

Program Name	Date Completed
Bachelor of Science in Mechatronics Engineering and Bachelor of Science in Industrial Engineering	6/4/2025
Report Completed By	Report Contributors
Nebojsa Jaksic	Leonardo Bedoya-Valencia, Trung Duong, Su Zhidong, Ash Hegana, and Sylvester Kalevela
Brief Statement of Program Mission and Goals	
The mission of the program is to create engineers (mechatronics engineers and industrial engineers) to satisfy the needs of local, regional, and global industry.	

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.
1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
B. In which academic year and semester was this SLO last assessed to generate data that informed the change(s)?
Spring 2022
C. What were the recommendations for change in the previous cycle? (See Column H in the previous cycle's report.)
none
D. How were the recommendations for change acted upon?
n/a
E. How did the change(s) impact student learning? If the change was not effective, what are the next steps or new recommendations?
n/a

A. Describe issues or SLOs addressed in the AY 2024-2025 cycle. Paste SLOs verbatim below.
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.
B. In which academic year and semester was this SLO last assessed to generate data that informed the change(s)?
Spring 2021
C. What were the recommendations for change in the previous cycle? (See Column H in the previous cycle's report.)
<p>The faculty have agreed on the following:</p> <p>1- Performance indicators from EN360 and EN487 (for the BSE Program) and EN475 and EN488 (for the BSIE program) are sufficient to measure students' performance for outcome. The note from the previous report should be updated accordingly.</p> <p>2- To reduce the effect of full-time work (of some students) on their academic performance, the faculty agreed to help those students by giving them more time to interact with other students in the team and with the instructor by increasing faculty availability (office hours) and encourage the students to engage in teamwork remotely.</p> <p>3- Risk analysis and management are sufficiently covered through the BSE and IE programs curriculum (at EN430 and EN486). Also, the students need to include them as part of their capstone project proposal. So, the faculty think risk and other affecting factors are already considered in the design process.</p>
D. How were the recommendations for change acted upon?
<p>1- We changed some of our assessment courses. EN 362 and EN 477 courses were dropped.</p> <p>2- We encouraged students to interact remotely if they are working full time</p> <p>3- Risk analysis and management are required for all senior projects.</p>
E. How did the change(s) impact student learning? If the change was not effective, what are the next steps or new recommendations?
We covered some gaps in knowledge/skills necessary for engineering practice.

A. Describe issues or SLOs addressed in the AY 2024-2025 cycle. Paste SLOs verbatim below.
3. an ability to communicate effectively with a range of audiences.
B. In which academic year and semester was this SLO last assessed to generate data that informed the change(s)?
Spring 2021
C. What were the recommendations for change in the previous cycle? (See Column H in the previous cycle's report.)
None – this is a new SLO in this form.
D. How were the recommendations for change acted upon?
n/a
E. How did the change(s) impact student learning? If the change was not effective, what are the next steps or new recommendations?
n/a



A. Describe issues or SLOs addressed in the AY 2024-2025 cycle. Paste SLOs verbatim below.
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.
B. In which academic year and semester was this SLO last assessed to generate data that informed the change(s)?
Spring 2022
C. What were the recommendations for change in the previous cycle? (See Column H in the previous cycle's report.)
none
D. How were the recommendations for change acted upon?
n/a
E. How did the change(s) impact student learning? If the change was not effective, what are the next steps or new recommendations?
n/a



A. Describe issues or SLOs addressed in the AY 2024-2025 cycle. Paste SLOs verbatim below.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative environment, establish goals, plan tasks, and meet objectives.
B. In which academic year and semester was this SLO last assessed to generate data that informed the change(s)?
Spring 2021
C. What were the recommendations for change in the previous cycle? (See Column H in the previous cycle's report.)
Create separate assessment report for each program.
D. How were the recommendations for change acted upon?
They were not acted upon since there were multiple changes in program restructuring, changes in leadership, and building renovation asserted different priorities.
E. How did the change(s) impact student learning? If the change was not effective, what are the next steps or new recommendations?
There was no impact on student learning.

A. Describe issues or SLOs addressed in the AY 2024-2025 cycle. Paste SLOs verbatim below.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
B. In which academic year and semester was this SLO last assessed to generate data that informed the change(s)?
Spring 2023
C. What were the recommendations for change in the previous cycle? (See Column H in the previous cycle's report.)
This assessment, which is also done for the ABET, covers three years. The outcome was not met for Outcome 6 for the Spring of 2018 for EN 420. Corrective action for the class was to give preparatory exercises and a preparatory exam including the design of a model using ARENA and its integration with the output analysis. Also, the outcome was not met for EN 443 for the Spring of 2020 semester. The instructor felt that it was not met because of the switch to remote learning and the distractions of the COVID-19. The instructor felt that no changes would be needed, assuming that the next time the class is taught it would be faceto-face and without the pandemic issue
D. How were the recommendations for change acted upon?
No changes were needed.
E. How did the change(s) impact student learning? If the change was not effective, what are the next steps or new recommendations?
n/a



A. Describe issues or SLOs addressed in the AY 2024-2025 cycle. Paste SLOs verbatim below.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.
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.)
none
D. How were the recommendations for change acted upon?
n/a
E. How did the change(s) impact student learning? If the change was not effective, what are the next steps or new recommendations?
n/a



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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.
1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
B. Semester and year this SLO was reported on prior to this cycle.
Spring 2022
C. Describe the assessment method for this SLO.
We reviewed the assessment of this SLO from individual classes EN 231, EN 460, EN 471, EN 487, and EN 488.
D. Described student group(s) assessed. Provide the number of students or number of artifacts assessed.
All students in each of the classes above were assessed.
E. Expected proficiency level and proportion of students who should reach this level.
The level differed by class. For example, 80% of students achieve a score of 80%
F. Assessment results and number of students who met proficiency level.
The goal was met.
G. Describe what results indicate about student performance.
n/a



H. Describe program level changes/improvements planned for AY 2025-2026 informed by this assessment.

A discussion about what does continuous improvement mean at the outcome level and how to link it to the program level arose while evaluating this outcome. We continuously reinforce the importance of learning python and other programming languages as a way to be able to solve complex engineering problems.

A. Program SLO assessed in this cycle. Copy the SLOs verbatim from the assessment plan.

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.

B. Semester and year this SLO was reported on prior to this cycle.

Spring 2021

C. Describe the assessment method for this SLO.

D. Described student group(s) assessed. Provide the number of students or number of artifacts assessed.

E. Expected proficiency level and proportion of students who should reach this level.

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

G. Describe what results indicate about student performance.

H. Describe program level changes/improvements planned for AY 2025-2026 informed by this assessment.



A. Program SLO assessed in this cycle. Copy the SLOs verbatim from the assessment plan.
3. an ability to communicate effectively with a range of audiences.
B. Semester and year this SLO was reported on prior to this cycle.
Spring 2023
C. Describe the assessment method for this SLO.
We reviewed the assessment of this SLO from individual classes.
D. Described student group(s) assessed. Provide the number of students or number of artifacts assessed.
All students in each of the classes were assessed, using specific assignments in each class.
E. Expected proficiency level and proportion of students who should reach this level.
The level differed by class. For example 80% of students achieve a score of 80%.
F. Assessment results and number of students who met proficiency level.
The goal was met. 100% of the students were proficient.
G. Describe what results indicate about student performance.
Our technological culture, the use of communication tools, and university services are improving through many courses we teach and the university-wide activities.
H. Describe program level changes/improvements planned for AY 2025-2026 informed by this assessment.
Creation of posters and PowerPoint presentations will be addressed in a more formal fashion.

A. Program SLO assessed in this cycle. Copy the SLOs verbatim from the assessment plan.
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.
B. Semester and year this SLO was reported on prior to this cycle.
Spring 2022
C. Describe the assessment method for this SLO.
We reviewed the assessment of this SLO from individual classes.
D. Described student group(s) assessed. Provide the number of students or number of artifacts assessed.
All students in each of the classes were assessed, using specific assignments in each class.
E. Expected proficiency level and proportion of students who should reach this level.
The level differed by class. For example 80% of students achieve a score of 80%.
F. Assessment results and number of students who met proficiency level.
The goal was met.
G. Describe what results indicate about student performance.
n/a
H. Describe program level changes/improvements planned for AY 2025-2026 informed by this assessment.
The Engineering faculty agreed that, since EN 101 contributes to essential skills for engineering, to maintain the required level of introducing ethical and professional concepts to assign a tenured or tenure-track faculty permanently to this class. Also, due to external changes, we should include more ethics in AI topics throughout the curriculum

A. Program SLO assessed in this cycle. Copy the SLOs verbatim from the assessment plan.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative environment, establish goals, plan tasks, and meet objectives.
B. Semester and year this SLO was reported on prior to this cycle.
Spring 2021
C. Describe the assessment method for this SLO.
Tests, homework assignments, projects, etc. were assessed.
D. Described student group(s) assessed. Provide the number of students or number of artifacts assessed.
All students in the following courses: EN 107, EN 215, and EN 430
E. Expected proficiency level and proportion of students who should reach this level.
A typical goal definition was " The goal is that 80% of students score at least 80% or better on an assignment."
F. Assessment results and number of students who met proficiency level.
The goal was met for all evaluated courses.
G. Describe what results indicate about student performance.
Students are doing well on Outcome 5.
H. Describe program level changes/improvements planned for AY 2025-2026 informed by this assessment.
The engineering faculty discussed team dynamics and current issues – no decisions were made.



A. Program SLO assessed in this cycle. Copy the SLOs verbatim from the assessment plan.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
B. Semester and year this SLO was reported on prior to this cycle.
Spring 2023
C. Describe the assessment method for this SLO.
We reviewed the assessment of this SLO from individual classes
D. Described student group(s) assessed. Provide the number of students or number of artifacts assessed.
All students in each of the classes were assessed, using specific assignments in each class.
E. Expected proficiency level and proportion of students who should reach this level.
The level differed by class. For example, 80% of students achieve a score of 80%.
F. Assessment results and number of students who met proficiency level.
The goal was met.
G. Describe what results indicate about student performance.
Students performed well.
H. Describe program level changes/improvements planned for AY 2025-2026 informed by this assessment.
We discussed the inclusion of R and Python to use these tools to analyze large data sets. We are planning to bring this improvement to the next meeting with the Industrial Advisory Board.



A. Program SLO assessed in this cycle. Copy the SLOs verbatim from the assessment plan.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.
B. Semester and year this SLO was reported on prior to this cycle.
Spring 2024
C. Describe the assessment method for this SLO.
The SLO was assessed through test questions and homework assignment, in EN 101, EN 215; and a senior design project in EN 487.
D. Described student group(s) assessed. Provide the number of students or number of artifacts assessed.
All students enrolled in EN 101, EN 215, and EN 487 in spring 2022, fall 2022, spring 2023 and fall 2023
E. Expected proficiency level and proportion of students who should reach this level.
The desired SLO student performance goal in assignments and test question is 80% of students score at least 80%. For the design project, proficiency is expected
F. Assessment results and number of students who met proficiency level.
The goals were met in the assessed courses, except for EN487. The assessment process is generally working well for this outcome. In EN101 we introduce the idea and make sure they are aware; in EN215 we reinforce methods for applying new knowledge and using appropriate learning strategies; in EN487/488 we require them to demonstrate their ability to engage in applying new knowledge and using appropriate learning strategies. Students in EN 487/488 demonstrate that they can learn new material and documented what they learned in a separate section of their final reports. Some EN101 classes were taught by adjunct faculty and the assessment were not done.
G. Describe what results indicate about student performance.
The SLO performance is mostly satisfactory. However some modern engineering tools are changing and students need to be aware of these changes.



H. Describe program level changes/improvements planned for AY 2025-2026 informed by this assessment.

Action: Encourage students to learn and use modern engineering tools like AI, IoT, IE 4.0, IE 5.0 etc.

Enter Table II AY 2025 Assessment Comments Below

All seven SLOs were summarized into the ABET report that included data generated during the period of fall 2018 through spring 2024. Also, an additional ABET report addresses all 7 outcomes from Fall 2018 to Spring 2025.