# Academic Program Assessment
# AY 2024-2025

| Program Name | Date Completed |
|---|---|
| **Civil Engineering Technology** | **05/31/2025** |
| Report Completed By | Report Contributors |
| **Hasan Faisal** | **Faculty teaching CET and CE courses (Drs. Kalevela, Islam, Sidorova, Gulzar)** |
| Brief Statement of Program Mission and Goals | |
| **The objective of the Civil Engineering Technology (CET) program is to provide an integrated educational experience that prepares graduates to apply established engineering principles and standards of practice in developing solutions to civil engineering problems. The program is designed to prepare graduates for successful careers in civil engineering by providing them with the ability to contribute to engineering teams in various practice areas including design, construction, operating and maintaining elements or systems of the built environment such as buildings, water supply infrastructures, flood mitigation systems, and highways.** | |

## Table I Closing the Loop

Report on at least one data-informed change to your curriculum during AY 2024-2025 that was implemented to improve student learning, in response to prior assessments or other data.

**A. Describe issues or SLOs addressed in the AY 2024-2025 cycle. Paste SLOs verbatim below.**

During AY 2024-2025, the Civil Engineering Technology program assessed all five program SLOs:

1. SLO 1: Ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly defined engineering problems appropriate to the discipline.
2. SLO 2: Ability to design systems, components, or processes meeting specified needs for broadly defined engineering problems appropriate to the discipline.
3. SLO 3: Ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.
4. SLO 4: Ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes.
5. SLO 5: Ability to function effectively as a member as well as a leader on technical teams.

**B. In which academic year and semester was this SLO last assessed to generate data that informed the change(s)?**

Spring 2024

**C. What were the recommendations for change in the previous cycle? (See Column H in the previous cycle's report.)**

For SLO 1 (CET 222): Incorporate more interactive and in-class examples and analysis of dynamic system problems.

For SLO 3 (CET 315): Integrate more interactive, in-class design examples and design tools for foundations, retaining walls, and other geotechnical engineering elements.

For SLO 1 (General): Review and reinforce prerequisite knowledge, especially in trigonometry.

Overall: Enhance teaching methods with more hands-on, example-based learning to strengthen students' understanding of key topics.

**D. How were the recommendations for change acted upon?**

All SLOs achieved the targeted goals after implementing the recommended changes. Specifically:

- All assessed courses showed that at least 75% of students met or exceeded the 75% proficiency target.
- Interactive teaching methods and strengthened prerequisites (including trigonometry) effectively supported student learning.

**E. How did the change(s) impact student learning? If the change was not effective, what are the next steps or new recommendations?**

The changes implemented (e.g., more interactive examples, strengthened prerequisite support, and enhanced hands-on exercises) had a positive impact on student learning. All assessed SLOs met or exceeded the 75% target proficiency level for student performance. As a result, no additional immediate changes are required. The program will continue to monitor SLOs and refine performance indicators as needed, ensuring continuous improvement and maintaining high student learning outcomes.

**Enter Table I Closing the Loop Comments Below**

The program will continue monitoring SLOs, refine performance indicators, and coordinate with related programs (Civil Engineering and Construction Management) to strengthen assessment practices. Additionally, the faculty will explore adding new courses, including math-focused offerings, to support student success in the program.

# Academic Program Assessment
# AY 2024-2025

| Program Name | Date Completed |
|---|---|
| **BSCET** | **06/01/2025** |
| Report Completed By | Report Contributors |
| **Hasan Faisal** | **Faculty teaching CET and CE courses (Drs. Kalevela, Islam, Sidorova, Gulzar)** |

## Table II Annual assessment of Student Learning Outcomes (SLOs) in AY 2024-25

1. Include information to share assessment processes, results, and recommendations for improved student learning. Copy this table for each assessed outcome.

| |
|---|
| **A. Program SLO assessed in this cycle. Copy the SLOs verbatim from the assessment plan.** |
| SLO 1 Ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly defined engineering problems appropriate to the discipline<br>SLO 2 Ability to design systems, components, or processes meeting specified needs for broadly defined engineering problems appropriate to the discipline.<br>SLO 3 Ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.<br>SLO 4 Ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes.<br>SLO 5 Ability to function effectively as a member as well as a leader on technical teams. |
| **B. Semester and year this SLO was reported on prior to this cycle.** |
| Spring 2024 |
| **C. Describe the assessment method for this SLO.** |
| SLO 1 CET 315 Quiz 1, CET 372 Test 2, CET 116 Exam 1<br>SLO 2 CET 404 Exam 2, CET 315 Final Exam, CET 412 Midterm<br>SLO 3 CET 208 Lab 2, CET 315 Lab 2, CET 206 Lab 1<br>SLO 4 CET 208 Final Project, CET 412 Final Project<br>SLO 5 CET 412 Peer Evaluation, CET 208 Peer Evaluation |
| **D. Described student group(s) assessed. Provide the number of students or number of artifacts assessed.** |
| SLO 1: 24 Students<br>SLO 2: 26 Students<br>SLO 3: 17 students<br>SLO 4: 19 students<br>SLO 5: 19 students |
| **E. Expected proficiency level and proportion of students who should reach this level.** |
| At least 75% of sampled students should attain 75% of the score |

**F. Assessment results and number of students who met proficiency level.**

SLO 1: Average of 96% (23 Students) of students achieved 75% score
SLO 2: Average of 87% (22 students) of students achieved 75% score
SLO 3: Average of 90% (15 students) of students achieved 75% score
SLO 4: Average of 89% (17 students) of students achieved 75% score
SLO 5: Average of 100% (19 students) of students achieved 75% score

**G. Describe what results indicate about student performance.**

Students have attained the target performance.

**H. Describe program level changes/improvements planned for AY 2025-2025 informed by this assessment.**

The CET program met with all the faculties to discuss improvements based on assessment results. Next year, the program will continue monitoring all SLOs and make changes to simplify the performance indicators and make them more focused and connected to the SLOs. Because some SLOs and indicators are linked with Civil Engineering and Construction Management programs, the faculty will align these improvements with the next academic calendar.

In addition, the BSCET faculty team is also working on proposals to add new courses and improvement in the program curriculum. These efforts aim to strengthen the overall assessment process and enhance student learning outcomes. These proposals include adding additional technical courses that align with industry needs and improve students' readiness for professional practice. In particular, the team is considering adding a math course to strengthen students' quantitative skills, which are essential for success in the field of civil engineering technology. These new courses are intended to complement the existing curriculum, provide more elective choices, and give students opportunities to apply their learning in real-world contexts.

**Enter Table II AY 2025 Assessment Comments Below**

The CET program has reviewed the assessment results and identified opportunities for improvement. For AY 2025-2026, the program plans to:

• Monitor all SLOs carefully to ensure continuous improvement.

• Simplify and refine performance indicators (PIs) to make them clearer and better aligned with SLOs.

• Coordinate with related programs (Civil Engineering and Construction Management) to ensure consistent assessment and integration of shared SLOs and PIs.

• Collect additional evidence and materials to strengthen assessment practices.

• Working towards proposals to CAP Board to add new courses, including math courses, to enhance students' quantitative and technical skills and improve overall program quality.

These steps are intended to improve student learning outcomes and better prepare students for careers in civil engineering technology.