



Covenant University

B.Eng. Degree Programme in
Mechanical Engineering

**Programme Educational Objectives
(PEOs)**

FOR
COMPLIANCE WITH THE ACCREDITATION OF ENGINEERING
PROGRAMMES IN NIGERIAN UNIVERSITIES

by

COUNCIL FOR THE REGULATION OF ENGINEERING IN NIGERIA

Established by Decrees 55/70 and 27/92 (amendment) now the Engineers
(Registration, etc.) Act, CAP E11, 2004

2022-2027 SESSION

Programme Educational Objectives (PEOs) of Department of Mechanical Engineering, Covenant University

The Mechanical Engineering Department has established the following objectives of the undergraduate program in support of our mission and that of the University. Graduates are expected to be able to attain these objectives within 5 years following graduation:

PEO1: Develop knowledge, skills (including transferable skills, such as leadership, motivation, time management, prioritization, delegation, listening, communication, analytics) and understanding, as well as awareness and “know how”, in the fields of engineering and its related disciplines so that as graduates they will be equipped to enter into self-employment and employment as professional engineers progressing on to Registered Engineer or equivalent status) or a wide range of other professional careers.

PEO2: Prepare them to engage in life-long and critical enquiry with skills in research and knowledge acquisition and an appreciation of the value of education to the wider community.

PEO3: Provide them with internationally recognized qualifications which meet and exceed the requirements of the COREN Outcome-Based Education Benchmark for Engineering Programmes in Nigeria and international Benchmark Statements for Engineering for ABET, Engineering Council, UK, etc.

PEO4: Provide the engineering industry and profession, in Nigeria and elsewhere, with ready employable and enterprising graduates prepared for the assumption of technical, managerial and financial responsibilities.

PEO5: Achieve the above in the contexts of the Covenant University Vision 10:2022 business plans, following the University’s policies and procedures and conforming to the relevant sections of the Quality and Academic Standards (QAS) guidelines.

The Program Educational Objectives of the Department of Mechanical Engineering is in consonance with the overall mission of Covenant University, founded on creating knowledge that is life-applicable through a Human Development and Total Man Concept driven curriculum. Technology enhanced learning tools are adopted to enrich the learning experience of the students and to train mechanical engineers imbued with team spirit, who will collaborate with other professionals to create a sustainable world and enhance the global quality of life. The program curriculum is regularly reviewed and revised to accommodate recent trends and the changing industrial requirements for Mechanical Engineering graduates, while also ensuring that the benchmark minimum standards of the relevant national and professional accreditation agencies are met. Industrial placement and ensure that their educational training is life-applicable and meets industrial needs. The program educational objective of the Department of Mechanical Engineering, in line with the entrepreneurship and total man concept goals of the Covenant University, seeks to produce graduates who are resourceful, creative, knowledgeable and able to perform modern engineering functions in all ambient of exposure. The Program Educational Objectives of Mechanical Engineering Department specifically align with the Covenant University mission statement as follows:

- a. All graduates are equipped with tools to progress in their future careers with minimal supervision as they attain higher responsibility and greater technical accountability.

- b. All graduates are prepared towards obtaining membership of relevant professional bodies, acquiring relevant certifications or to advance their knowledge in graduate schools.
- c. All graduates are furnished with necessary tools to function effectively in entrepreneur's initiatives, civil service, industrial or commercial activities.
- d. All graduates are supplied with technical and leadership skill meant to cause them to make informed contributions to technological issues in a globalized environment, be part of the future world changers and innovators that will re-open new frontiers for human advancement.

The objectives are in consonance with the mission statement of the University which states thus *“To create knowledge and restore the dignity of the Black man via a Human Development Total Man Concept-driven curriculum employing innovative, leading edge teaching and learning methods, research and professional services that promote integrated, life-applicable, life-transforming education relevant to the context of Science, Technology and Human Capacity Building”* as underlined in the above Program Educational Objectives. Objectives ‘a’, ‘b’, ‘c’ and ‘d’ are clearly mapped out from the mission and shows the depth at meeting the aspirations of the Board of Regent for the program.

The Mechanical Engineering Program constituencies/stakeholders include industry, academia (graduate research programs), the national laboratories, state and federal agencies, regulatory agencies (COREN, NUC), Nigerian Institution of Mechanical Engineering, faculty members, students, alumni and employers. These constituencies have their own needs that are addressed by the Program Educational Objectives.

In order to have first-hand information on the impact of the Mechanical Engineering programme on our alumni towards achieving the twelve student outcomes that are mapped to the program educational objectives, the following are the significant constituencies:

Faculty: Faculty members are directly involved in the implementation of the student outcomes and assessment processes of the analysis and review of the objectives and outcomes.

Alumni: this group of stakeholders look forward to the continued quality and reputation of the programme as it in-turn shows the quality of the education acquired. The alumni most have been employed for 3-5 years and recent graduate of the programme. They have the experience on both sides of the wall to assess the PEOs and SOs.

Graduate/Alumni Employers: the positive assessment of the program by employers translates into opportunities for graduates of the program.

Advisory Board: this group is made up of representative of the industry, employers of our graduates, alumni, faculty and current students.

COREN: An important stakeholder is the national regulatory agency called COREN which stand for the Council for the Regulation of Engineering in Nigeria. This body accredits universities in Nigeria to run programmes in Nigeria. The Benchmark for Minimum Academic Standard (BMAS) must be met as a standard has been set to meet the Washington Accord. The requirement for the program educational objectives (PEO) for engineering programmes was embedded into the Benchmark for Minimum Academic Standard (BMAS) of the regulatory

agency for engineering education in the year 2017 and subsequently the College of Engineering at Covenant University formulated hers and was approved by the University Senate. In existence prior to 2017, employer assessment was conducted once for a maximum period of 5 years. Focus from henceforth is to conduct survey of graduates/alumni and graduate/alumni

-employer. A follow-up shall consist of discussion of a Faculty Committee or faculty members of the assessment criteria and results with the advisory board of the Department on an annual basis. For the first 5 years, the survey shall be annually and later every 3 years for consistent follow-up