



# UNIVERSITY OF ARKANSAS

**College of Engineering**  
*Department of Civil Engineering*

## Bachelor of Science in Civil Engineering (BSCE)

### Student Learning Outcomes (SLO)

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. an ability to communicate effectively with a range of audiences.
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

### Assessment and Evaluation: AY 2024 - 2025

The faculty of the Department of Civil Engineering evaluated the SLOs during their annual fall retreat on August 13, 2025. The faculty discussed the SLO assessment data and the current student performance on the Fundamentals of Engineering (F.E.) exam. The faculty decided to change the assessment for each of the SLOs and no longer use the F.E. exam (which are discussed further below).

### Changes to the Degree Program – Planned or Considered

The faculty voted to no longer require the students to take the F.E. exam prior to graduation. The students will still be encouraged to take the exam and will be reimbursed if they pass the exam prior to graduation.

### Changes to the Assessment Process – Planned or Considered

The following courses will be used to assess the SLOs. For sophomore and junior level courses, 80 percent of the students earn 70 or better on the assessment. For senior level courses, 90 percent of the students earn a 70 percent or better on the assessment.

### Student Learning Outcomes (SLO)

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
  - a. CVEG 20103, Mechanics 1
  - b. CVEG 32103, Hydraulics
  - c. CVEG 43003, Concrete 1
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
  - a. Geotechnical, Transportation, Environmental, and Structural Design Projects
3. an ability to communicate effectively with a range of audiences.
  - a. Geotechnical, Transportation, Environmental, and Structural Design Projects
  - b. CVEG 21103, Structural Materials Lab Report
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
  - a. CVEG 28501, PPI
  - b. CVEG 34103, Transportation Systems Engineering
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
  - a. Geotechnical, Transportation, Environmental, and Structural Design Projects
  - b. CVEG 43003, Concrete 1
6. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
  - a. CVEG 21103, Structural Materials – Mini Project Report/Grade
  - b. CVEG 32103, Hydraulics
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.
  - a. CVEG 20103, Mechanics 1
  - b. CVEG 32103, Hydraulics
  - c. CVEG 43003, Concrete 1