

Capacity Building in Engineering Education, Case Studies from Projects in Africa

By

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Global warming, pandemic, conflicts and other threats calls for approaches to quality engineering education beyond conventional aims and action plans. Quality engineering education for sustainable development is very crucial.



Well Match with the Current Needs

- WFEO - the Co-Chair of the Science and Technology Group at the UN Major Group of Stakeholders (MGoS)
- WFEO - CEIE achievements of the past two years are very remarkable and well match with the theme for the HLPF 2022 –

“Building back better from the coronavirus disease (COVID-19) while advancing the full implementation of the 2030 Agenda for Sustainable Development”.

Presentation Outlines

- The presentation would be on the Mentoring Work being done by WFEO and its partners in international engineering to align its engineering education benchmarks with the UN SDGs.
- The work is supported by UNESCO.

Mentoring Support

- National Board of Accreditation India (NBA)
- Pakistan Engineering Council (PEC)
- Institution of Engineers Sri Lanka (IESL)
- China Association of Science and Technology (CAST)
- Board of Engineers Malaysia (BEM)
- Engineering Council of South Africa (ECSA)
- Peruvian Engineers Association (CIP)
- Myanmar Engineering Council (MEngC)

Members/ Economies who are interested to be WFEO Member, seeking mentoring to become IEA Provisional Signatory Status

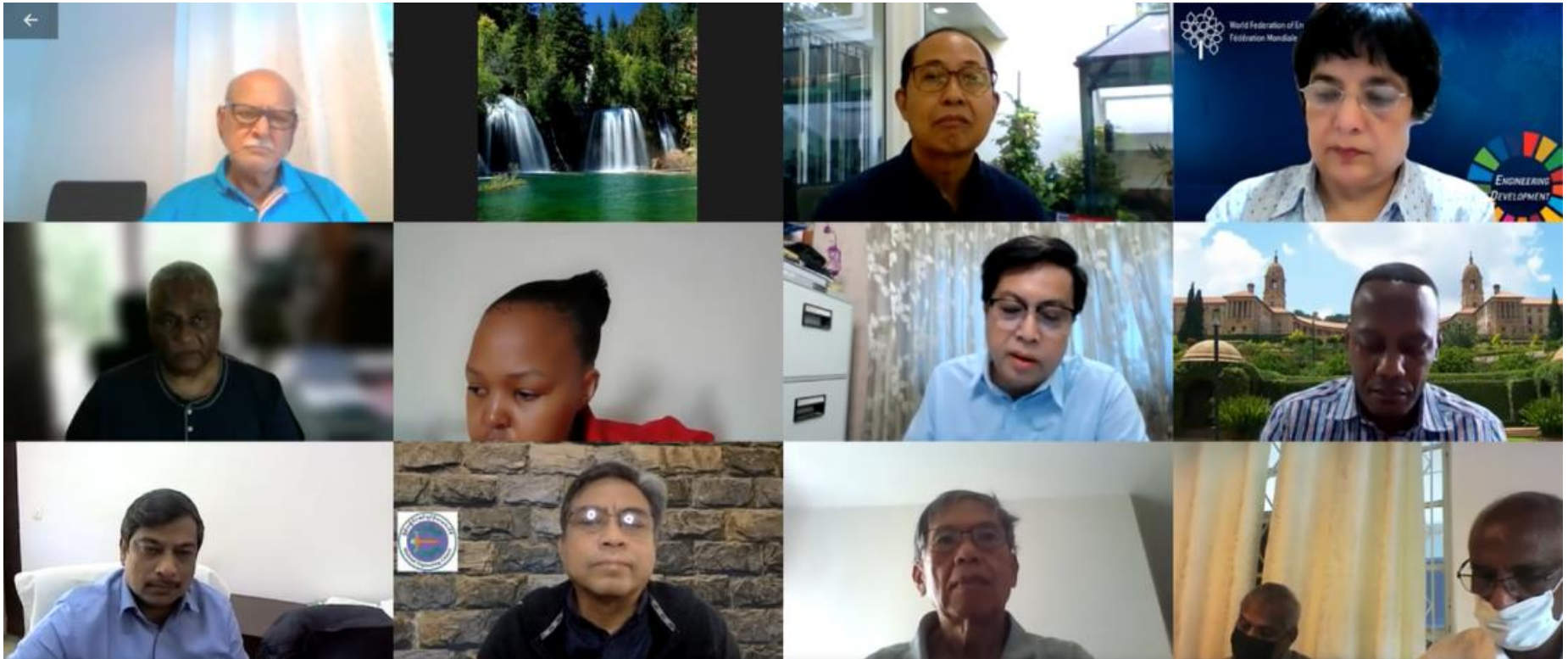
- Institution of Engineers Mauritius (IEM)
 - Engineers Board of Kenya (EBK)
 - Ghana Tertiary Education Commission (GTEC)
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- Regular meeting are held virtually with a systematic approach to build capacity to achieve international standards

Mentors and Mentees Relationship Activities



The mentoring session of Engineers Board of Kenya (EBK) with Pakistan Engineering Council (PEC) & Board of Engineers Malaysia (BEM)

Mentors and Mentees Relationship Activities



The mentoring session of Institution of Engineers Mauritius (IEM) with National Board of Accreditation (NBA, India) & Engineering Council of South Africa (ECSA)

Mentors and Mentees Relationship Activities



The Mentoring Session of the Ghana Tertiary Education Commission (GTEC) with China Association for Science and Technology (CAST) & Association for Evaluation and Accreditation of Engineering Programs (MÜDEK)

Mentoring Site Visit - Mauritius

1. Site Visit to Mauritius 27 June – 1 July 2022 – hosted The Institution of Engineers Mauritius (IEM)
2. Next Stage after establishing the appropriate structure and policies and procedures
3. Goal was to build capacity for accreditation and to review infrastructure and facilities at the Higher Education Institutions
4. Observes accreditation visits to three universities:
 - University of Mauritius – Civil Engineering and Chemical Engineering
 - University de Mascareignes – Civil Engineering
 - University of Technology – Electrical and Electronics Engineering

Mentoring Site Visit - Mauritius

5. Visited the facilities at the three universities
6. Provided training to educators and assessors from all three universities
7. Meetings with:
 - a. Minister for Science and Technology
 - b. Chair Higher Education Commission
 - c. Chair Quality Assurance Authority
 - d. Chair Council for Regulation of Professional Engineers
 - e. President Institution of Engineers Mauritius
 - f. Chair IEM Engineering Accreditation Board

Mentoring Site Visit - Mauritius



National Support from the Government, Ministry of Education, and leaders of the tertiary education sector and universities

Opening Session: L to R: Chair Quality Assurance Authority, Chair Council for Registration of Professional Engineers, President Institution of Engineers Mauritius, WFEO President 2017-2019 Dr Marlene Kanga, Vice Prime Minister and Minister for Science and Technology Mauritius, Dr S Agrawal, Mentor NBA India, Dr Andrew Chan, Chair Engineering Accreditation Board Mauritius, Chair Mauritius Institute of Education, Chair Tertiary Education Commission Mauritius, 27 June 2022



Assessor team (Chem Engg.) and observers at University of Mauritius 28 June 2022

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Mentoring Site Visit - Mauritius



Assessor team for University of Mauritius with Industry representatives and non-participatory observation by mentors, 27 June 2022



Assessor team (Electronics Engg.) and observers at University of Technology (UTM) Mauritius 29 June 2022



Assessor team (Civil Engg.) and observers at Universite des Mascareignes (UdM) Mauritius 29 June 2022

Conclusion

- Mentoring Tracking Schedules are recorded to monitor the program and for future references.
- CEIE thanks UNESCO & IEA for their support and working closely and collaboratively.
- We have developed a wiser way to mentoring new economies seeking international recognition of their engineering education systems

Thank you for your kind attention.