

Academic Year 2025-2026

ME-Chemical Engineering - ME-MECH Learning Outcomes

Application of Engineering, Science, and Mathematics Principles **MET**

Students will demonstrate an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

| MEASURES                                                                                                                                                                                           | RESULTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ACTIONS                                |               |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------|-------------------|---------------|----|--------|------|------|----|--------|------|------|----|--------|------|------|---------|--------|------|------|----------------------------------------|
| <div>Comprehensive Exam</div> <div>Proficiency Minimum acceptable is 3 out of 4</div> <div>Direct - Exam (Course-based)</div> <div>Target</div> <div>75% of students achieve the proficiency</div> | <div>MET</div> <div>Comprehensive Exam</div> <div><div>Met</div><div><div></div></div></div> <div>0%100%</div> <div>Values are not shown when too close to each other.<br/>Click or use arrow keys to see details.</div> <div>Met:100%</div> <div>Met Total:100%</div> <div>Not Met Total:</div> <div>Summary</div> <div>The students were asked to reflect on their own abilities for each indicator related to SLO #1 by completing the approved survey. The results of the student self-assessments are below:</div> <div>Student Self-Evaluations (Survey)</div> <table><thead><tr><th>Performance Indicator</th><th>Proficiency %</th><th>Non-Proficiency %</th><th>Average Score</th></tr></thead><tbody><tr><td>1a</td><td>100.0%</td><td>0.0%</td><td>4.00</td></tr><tr><td>1b</td><td>100.0%</td><td>0.0%</td><td>4.00</td></tr><tr><td>1c</td><td>100.0%</td><td>0.0%</td><td>4.00</td></tr><tr><td>Overall</td><td>100.0%</td><td>0.0%</td><td>4.00</td></tr></tbody></table> <div>The student survey data include 2 student responses. The numbers presented are summary statistics.</div> | Performance Indicator                  | Proficiency % | Non-Proficiency % | Average Score | 1a | 100.0% | 0.0% | 4.00 | 1b | 100.0% | 0.0% | 4.00 | 1c | 100.0% | 0.0% | 4.00 | Overall | 100.0% | 0.0% | 4.00 | <div>No actions have been added.</div> |
| Performance Indicator                                                                                                                                                                              | Proficiency %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Non-Proficiency %                      | Average Score |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                                        |
| 1a                                                                                                                                                                                                 | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.0%                                   | 4.00          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                                        |
| 1b                                                                                                                                                                                                 | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.0%                                   | 4.00          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                                        |
| 1c                                                                                                                                                                                                 | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.0%                                   | 4.00          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                                        |
| Overall                                                                                                                                                                                            | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.0%                                   | 4.00          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                                        |
| <div>Student Survey</div> <div>Proficiency = Minimum acceptable is 3 out of 4</div> <div>Indirect - Survey</div> <div>Target</div> <div>75% of students will achieve the proficiency</div>         | <div>MET</div> <div>Student Survey</div> <div><div>Met</div><div><div></div></div></div> <div>0%100%</div> <div>Values are not shown when too close to each other.<br/>Click or use arrow keys to see details.</div> <div>Met:100%</div> <div>Met Total:100%</div> <div>Not Met Total:</div> <div>Summary</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <div>No actions have been added.</div> |               |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                                        |

|                       | <p>The students were asked to reflect on their own abilities for each indicator related to SLO #1 by completing the approved survey. The results of the student self-assessments are below:</p> <p><b>Student Self-Evaluations (Survey)</b></p> <table><tr><th>Performance Indicator</th><th>Proficiency %</th><th>Non-Proficiency %</th><th>Average Score</th></tr><tr><td>1a</td><td>100.0%</td><td>0.0%</td><td>4.00</td></tr><tr><td>1b</td><td>100.0%</td><td>0.0%</td><td>4.00</td></tr><tr><td>1c</td><td>100.0%</td><td>0.0%</td><td>4.00</td></tr><tr><td><b>Overall</b></td><td><b>100.0%</b></td><td><b>0.0%</b></td><td><b>4.00</b></td></tr></table> <p>The student survey data include 2 student responses. The numbers presented are summary statistics.</p> | Performance Indicator | Proficiency % | Non-Proficiency % | Average Score | 1a | 100.0% | 0.0% | 4.00 | 1b | 100.0% | 0.0% | 4.00 | 1c | 100.0% | 0.0% | 4.00 | <b>Overall</b> | <b>100.0%</b> | <b>0.0%</b> | <b>4.00</b> |  |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|-------------------|---------------|----|--------|------|------|----|--------|------|------|----|--------|------|------|----------------|---------------|-------------|-------------|--|
| Performance Indicator | Proficiency %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Non-Proficiency %     | Average Score |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |                |               |             |             |  |
| 1a                    | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.0%                  | 4.00          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |                |               |             |             |  |
| 1b                    | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.0%                  | 4.00          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |                |               |             |             |  |
| 1c                    | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.0%                  | 4.00          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |                |               |             |             |  |
| <b>Overall</b>        | <b>100.0%</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>0.0%</b>           | <b>4.00</b>   |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |                |               |             |             |  |

Conclusion

Analysis of Results - SLO #1

Per the above section, proficiency as indicated by the combined results is 100.0%. This indicates an acceptable level of proficiency for students completing the ME degree in chemical engineering.

Both faculty evaluations and student self-evaluations met the 75% benchmark. Faculty evaluations produced an overall average score of 3.42, while student self-evaluations produced an overall average score of 4.00. Although students rated themselves higher than faculty did, both results indicate that students are meeting expectations for identifying, formulating, and solving complex engineering problems.

All three performance indicators achieved 100.0% proficiency. The lowest faculty average score was for 1c, solving the problem by applying engineering, science, and mathematical principles, with an average score of 3.13. This remains above the minimum threshold but should continue to be monitored.

Improvement Plan - SLO #1

Because the benchmark was met for all performance indicators, major curriculum changes are not warranted this cycle. However, the program should continue to support continuous improvement and guard against future decreases in performance. The following improvement steps are proposed:

- Present the findings to department faculty to confirm that required and elective courses continue to promote students’ abilities to identify, formulate, and solve complex engineering problems.
- Continue emphasizing complete engineering problem-solving procedures, including problem identification, mathematical formulation, solution method, and interpretation of results.
- Evaluate where open-ended projects in the ME curriculum can reinforce SLO #1 skills, particularly final solution and interpretation.
- Continue evaluating externally taken courses to ensure they support SLO #1 expectations.
- Work with College of Engineering partners to maintain acceptable rigor related to SLO #1 across disciplines associated with the shared degree.

Engineering Design MET

Students will demonstrate an ability to apply engineering design to produce solutions appropriately.

| MEASURES                                                                                                                                                                       | RESULTS                                                                                                                                                                                                                                                           | ACTIONS                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| <p><b>Comprehensive Exam</b></p> <p>Proficiency is 3 out of 4</p> <p>Direct - Exam (Course-based)</p> <p><b>Target</b></p> <p>75% of students will achieve the proficiency</p> | <p><b>MET</b></p> <p>Comprehensive Exam</p> <p>■ Met</p>  <p>0% 100%</p> <p>Values are not shown when too close to each other.<br/>Click or use arrow keys to see details.</p> | <p>No actions have been added.</p> |

|                                                                                                                                                                                               | <div>Met:100%</div> <div>Met Total:100%</div> <div>Not Met Total:</div> <div>Analysis</div> <div>Faculty administering the comprehensive exam were asked to evaluate each tested student on the SLO based on the approved rubric. The results of the faculty evaluations are below:</div> <div>Faculty Evaluations (Comprehensive Exam)</div> <table><tr><th>Performance Indicator</th><th>Proficiency %</th><th>Non-Proficiency %</th><th>Average Score</th></tr><tr><td>2a</td><td>100.0%</td><td>0.0%</td><td>3.25</td></tr><tr><td>2b</td><td>100.0%</td><td>0.0%</td><td>3.38</td></tr><tr><td>2c</td><td>100.0%</td><td>0.0%</td><td>3.38</td></tr><tr><td>Overall</td><td>100.0%</td><td>0.0%</td><td>3.33</td></tr></table> <div>The faculty evaluation data include 8 assessment records for the ME comprehensive exam. Each tested student was evaluated multiple times in each indicator, depending on each faculty member's ability to provide reasonable and useful performance evaluation on each topic. The numbers presented are summary statistics.</div> | Performance Indicator | Proficiency % | Non-Proficiency % | Average Score | 2a | 100.0% | 0.0% | 3.25 | 2b | 100.0% | 0.0% | 3.38 | 2c | 100.0% | 0.0% | 3.38 | Overall | 100.0% | 0.0% | 3.33 |                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------|-------------------|---------------|----|--------|------|------|----|--------|------|------|----|--------|------|------|---------|--------|------|------|-----------------------------|
| Performance Indicator                                                                                                                                                                         | Proficiency %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Non-Proficiency %     | Average Score |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                             |
| 2a                                                                                                                                                                                            | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.0%                  | 3.25          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                             |
| 2b                                                                                                                                                                                            | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.0%                  | 3.38          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                             |
| 2c                                                                                                                                                                                            | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.0%                  | 3.38          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                             |
| Overall                                                                                                                                                                                       | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.0%                  | 3.33          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                             |
| <div>Student Survey</div> <div>Proficiency is a Minimum acceptable is 3 out of 4</div> <div>Indirect - Survey</div> <div>Target</div> <div>75% of students will achieve the proficiency</div> | <div>MET</div> <div>Student Survey</div> <div><div>Met</div><div><div></div></div></div> <div>0%100%</div> <div>Values are not shown when too close to each other.<br/>Click or use arrow keys to see details.</div> <div>Met:100%</div> <div>Met Total:100%</div> <div>Not Met Total:</div> <div>Summary</div> <div>The students were asked to reflect on their own abilities for each indicator related to SLO #2 by completing the approved survey. The results of the student self-assessments are below:</div> <div>Student Self-Evaluations (Survey)</div> <table><tr><th>Performance Indicator</th><th>Proficiency %</th><th>Non-Proficiency %</th><th>Average Score</th></tr><tr><td>2a</td><td>100.0%</td><td>0.0%</td><td>3.00</td></tr><tr><td>2b</td><td>100.0%</td><td>0.0%</td><td>3.50</td></tr><tr><td>2c</td><td>100.0%</td><td>0.0%</td><td>3.50</td></tr><tr><td>Overall</td><td>100.0%</td><td>0.0%</td><td>3.33</td></tr></table> <div>The student survey data include 2 student responses. The numbers presented are</div>                           | Performance Indicator | Proficiency % | Non-Proficiency % | Average Score | 2a | 100.0% | 0.0% | 3.00 | 2b | 100.0% | 0.0% | 3.50 | 2c | 100.0% | 0.0% | 3.50 | Overall | 100.0% | 0.0% | 3.33 | No actions have been added. |
| Performance Indicator                                                                                                                                                                         | Proficiency %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Non-Proficiency %     | Average Score |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                             |
| 2a                                                                                                                                                                                            | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.0%                  | 3.00          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                             |
| 2b                                                                                                                                                                                            | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.0%                  | 3.50          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                             |
| 2c                                                                                                                                                                                            | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.0%                  | 3.50          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                             |
| Overall                                                                                                                                                                                       | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.0%                  | 3.33          |                   |               |    |        |      |      |    |        |      |      |    |        |      |      |         |        |      |      |                             |

summary statistics.

Analysis

The students were asked to reflect on their own abilities for each indicator related to SLO #2 by completing the approved survey. The results of the student self-assessments are below:

Student Self-Evaluations (Survey)

| Performance Indicator | Proficiency % | Non-Proficiency % | Average Score |
|-----------------------|---------------|-------------------|---------------|
| 2a                    | 100.0%        | 0.0%              | 3.00          |
| 2b                    | 100.0%        | 0.0%              | 3.50          |
| 2c                    | 100.0%        | 0.0%              | 3.50          |
| Overall               | 100.0%        | 0.0%              | 3.33          |

The student survey data include 2 student responses. The numbers presented are summary statistics.

## Conclusion

### Analysis of Results - SLO #2

Per the above section, proficiency as indicated by the combined results is 100.0%. This indicates an acceptable level of proficiency for students completing the ME degree in chemical engineering.

Both faculty evaluations and student self-evaluations met the 75% benchmark. Faculty and student average scores were closely aligned, with both at 3.33. This indicates that students' perception of their design competency is consistent with faculty assessment for this cycle.

All three design performance indicators achieved 100.0% proficiency. The lowest average score was for 2a in the student self-evaluations, consideration of requirements and constraints, with an average score of 3.00. This meets the minimum threshold, but continued emphasis on realistic constraints, customer needs, specifications, and design requirements remains appropriate.

### Improvement Plan - SLO #2

Because the benchmark was met across all performance indicators, no major curriculum change is required this cycle. However, the program should continue strengthening how students recognize and apply engineering design expectations. The following improvement steps are proposed:

- Present the findings to department faculty to confirm that required and elective courses continue to promote engineering design skills.
- Continue emphasizing requirements, constraints, customer or end-user needs, economic considerations, standards, and codes as part of design.
- Maintain clear faculty expectations for good engineering design, logical solution development, and meaningful presentation of results.
- Evaluate externally taken courses to ensure they support SLO #2 design expectations.
- Work with College of Engineering partners to maintain acceptable rigor related to SLO #2 across disciplines associated with the shared degree.

## Engineering Analysis **MET**

Students will demonstrate an ability to use modern engineering tools to produce engineering analysis in a systematic manner.

| MEASURES | RESULTS | ACTIONS |
|----------|---------|---------|
|----------|---------|---------|

| <div>Comprehensive Exam</div> <div>Proficiency Minimum acceptable is 3 out of 4</div> <div>Direct - Exam (Course-based)</div> <div>Target</div> <div>75% of students achieve the proficiency mentioned above</div> | <div>MET</div> <div>Comprehensive Exam</div> <div>Met</div> <div><div></div><div></div></div> <div>0%100%</div> <div>Values are not shown when too close to each other.<br/>Click or use arrow keys to see details.</div> <div>Met:100%</div> <div>Met Total:100%</div> <div>Not Met Total:</div> <div>Summary</div> <div>faculty administering the comprehensive exam were asked to evaluate each tested student on the SLO based on the approved rubric. The results of the faculty evaluations are below:</div> <div>Faculty Evaluations (Comprehensive Exam)</div> <table><tr><th>Performance Indicator</th><th>Proficiency %</th><th>Non-Proficiency %</th><th>Average Score</th></tr><tr><td>3a</td><td>100.0%</td><td>0.0%</td><td>3.50</td></tr><tr><td>3b</td><td>100.0%</td><td>0.0%</td><td>3.50</td></tr><tr><td>Overall</td><td>100.0%</td><td>0.0%</td><td>3.50</td></tr></table> <div>The faculty evaluation data include 8 assessment records for the ME comprehensive exam. Each tested student was evaluated multiple times in each indicator, depending on each faculty member's ability to provide reasonable and useful performance evaluation on each topic. The numbers presented are summary statistics.</div> | Performance Indicator                  | Proficiency % | Non-Proficiency % | Average Score | 3a | 100.0% | 0.0% | 3.50 | 3b | 100.0% | 0.0% | 3.50 | Overall | 100.0% | 0.0% | 3.50 | <div>No actions have been added.</div> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------|-------------------|---------------|----|--------|------|------|----|--------|------|------|---------|--------|------|------|----------------------------------------|
| Performance Indicator                                                                                                                                                                                              | Proficiency %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Non-Proficiency %                      | Average Score |                   |               |    |        |      |      |    |        |      |      |         |        |      |      |                                        |
| 3a                                                                                                                                                                                                                 | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.0%                                   | 3.50          |                   |               |    |        |      |      |    |        |      |      |         |        |      |      |                                        |
| 3b                                                                                                                                                                                                                 | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.0%                                   | 3.50          |                   |               |    |        |      |      |    |        |      |      |         |        |      |      |                                        |
| Overall                                                                                                                                                                                                            | 100.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.0%                                   | 3.50          |                   |               |    |        |      |      |    |        |      |      |         |        |      |      |                                        |
| <div>Student Survey</div> <div>Proficiency is a 3 out of 4 on rubric</div> <div>Indirect - Survey</div> <div>Target</div> <div>75% of students achieve the proficiency mentioned above</div>                       | <div>MET</div> <div>Student Survey</div> <div>Met</div> <div><div></div><div></div></div> <div>0%100%</div> <div>Values are not shown when too close to each other.<br/>Click or use arrow keys to see details.</div> <div>Met:100%</div> <div>Met Total:100%</div> <div>Not Met Total:</div> <div>Summary</div> <div>The students were asked to reflect on their own abilities for each indicator related to SLO #3 by completing the approved survey. The</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <div>No actions have been added.</div> |               |                   |               |    |        |      |      |    |        |      |      |         |        |      |      |                                        |

|  |                       |                                                                                                    |                   |               |  |
|--|-----------------------|----------------------------------------------------------------------------------------------------|-------------------|---------------|--|
|  |                       | results of the student self-assessments are below:                                                 |                   |               |  |
|  |                       | <b>Student Self-Evaluations (Survey)</b>                                                           |                   |               |  |
|  | Performance Indicator | Proficiency %                                                                                      | Non-Proficiency % | Average Score |  |
|  | 3a                    | 100.0%                                                                                             | 0.0%              | 3.00          |  |
|  | 3b                    | 100.0%                                                                                             | 0.0%              | 3.50          |  |
|  | <b>Overall</b>        | <b>100.0%</b>                                                                                      | <b>0.0%</b>       | <b>3.25</b>   |  |
|  |                       | The student survey data include 2 student responses. The numbers presented are summary statistics. |                   |               |  |

## Conclusion

### Analysis of Results - SLO #3

Per the above section, proficiency as indicated by the combined results is 100.0%. This indicates an acceptable level of proficiency for students completing the ME degree in chemical engineering.

Both faculty evaluations and student self-evaluations met the 75% benchmark. The faculty evaluation average was 3.50, while the student self-evaluation average was 3.25. Faculty scores were slightly higher than student self-evaluations, suggesting that students may have been conservative in rating their own use of modern engineering tools.

Both performance indicators achieved 100.0% proficiency. The lowest average score was for 3a in the student self-evaluations, proficiency with modern engineering tools and software, with an average score of 3.00. This meets the minimum threshold, but continued attention to modern tools, software, and systematic analysis remains appropriate.

### Improvement Plan - SLO #3

Because the benchmark was met across all performance indicators, no major curriculum change is required this cycle. However, the program should continue intentional coverage of modern engineering tools and systematic analysis methods. The following improvement steps are proposed:

- Present the findings to department faculty to confirm that required and elective courses continue to promote modern engineering tools for systematic analysis.
- Continue providing clear syllabus language regarding student learning outcomes and expectations related to modern tools and systematic analysis.
- Continue providing access to modern engineering tools and techniques in internally offered courses.
- Evaluate externally taken courses to determine what modern tools and techniques are used and whether internal coverage needs strengthening.
- Work with College of Engineering partners to maintain acceptable rigor related to SLO #3 across disciplines associated with the shared degree.