

**OBAFEMI AWOLOWO UNIVERSITY**  
**FACULTY OF TECHNOLOGY**

**DEPARTMENT OF CIVIL ENGINEERING**

**PROGRAMME EDUCATIONAL OBJECTIVES**

Graduates are expected to achieve the goals outlined in the program educational objectives within three to five years of graduation using the knowledge they have acquired from their academic program. The following are the specific program educational objectives (PEOs) for the Civil Engineering Department at Obafemi Awolowo University (OAU) in Ile-Ife, Osun State, Nigeria:

**PEO1:** Produce graduates who could develop careers in civil engineering and other related fields;

**PEO2:** Produce graduates who can apply learnt skills to develop innovative solutions and technologies to solving real life problems;

**PEO3:** Produce graduates who are capable of seeking additional professional training and personal development, and;

**PEO4:** Promote research in different areas of civil engineering.

**PROGRAMME OUTCOMES**

The students who successfully undertake the Civil Engineering programme curriculum of the Department will be able to demonstrate the following competencies on graduation:

**PO1. Engineering Knowledge:** The students will be able to apply the knowledge of mathematics, basic and engineering sciences to develop solutions to solve engineering problems. The result will guarantee the graduates possess a solid understanding of the technical concepts that form the basis of the civil engineering career.

**PO2. Problem Analysis:** Using the fundamental concepts from mathematics, natural sciences, engineering, and science, as well as holistic considerations for sustainable development in their future careers, the students will be able to identify, formulate research problems, research questions, and analyze complex civil engineering problems to reach substantiated conclusions.

**PO3. Design/Development of Solutions:** When designing systems, components, or processes to meet specific needs, engineering students will be able to take into account public health and safety, whole-life costs, net zero carbon, and any necessary resource, cultural, societal, and environmental considerations. They will also be able to design solutions for complex engineering problems.

**PO4. Investigation:** Through the use of research methodologies such as design of experiments, analysis and interpretation of local and real-time data, and information synthesis to provide reliable results, the students will be able to perform in-depth studies of difficult engineering challenges.

**PO5. Modern Tools Usage:** The students will possess the capacity to design, model, choose, apply, and assess the constraints of suitable methods, materials, and contemporary engineering with IT tools, such as modeling and prediction, to complex engineering issues. The use of Computer Aided Design (CAD) with other resources effectively in Engineering projects is a good indicator of this.

**PO6. The Engineer and Society:** The students will be able to analyze and assess the effects of sustainable development on the environment, legal frameworks, health and safety, sustainability, and society as they solve difficult engineering challenges.

**PO7. Ethics:** they will be able to follow pertinent national and international legislation, adhere to professional ethics and engineering practice norms, and apply ethical concepts. So that they will be aware of the importance of diversity and inclusivity.

**PO8. Individual and Team Work:** In diverse and inclusive teams as well as in multidisciplinary, in-person, remote, and distributed settings, the students will be able to contribute and lead with effectiveness.

**PO9. Communication:** The students will possess the ability to comprehend and write effective reports and design documentation, make effective presentations, and take into account cultural, linguistic, and learning differences in order to communicate effectively and inclusively on complex engineering activities with the engineering community and with society at large.

**PO10. Project Management:** The students will be able to apply knowledge and comprehension of engineering management concepts and economic decision-making to their personal work, as a team member and leader, project management, and multidisciplinary situations.

**PO11. Lifelong Learning:** understand the importance of, and possess the skills necessary for:  
(i) independent, lifelong learning; (ii) adaptability to new and developing technologies; and (iii) critical thinking in the context of overall technological change.

**Some Specific Educational Outcomes:**

The student should possess a good and satisfactory performance in the following areas:

- Ability to conduct experiments on soil to determine the geotechnical properties of soils.
- Be in a position to apply the core concepts in water and wastewater processing engineering to develop flowsheets.
- Be capable of designing and conducting experiments to monitor and prevent the failure of structures. Be capable of using British Standard (BS) codes to design road, concrete, and steel structures
- Be in a position to work independently and as a team member engaged in engineering projects
- Ability to select materials for critical engineering components and for construction
- Possess the experimental and computational skills for a professional career in Civil Engineering
- Ability to identify, formulate and solve materials related engineering problems