ENGINEERS BOARD OF KENYA

Enhancing Professionalism

WORKSHOP BETWEEN ENGINEERS BOARD OF KENYA AND THE COUNCIL OF ENGINEERING DEANS AND PRINCIPALS REPORT FROM 28TH FEBRUARY – 1ST MARCH 2024 AT KYAKA HOTEL, MACHAKOS.

TABLE OF CONTENTS

1.0 INTRODUCTION

The Engineers Board of Kenya is a statutory body established under Section 3(1) of the Engineers Act 2011. The Board is mandated with the responsibility of regulating standards in the engineering profession and building capacity for individual engineers and engineering firms. The Board also registers engineers and engineering firms and regulates their conduct for improved performance of the engineering profession.

The Board has been carrying out accreditation of engineering programmes since the enactment of the Engineers Act 2011. However, following the court ruling on matters of accreditation of professional programmes, the Commission of University Education was awarded the mandate for accreditation of all university programmes. During its 185th meeting, the Board resolved to conduct independent reviews of all applications for recognition of engineering programmes that it had received from various universities. The Board has so far recognised 32 programmes across 9 universities.

1.1 Council of Engineering Deans & Principals

The Council of Engineering Deans & Principals is an association of deans of schools, faculties and colleges offering Bachelor of engineering degree programmes. The Association was established in 2014 to address common challenges experienced in engineering education including bridging the gap between the industry and academia, foster the partnerships and collaborations between EBK and Universities in engineering training, capacity building and address emerging issues in engineering education. These goals are achieved through peering and information sharing among the local and international heads of engineering faculties. The Council is affiliated to the Global Engineering Deans Council (GEDC) and the Africa Engineering Deans Council (AEDC).

One of the Board's strategic objectives of the Board is to accede to Washington Accord by 2025. The Washington Accord is an international agreement between bodies responsible for accrediting engineering degree programmes. The Accord outlines the mutual recognition, between the participating bodies, of accredited engineering degree programmes. It also establishes and benchmarks the standard for professional engineering education across those bodies. Joining Washington Accord will enhance mobility of engineers and facilitate trade of engineering services under Africa Continental Free Trade Area. The country is expected to realize many benefits including export of high value engineering jobs, exporting engineering services and attracting international students thus earning foreign exchange for the country.

In preparation for joining Washington Accord, the Board and the Council of Engineering Deans and Principals met from 28th February 2024 to 1st March 2024. They considered among other things: -

a) Reviewed and adopted accreditation standards for EE aligned to WA.
b) Reviewed CUE codebook and developed standardized nomenclature for engineering programs.

c) Noted that the Board had received petitions from over 500 graduates from unaccredited programs who expressed willingness to attend remedial programmes to register as graduate engineers. Accordingly, they reviewed selected unaccredited programs and identified gaps. Resolved to design bridging programs which will be delivered by Kenya School of Engineering in partnership with participating universities for roll out by 1st July 2024.
d) Noting that there was shortage faculty who are PEs, the Board has designed accelerated training programmes to support transition of GEs to PEs among lecturers (GEIP academia model)
e) To address acute shortage of teaching equipment in laboratories, agreed to pursue collaborative framework between universities and industry to undertake applied research projects.

This workshop emerged as a proactive response to critical challenges facing the engineering education sector. The agenda encompassed multifaceted dimensions, from a comprehensive review of accreditation standards and degree programmes nomenclature by the Commission for University Education to charting a strategic roadmap for bridging postgraduate diploma courses and addressing deficiencies in the registration of Bachelor of Technology students. Moreover, it provided a unique platform to deliberate on the essential Articles of Association governed by the Council of Engineering Deans and Principals.

The three days' workshop aspired to be a melting pot of innovative ideas, constructive dialogues, and collaborative initiatives to foster an environment where challenges transform into opportunities for growth and advancement.

2.0 OBJECTIVES OF THE WORKSHOP

The overall objectives of the workshop were to discuss the following: -

a) Review Accreditation Standards
b) Review nomenclature for degree programmes by the Commission for University Education.
c) Prepare the roadmap for bridging/ PGD courses to address deficiencies / B. Tech conversion to B. Eng./BSc.
d) Review the Articles of Association for Council of Engineering Deans and Principals.

3.0 PARTICIPANTS FROM UNIVERSITIES

S. NO	NAME OF DEAN/ REPRESENTATIVE	UNIVERSITY
1.	Eng. Benard W. Ikua, PE	Chairman (COEDP)
2.	Eng. Prof. Simiyu Sitati, PE	Vice Chair (COEDP)
3.	Eng. Martin Nzomo, PE	Secretary
4.	Eng. Dr. David Kamau, PE	Assistant Secretary

5.	Eng. Prof. Alex Muumbo, PE (Representing Eng. Bernadette Sabuni, PE	Treasurer
6.	Eng. Julius Butime, PE	Strathmore University
7.	Eng. Dr. Peter Musau, PE	South Eastern Kenya University
8.	Eng. Dr. Charles Kabubo, PE	Jomo Kenyatta University of Agriculture & Technology
9.	Eng. Prof. Cleophas M. Maende, PE	Technical University of Kenya
10	Dr. Evans Ataro	Technical University of Kenya
11	Eng. Prof. Japheth Onyando, PE	Egerton University
12	Eng. Prof. Abel Mayaka, PE	Multimedia University of Kenya
13	Eng. Dr. Fidelis Kilonzo, PE	Kenyatta University
14	Eng. Dr. Christopher Muriithi Maina, PE	Murang'a University of Technology
15	Eng. Sameer Kamrudin Bachani, PE	Technical University of Mombasa
16	Eng. Charles Mwaniki, PE	Machakos University

4.0 SUMMARY OF DELIBERATIONS

4.1 Overview of Engineering Education Opportunities and Challenges

The presentation done by Eng. Prof Bernard W. Ikua highlighted the following: -

a) The background of engineering education in Kenya
b) Status of engineering schools.
c) Enhancing quality in engineering education through research and innovation, presenting engineering schools as problem solvers to industry, create strong links with industry – strengthen industry liaison units as well as form inter faculty consortia and bid for projects
d) Staffing remains a challenge following rapid expansion of universities, and there is need to enhance staffing to meet the quality standards.
e) The need to establish consortia for writing proposals for research grants and Include infrastructure component in research proposals.

4.2 Review of Accreditation standards in line with Washington Accord.

The presentation highlighted the following key points; -

a) The IEA requirements for the criteria for Admission to Provisional Signatory Status i.e., principles of operational accreditation system with documented procedures and practices
b) The Board key milestones in acceding to the Washington Accord such as:-
   i. Joining WFEO as an affiliate member
   ii. Workshops and trainings of WA taskforce members and the independent review teams.
   iii. Drafting of instruments to establish the EAC
   iv. Appointment of assessors
   v. Development of draft standards
c) The roadmap to acceding to the Washington Accord

d) Qualifying requirements and accreditation criteria
e) The Expression of interest that was to be sent out to all 15. No universities offering engineering programmes recognized by the Board.

4.3 Review of Nomenclature of Engineering Degree Programmes.

The following were highlighted: -

a) Classification of Academic Programs is based on the premise that academic programs should be organized and delivered in a structured and systematic manner.
b) The benefits of the Codebook in Kenya, e.g., quality assurance, consistency, mobility as well as common language.

4.4 Proposed Amendments to Articles of Association.

The following were the discussions and amendments to the Articles of Association Constitution and Rule

Table 1: below shows comparison between the draft constitution and rules of the Articles of Association vis a vis the proposed amendments to the Article.

S. No	TOPIC	Draft Articles of Association	Proposed amendments to the Article
1.	'NAME'	The name of the society shall be **ENGINEERING DEANS AND PRINCIPALS' ASSOCIATION OF KENYA** (In this constitution referred to as *"the Society"*)	The name of the society shall be UNIVERSITY ENGINEERING DEANS AND PRINCIPALS' ASSOCIATION OF KENYA (UEDPA-K)
2.	'OBJECT'	a) Advancement of engineering education and research in Kenya. b) Providing engineering deans and principals in Kenya with the ideas, tools and best practices necessary to further engineering education	i. Promoting Excellence in Engineering Education by setting standards and sharing best practices ii. Advocacy and promoting the interests of engineering faculties and institutions to government agencies, industry stakeholders to advocate for policies that support engineering education and research iii. Professional Development by organizing workshops, seminars, and conferences to support the professional development of engineering faculty members and administrators. iv. Facilitate collaboration and networking among engineering educators and industry within Kenya, regionally and internationally v. Student Engagement and Support by focusing on initiatives aimed at enhancing the student experience in engineering education. vi. Quality Assurance vii. Promoting research and innovation in engineering education and related fields viii. Community outreach ix. Collaboration with regulatory agencies
3.	'MEMBERSHIP'	a) Any Engineer who heads an Engineering Institution or Department in Kenya shall be eligible for membership of the society and shall, subject to approval of the committee, become a member on payment of an entrance fee of Sh......... b) Every member shall pay a monthly subscription of Sh. .... not later than the 15th day of each month	i. The membership to the Society is open to all current and former University Engineering Deans and Principals in Kenya. ii. All members must be registered engineers by the Engineers Board of Kenya.

		c) Any member desiring to resign from the society shall submit his resignation to the secretary, which shall take effect from the date of receipt by the secretary of such notice. d) Any member maybe expelled from membership if the committee so recommends and if a general meeting of the society shall resolve by a two-thirds majority of the members present that such a member should be expelled on grounds that his conduct has adversely affected the reputation or dignity of the society, or that he has contravened any of the provisions of the constitution of the society. The committee shall have power to suspend a member from his membership until the next general meeting of the society following such suspension but not withstanding such suspension a member whose expulsion is proposed shall have the right to address the general meeting at which his expulsion is to be considered. Any person who resigns or is removed from membership shall not be entitled to a refund of his subscription or any part thereof or any moneys contributed by him at any time. e) Any member who falls into arrears with his monthly subscription for more than six months shall automatically cease to be a member of the society and his name shall be struck off the register of members. The committee may, however, as its discretion, reinstate such member of the total amount of subscription outstanding.	iii. iv. v. vi. vii. viii. ix. x.	iii. University Engineering Deans and Principals who wish to become members shall make an application in the prescribed format and pay the requisite fees. iv. Every member shall pay a monthly subscription of Sh. .... not later than the 15th day of each month (It is more prudent to consider annual subscription fees) v. Any member desiring to resign from the society shall submit his resignation to the secretary, which shall take effect from the date of receipt by the secretary of such notice. vi. +Any member may be expelled from the Society if the committee so recommends, and a general meeting of the society approves by a two-thirds majority of the members present: i. His conduct has adversely affected the reputation or dignity of the society, or ii. he has contravened any of the provisions of the constitution of the society. vii. The committee shall have power to suspend a member from his membership until the next general meeting of the society. viii. A member on suspension or recommended for expulsion shall have the right to address the general meeting at which his expulsion is to be considered. ix. Any person who resigns or is removed from membership shall not be entitled to a refund of his subscription or any part thereof or any moneys contributed by him at any time. x. Any member who falls into arrears subscription for more than two years shall automatically cease to be a member of the society and his name shall be struck off the register of members. The committee may, however, as its discretion, reinstate such member if the total amount of subscription outstanding is cleared.

4.	'OFFICE BEARER'	a) All office bearers shall hold office from the date of election until the succeeding annual general meeting subject to the conditions contained in sub-paragraphs(c) and (d) of this rule but shall be eligible for re-election. b) Any office bearer who ceases to be a member of the society shall automatically cease to be an office bearer thereof. c) Office bearers may be removed from office in the same way as it is laid down for the expulsion of members in rule 3 (d) and vacancies thus created shall be filled by persons elected at the general meeting resolving the expulsion.	a) The above office bearers shall constitute the Committee. b) All office bearers shall hold office from the date of election until the succeeding annual general meeting subject to the conditions contained in sub-paragraphs(c) and (d) of this rule but shall be eligible for re-election. c) Any office bearer who ceases to be a member of the society shall automatically cease to be an office bearer thereof. d) Office bearers may be removed from office in the same way as it is laid down for the expulsion of members in rule 3 (d) and vacancies thus created shall be filled by persons elected at the general meeting resolving the expulsion
5.	'THE COMMITTEE'	a) The committee shall consist of all the office bearers of the society and .... Other members elected at the annual general meeting in each year; such committee members shall hold office until the following annual general meeting. The committee shall meet at such times and places as it shall resolve but shall meet not less than once in any three months. (NOTE. – Where it is the intention of the society to form branches, it may well be that some provision should be made for them to be represented on this committee. In which case the election of these representatives should be by the committee of the branch concerned)	a) The committee shall consist of all the office bearers of the society and the immediate past Chairman who shall be an ex-officio member. Other members elected at the annual general meeting in each year; such committee members shall hold office until the following annual general meeting. The committee shall meet at such times and places as it shall resolve but shall meet not less than once in any three months. (NOTE. – Where it is the intention of the society to form branches, it may well be that some provision should be made for them to be represented on this committee. In which case the election of these representatives should be by the committee of the branch concerned)
6.	'FUNDS'		Sources of the funds: i. Subscription fees ii. Gifts and donations iii. Funds raised from workshop and other activities of the Society

5.0 KEY RECOMMENDATIONS & ACTION PLANS

The following were the key recommendations and action plans: -

1) The accreditation standards for engineering programs be updated to align with international best practices and industry needs.
2) Emphasis should be placed on practical training, industry partnerships, and continuous improvement of curriculum content.
3) The need to standardize and update the nomenclature for engineering degree programs by the Commission for University Education was highlighted to provide a clear and consistent program names will help students, employers, and the public better understand the focus and specialization of each engineering program.
4) Need to address deficiencies in engineering education through bridging programs and Postgraduate Diploma (PGD) courses enable B. Tech Graduates to register with Board if the they so desire
5) Need to develop a roadmap and plans to facilitate the conversion of B. Tech graduates to B. Eng through additional training and assessments.
6) The Articles of Association for the Council of Engineering Deans and Principals were discussed, and further amendments made. These articles will guide the functioning and governance of the council, promoting collaboration and coordination among engineering institutions.

6.0 WAY FORWARD

1) It was suggested that the Accreditation Council should be solely composed by academicians. However, industry experts will also be incorporated
2) The Board together with the COEDP should take cognizance of the factors that cause hinderance of registration of 10000 GEs to PEs especially in the academia
3) There is a need to develop pathways for bridging the deficiencies to enable for the registration of Technicians and Technologists by the Board.
4) There is need to address the challenges in engineering education e.g. staffing, and training infrastructure due to the rapid expansion of universities to meet quality standards.
5) Deans we requested to take note of the importance of having membership with COVIDSET under UNESCO and the African Network of Scientific and Technological Institutions (ANSTI)

Annex I: Workshop Program

ITEM	DURATION	DESCRIPTION
DAY I – SETTING THE FOUNDATION		
1.	8.00 - 8.30	**Registration**
2.	8.30 – 9.00	**Introductions** • Eng. Grace Onyango, PE – *Director, Capacity Building & Accreditation. EBK*
3.	9.00 – 9.30	**Session I:** • Remarks – **Eng. Margaret N. Ogai, CE** – *Registrar/CEO, Engineers Board of Kenya* • Remarks – **Eng. Erastus K. Mwongera CE, FIEK, CBS** – *Chairman, Engineers Board of Kenya* • Remarks - **Eng. Prof. Sylvester Abuodha, CE** - *Chairman, Academic Qualifications Committee*
4	09.30 – 10.30	• Remarks – **Eng. Prof. Bernard W. Ikua, PE** – Chairman, Council of Engineering Deans & Principals Presentation of Overview of Engineering Education- Opportunities and Challenges
10.30 – 11.00		**Health Break and group photo**
5	11.00 – 01.00	**Session II:** • Review the Accreditation Standards i.e., Washington Accord, CUE, EBK

01.00 – 02.00		**Lunch Break**
6	02.00 – 04.00	**Session III:** • Group Discussions on Identified Issues in Alignment of Accreditation Standards to Washington Accord
04.30		**Departures**
DAY II: ADDRESSING CHALLENGES IN ENGINEERING EDUCATION		
1.	08.00 - 08.30	Arrival & Opening prayer
2.	08.30 – 10.30	• Review of Nomenclature for Degree Programs
10.30 – 11.00		**Health Break**
3.	11.00 – 01.00	• Development of Pathways
01.00 – 02.00		**Lunch Break**
4.	02.00 – 03.00	• Articles of Association
5.	03.00 – 04.00	• Discussions on way forward
DAY III: SHAPING THE FUTURE OF ENGINEERING EDUCATION		
1.	8.00 – 08.30	• Arrival & Opening prayer
2.	08.30 – 10.00	• Proposed Amendments to Articles of Association

10.00 - 10.30		**Tea Break**
3.	10.30 – 01.00	• Way forward • Closing Remarks
01.00 - 02.00		**Lunch Break & Departure**

Prepared By:
Ritah Ivayo
Capacity Building Officer 19/04/2024

Checked By:
for **Eng. Grace Onyango, PE**
Director (Capacity Building & Accreditation) .... 19/04/2024.

Approved By:
Eng. Margaret N. Ogai, CE
Registrar/Chief Executive Officer 26.4.2024