while Egerton University (68.89%), University of Eldoret (65.91%), and MMUST (61.23%) require moderate transition, with MMUST being borderline.

A plenary session on Day 1 provided an opportunity for participants to raise critical questions regarding accreditation fees, the relationship between EBK and the Commission for University Education (CUE), programme uniformity across universities, and the classification of computing-related programmes.

Post-training feedback from 44 participants indicated that 88.7% rated the training as "Very Good" or "Excellent," and 100% of participants stated they would strongly recommend the training to colleagues.

Overall, the training enhanced participants' understanding of Outcome-Based Education frameworks, strengthened institutional readiness for OBE implementation, and promoted collaboration among engineering faculties across the four participating universities.

2. INTRODUCTION

The Engineers Board of Kenya is mandated under the Engineers Act, 2011 to regulate engineering education and practice in Kenya through accreditation of university programmes.
To align with the Washington Accord requirements, engineering programmes must adopt Outcome-Based Education (OBE), emphasizing measurable learning outcomes that ensure graduate competence.
The training was organized to support universities in transitioning to OBE-based curricula within the Rift Valley cluster.

2.1. Legal Basis

i. Engineers Act, 2011 (Section 7(1)(r))
ii. Engineers Rules, 2019 (Fourth Schedule)
iii. Engineering Accreditation Standards (EAC/STD/01, August 2024)

3. RATIONALE

Following Kenya's accession as a provisional signatory to the Washington Accord in 2025, there was need to build capacity among lecturers to implement OBE effectively.
The training aimed to:

i. Enhance capacity for OBE curriculum design
ii. Standardize interpretation of Washington Accord requirements
iii. Promote student-centered learning
iv. Support accreditation readiness
v. Advance Kenya's progression to full signatory status

3.1. Objectives of the Training

The training aimed to strengthen the capacity of engineering lecturers and university staff to implement Outcome-Based Education in engineering programmes in line with EBK accreditation standards and Washington Accord requirements. The specific objectives were to:

i. Enhance understanding of OBE principles and their application in engineering education
ii. Equip lecturers with practical skills for designing OBE-aligned curricula, learning outcomes, and assessment methods
iii. Strengthen institutional capacity for curriculum mapping and alignment between Programme Educational Objectives (PEOs), Programme Outcomes (POs), and Course Outcomes (COs)
iv. Promote student-centred teaching approaches and evidence-based assessment practices

v. Support universities in preparing for OBE-based accreditation and continuous quality improvement

4. TRAINING PARTICIPANTS

The workshop brought together participants from four (4) universities offering recognized engineering programmes within the Rift Valley cluster. The training targeted academic and administrative personnel who play a central role in the design, delivery, and quality assurance of engineering programmes. Participating universities included:

1) Egerton University – 5 participants
2) Moi University – 20 participants
3) University of Eldoret – 31 participants
4) Masinde Muliro University of Science and Technology – 4 participants

A total of 60 participants from the 4 no universities attended the training.

The detailed list of participants and their respective institutions is provided in ***Annex I (Attendance List)*** of this report.

5. TRAINING PROGRAM AND FACILITATION

The training was conducted over three days (12th – 14th May 2026) and involved a combination of technical presentations, plenary discussions, practical exercises, and breakout sessions.

Facilitators

i. Eng. Grace Onyango, CE – Ag. Registrar/CEO, Engineers Board of Kenya
ii. Ir. Abdul Aziz Omar – Board of Engineers Malaysia
iii. Eng. Dr. Samuel Abich, PE – Manager, CBA
iv. Eng. Prof. Emmanuel Kipkorir, PE – Civil Engineering Master Trainer
v. Eng. Paul Ochola, CE – Electrical Engineering Master Trainer
vi. Eng. Prof. Simiyu Sitati, PE – Electrical Engineering Master Trainer

6. WORKSHOP PROCEEDINGS

6.1. Day 1– Setting the Foundation

The first day focused on the regulatory context, international best practices, and the fundamental principles of OBE.

Opening Session: The training commenced with registration and an opening prayer, followed by introductions facilitated by Eng. Dr. Samuel Abich, PE. Remarks were delivered by Ir. Abdul Aziz Omar of the Board of Engineers Malaysia (virtually),

who congratulated Kenya on attaining provisional signatory status and set the stage for the training.

Session 1: Regulatory and Legal Framework – ***Eng. Dr. Samuel Abich, PE*** delivered a comprehensive presentation on the legal basis for the transition. He guided participants through key documents, including the Engineers Act 2011, the Engineers Rules 2019, and the new Engineering Accreditation Standards (EAC/STD/01, August 2024). He emphasized that these standards would now serve as the primary reference for all engineering programmes.

Key Changes Under the New Standards highlighted included:

i. New Criterion on Students: Focusing on student intake, progression, and support, reflecting the OBE emphasis on what students can do.
ii. Accreditation Decision-Making: Strengthened process with the introduction of a moderation stage to ensure reports are objective and meet standards before being tabled at the Accreditation Management Sub-Committee and the Board.
iii. Revised Accreditation Outcomes: Five-year accreditation requires "no major concerns," while two-year accreditation is granted when there are no more than two major concerns.
iv. Emphasis on Professional Registration: Stressed the need for faculty to hold professional qualifications, noting the existence of an academia model for professional registration.
v. Continuous Quality Improvement (CQI): Underscored that CQI is central to the Washington Accord. Universities must demonstrate mechanisms for collecting feedback from Industry Advisory Boards, alumni, and students.

Session 2: International Perspective on OBE – ***Ir. Abdul Aziz Omar*** (Board of Engineers Malaysia) presented virtually, sharing invaluable insights from Malaysia's 20+ year journey in OBE implementation.

i. The Philosophical Shift, where he described OBE as a fundamental "flip mindset" from traditional content delivery: "We are not just teachers or lecturers; we are also facilitators."
ii. The Wholesome Engineer: He stressed the importance of developing the "humane part" of an engineer teamwork, communication, ethics, and emotional intelligence as what will differentiate human engineers from AI.
iii. Change Management: OBE requires a "mindset, even a cultural change," and management commitment from Deans, DVCs, and VCs is crucial.
iv. Crafting Outcomes: PEOs, POs, and CLOs must be "crafted, not just produced" – they are a "plan to act," not just statements.
v. New Knowledge Profile (WK9): Introduced the new knowledge profile on ethics, diversity, and inclusivity (DEI), which must be practiced in teaching.

vi. Constructive Alignment: Emphasized aligning teaching and assessment methods with desired outcomes, moving away from over-reliance on high-stakes final exams.

6.2. Plenary Session – Day 1

Following the presentations, a plenary session was held to allow participants to seek clarification on various issues related to accreditation, fees, regulatory coordination, and programme standards. The following questions were raised, with some responses handled by the master trainers and Eng. Dr. Samuel Abich, PE.

Topic	Summary
Financial sustainability	Concern over Kshs. 300,000 per programme accreditation fee and the burden on universities with multiple programmes.
EBK-CUE harmonization	Need to reduce duplication of submissions and fees; joint visits and shared recognition being explored.
Clear timelines	Declined accreditation requires one year before resubmission; early revisit possible within 60 days at university's cost.
Programme uniformity	Number of programmes per university varies based on capacity, strategy, and resources; no prescribed minimum or maximum.
Emerging disciplines	Computer engineering falls under electrical/electronics; specific guidelines for interdisciplinary programmes under development.
Centers of Excellence	Designation is not an EBK function; all programmes must meet accreditation standards regardless of Centre status.

6.3. Day 2 - Official Opening, Practical Mapping, and Gap Analysis

The second day was the core technical day, dedicated to curriculum design, alignment, and institutional readiness assessment.

Session 5: Formulating Outcomes

Eng. Grace Onyango, CE guided participants through the process of formulating Programme Educational Objectives (PEOs), Programme Outcomes (POs), and Course Learning Outcomes (CLOs). A key focus was articulating the clear connection between the University's Vision and Mission, the Programme Vision, and the PEOs.

Session 6 & 7: Practical Curriculum Mapping and Gap Analysis

This was the most intensive part of the workshop. Participants engaged in discipline-specific exercises facilitated by Master Trainers.

Activity 1: PEO Alignment to University Vision and Mission

Participants were guided through the process of aligning their Programme Educational Objectives (PEOs) with their respective University Vision and Mission Statements. Using the template provided (Table 3.2: Alignment of PEOs with Vision and Mission of the University), participants:

a) Articulated how each PEO supports the institutional vision and mission
b) Identified operational activities that demonstrate the achievement of each PEO
c) Linked PEOs to performance targets and assessment criteria

This exercise ensured that programme objectives are firmly rooted in the broader institutional strategy and purpose.

Activity 2: Gap Analysis Using Excel Template

Participants were provided with the Gap Analysis Excel Template. The template covered nine assessment areas: Qualifying Requirements, Graduate Attributes, Curriculum Structure, Assessment & CQI, Staffing, Facilities & Infrastructure, Laboratories, Industry Engagement, and Quality Assurance System.

Participants worked in institution-based teams to score their status (0–3), identify gaps, and document required actions.

Activity 3: Mapping of Course Outcomes to Programme Outcomes and Knowledge Profile

A key practical exercise involved mapping Course Outcomes (COs) to Programme Outcomes (POs) and the Knowledge Profile (WK1–WK9).

Day Review: The day concluded with a plenary where groups shared their mapping challenges and gap analysis findings, fostering peer learning across disciplines.

6.4. Day 3 – Assessment, Institutional Readiness, and Way Forward

Practical Session: Teaching, Learning & Assessment
Master Trainers led a session on OBE-aligned teaching strategies and assessment methods, including development of assessment rubrics.

Session 8: Institutional Readiness and Self-Assessment Reports (SARs)
Eng. Grace Onyango, CE presented on the structure of the **Self-Assessment Report (SAR)** as outlined in Chapter 4 of the Engineering Accreditation Standard

Session 9: Preliminary Gap Analysis Report

Each participating university prepared a preliminary gap analysis report summarizing their readiness score, key gaps, priority actions, and proposed timelines.

7. GAP ANALYSIS RESULTS – SUMMARY

As part of the practical session on Day 2, each participating university completed a self-assessment gap analysis using the provided Excel template. The template assessed readiness across nine categories aligned to the Washington Accord requirements. The completed Excel files for each university are attached as Annexes this report.

7.1. Overall Readiness Scores

University	Total Score (%)	Readiness Level
Moi University	81.98%	Ready for WA-aligned accreditation
Egerton University	68.89%	Moderate transition required
University of Eldoret	65.91%	Moderate transition required
Masinde Muliro University of Science & Technology	61.23%	Moderate transition required (borderline)

7.2. Common Gaps Identified Across All Universities

Gap Area	Egerton	UoE	Moi	MMUST
Integrated Design Project (IDP) missing or incomplete	✓	✓	✓ (partial)	✓
Modern engineering software tools inadequate	✓	✓	✓	✓
Industry Advisory Board not active or nonexistent	✓	✓	✓	✓
Laboratory equipment inadequate	✓	✓	✓	✓
Professional Engineers (PEs) below requirement	✓	-	✓	✓
OBE training not yet complete for all staff	✓	✓	-	✓

8. PARTICIPANT FEEDBACK ANALYSIS

8.1. Overview of Feedback Collection

At the conclusion of the training, participants were requested to complete an online feedback questionnaire. A total of 44 participants completed the questionnaire. The summary of responses is provided in ***Annex III*** of this report.

8.2. Rated Feedback Questions (Quantitative Analysis)

Finding	Detail
Overall satisfaction	88.7% rated the training as "Very Good" or "Excellent" across all categories.
Facilitator effectiveness	90.9% rated "Very Good" or "Excellent" (63.6% Excellent, the highest score).
Confidence in applying OBE	79.6% rated "Very Good" or "Excellent" – 20.5% rated only "Good," indicating room for further confidence-building.
Theory vs. hands-on balance	86.4% rated "Very Good" or "Excellent," though one participant rated "Fair."

9. KEY OBSERVATIONS

Several observations emerged during the workshop:

i. Participants demonstrated strong enthusiasm and willingness to adopt Outcome-Based Education frameworks in their institutions.

ii. The training enhanced participants' understanding of the overall structure and philosophy of OBE and how it compares with existing teaching and curriculum frameworks.

iii. The four participating universities are currently at different stages of readiness regarding the adoption and implementation of OBE curricula. The gap analysis exercise revealed varying levels of preparedness across institutions.

iv. The interactive delivery approach, particularly the breakout sessions and practical gap analysis exercise, fostered collaborative engagement among participants.

v. The presence of an international mentor from the Board of Engineers Malaysia provided valuable context and credibility to the training.

vi. The plenary session revealed that universities have significant concerns regarding financing of accreditation fees, duplication of processes with CUE, and clarity on timelines for resubmission after declined accreditation.

9.1. Key Challenges Identified

Participants and facilitators identified several challenges that need to be addressed for successful OBE implementation:

i. Technical Capacity Gaps in Course Design:

a) Difficulty in formulating clear, measurable, and assessable learning outcomes
b) Many COs focus primarily on recognition and recall rather than higher-level competencies
c) Assessment mapping remains a grey area for many lecturers
d) Calculation of Student Learning Time remains poorly understood

ii. Gap Analysis Findings:

a) Several universities scored below 60% in categories such as Graduate Attributes, Assessment & CQI, and Laboratories

a) Many programmes showed weak alignment between Course Outcomes and WA Graduate Attributes, particularly for Attributes 6 (Sustainability), 7 (Ethics), and 11 (Lifelong Learning)
b) Staffing categories scored low, particularly regarding the minimum of three Professional Engineers registered with EBK

iii. **Financial and Regulatory Challenges**

a) Overlap between EBK and CUE processes, leading to duplication of submissions and fees
b) Unclear positioning of computer engineering and computing-related programmes within the EBK accreditation framework

iv. **Institutional Readiness and Support:**

a) Varying levels of management appreciation and buy-in across the four universities
b) Concerns about resourcing (laboratories, digital systems, faculty time) to meet OBE requirements

10. RECOMMENDATIONS

The following recommendations are drawn from gap analysis results, participant feedback, plenary session, and facilitator observations. They are organized by priority level for ease of implementation.

S.No	Recommendation	Timeframe
1.	Introduce Integrated Design Projects (IDP) into all engineering curricula within the next review cycle	Immediate
2.	Establish active Industry Advisory Boards (IAB) for each engineering programme	Ongoing
3.	Procure modern engineering software tools and upgrade laboratory equipment	Ongoing
4.	Develop and implement equipment maintenance and calibration plans for all laboratories	Ongoing
5.	Accelerate Professional Engineer (PE) registration for academic staff	Ongoing
6.	Recruit additional academic staff to improve staff-student ratio	1–2 years
7.	Conduct management-level OBE sensitization for VCs, DVCs, and Deans	≤ 3 months
8.	Complete mapping of Course Outcomes to Programme Outcomes and Knowledge Profile	≤ 1 year
9.	Second academic staff to industry to gain practical experience for PE registration	Ongoing
10.	Advocate with university management to prioritize OBE implementation and resource allocation	Ongoing
11.	Establish peer learning networks across the four universities	≤ 3 months

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Date: 20/5/2026

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Ag. Registrar/CEO

Signature: .....

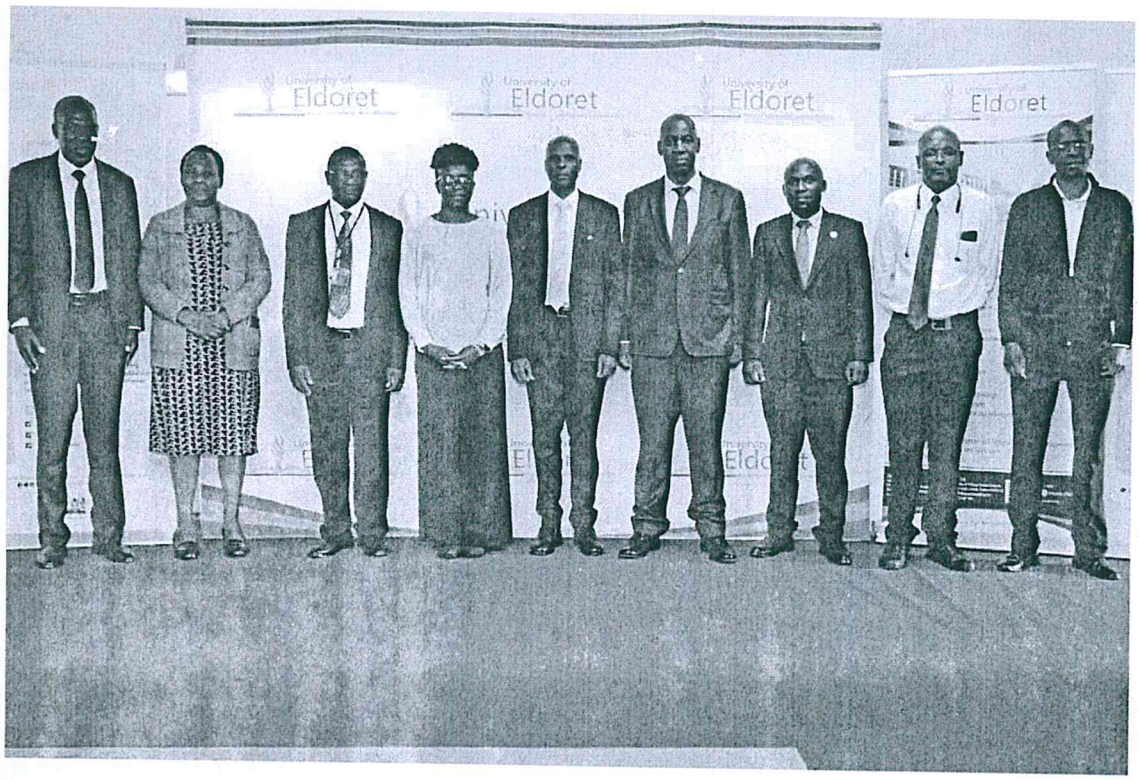
Date: 20/5/2026

ANNEXES

Annex I: Attendance List

Annex II: Photographs of the Workshop

Annex III: Universities Completed Gap Analysis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