

# Student Outcomes

## Civil Engineering Department

Warith Al-Anbiyaa University • College of Engineering

### SO1 Knowledge

SO1-1

Ability to identify, formulate, and solve civil engineering problems by applying principles of engineering, science, and mathematics.

SO1-2

Ability to apply engineering design to produce solutions meeting specified needs — such as structural systems, hydraulic systems, and geotechnical works — while considering safety, sustainability, and relevant constraints.

SO1-3

Ability to apply knowledge of structural analysis, mechanics of materials, fluid mechanics, soil mechanics, and construction materials to civil engineering practice.

### SO2 Skills & Competencies

SO2-1

Ability to design, conduct, and analyze experiments relevant to civil engineering (materials, soil, concrete, and structural elements) and to interpret data using sound engineering judgment.

SO2-2

Ability to communicate effectively — verbally and in writing — with engineering teams, clients, and the public at different technical levels.

SO2-3

Ability to use modern engineering tools and software (SAP2000, ETABS, AutoCAD, ABAQUS, GIS) relevant to civil engineering analysis and design.

SO2-4

Ability to recognize the need for continuous professional development and to independently acquire and apply new knowledge in civil engineering.

SO2-5

Ability to function effectively in multidisciplinary engineering teams, set goals, plan tasks, manage risk, and meet project deadlines.

### SO3 Values & Professional Ethics

SO3-1

Ability to recognize and fulfill ethical and professional responsibilities in civil engineering practice, making informed judgments that account for safety, environmental impact, societal welfare, and global sustainability.

SO3-2

Ability to evaluate civil engineering solutions with consideration of public health, infrastructure durability, environmental impact, and the economic and social context of the local and global community.