Assessment Cycle 2024 – 2025

Program: Bachelor of Science (BS) in Biology (618)

Department of Biology and Microbiology

School of Science, Technology, Engineering, & Math

College: Arts and Sciences

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Northwestern Mission. Northwestern State University is a responsive, student-oriented institution committed to acquiring, creating, and disseminating knowledge through innovative teaching, research, and service. With its certificate, undergraduate, and graduate programs, Northwestern State University prepares its increasingly diverse student population to contribute to an inclusive global community with a steadfast dedication to improving our region, state, and nation.

College of Arts and Sciences' Mission. College of Arts and Sciences' Mission. The College of Arts & Sciences, the largest college at Northwestern State University, is a diverse community of scholars, teachers, and students, working collaboratively to acquire, create, and disseminate knowledge through transformational, high-impact experiential learning practices, research, and service. The College strives to produce graduates who are productive members of society equipped with the capability to promote economic and social development and improve the overall quality of life in the region. The College provides an unequaled undergraduate education in the social and behavioral sciences, English, communication, journalism, media arts, biological and physical sciences, and the creative and performing arts, and at the graduate level in the creative and performing arts, English, TESOL, and Homeland Security. Uniquely, the College houses the Louisiana Scholars' College (the State's designated Honors College), the Louisiana Folklife Center, and the Creole Center, demonstrating its commitment to community service, research, and preservation of Louisiana's precious resources.

School of Science, Technology, Engineering, & Math. The School of Science, Technology, Engineering and Math at Northwestern State University serves to create a collaborative environment for natural and applied science education that inspires students and faculty to engage in an interdisciplinary approach to developing strong analytical skills in interpersonal communication, critical thinking, research, and data literacy as they become lifelong learners who are prepared for an ever-changing, global STEM community.

Department of Biology and Microbiology Mission Statement. The mission of the Northwestern State University Biology and Microbiology Department is to provide a comprehensive education in biology and microbiology for all of our majors and to create

a unique training environment for students wishing to pursue graduate or professional education.

Purpose (optional): The primary goal of the Biology program is to prepare students to enter the job market competitively at the bachelor level or to further their education in either graduate or professional school.

Methodology: The assessment process for the Biology program is as follows:

1) Data from assessment tools (both direct – indirect, quantitative, and qualitative) are collected and returned to the program coordinator.

2) The department head will analyze the data to determine whether students have met measurable outcomes.

3) Results from the assessment will be discussed with the program faculty.

4) The Department Head as well as the faculty will propose changes to measurable outcomes and/or assessment tools for the next assessment period and, where needed, curricula and program changes.

Student Learning Outcomes:

SLO 1. Students will explain the basic concepts of the molecular basis of life.

Course Map: Tied to the course syllabus objectives

BIOL1010: Biological Principles I. All majors are required to complete BIOL1010.

Measure 1.1. (Direct – knowledge):

Throughout the course, students will learn about the molecular basis of life including macromolecules, cellular structure, enzyme function, gene expression, cellular respiration, photosynthesis, DNA structure and function, genetics, and cellular division. Each student is required to pass a quiz covering these concepts. The target is to have 70% of students attain a quiz grade of ≥70%.

Findings: Target met.

Analysis: In AC 2023-2024, the target was met with 80% (48/60) of students scoring ≥ 70% on the assessment. This was due to enhanced involvement of the course steward ensuring that rubrics were consistent and using extra time to teach the structure of DNA and its function in the cell.

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Based on the analysis on the AC 2023-2024 results, in AC 2024-2025, the following changes were made. The department head met with the faculty prior to the start of the academic cycle and discussed how data is being tracked. The faculty agreed to enhance time spent on these topics in lecture, and discussed the types of assignment on the Mastering platform that were effective at teaching the molecular basis of life. This class switched to the Mastering platform in the AC 2023-2024. As a result of the changes in AC 2023-2024, the AC 2024-2025 target was met with 77% (41/53) of students scoring ≥ 70% on the assessment. This implies that students were able to demonstrate appropriate knowledge of the molecular basis of life. This is a decrease of 3% from the previous AC, 2023-2024. The changes and focus on this measure illustrate that our changes since AC 2020-2021 have led to the enhanced educational experience for students setting them on a successful path to complete their degree.

Commented [MH1]: Tell how making these changes in AC 2024-2025 will benefit the students.

Decision: In AC 2024-2025, the target was met. Based on the analysis of AC 2024-2025, in AC 2025-2026, the faculty will implement the following changes to drive the cycle of improvement. The department head will meet with the course steward and faculty to generate idea changes to drive improvement such as ensuring that the order in which content is delivered is more intuitive for students in Biol 1010. The course steward will be more involved in driving change and gathering data from the faculty. This will help to drive more change in real time and improve data collection. A new faculty member has been hired to teach this course. The department head and course steward will meet with this faculty member to ensure that he is aware of this SLO and how to assess it. Furthermore, this faculty member will need assistance with materials to best drive outcomes for this SLO. These materials will be shared among faculty and the course steward in the meeting with the department head. The switch to the Mastering platform has led to the target being met for the past 2 years, additionally demonstrating continuous improvement since implementation. We will discuss what role the Mastering platform has led to this success, and how to capitalize on this in future semesters.

Measure 1.2. (Indirect – survey):

At the end of the course, a survey is administered to students to gauge their appraisal of their understanding of the basic concepts covered in the course. The target is to have 70% of the students report an above average or excellent knowledge of the indicated concepts.

Findings: Target not met.

Analysis: The target was not met for AC 2023-2024, with only 45% (27/60) of students reporting that they had an above-average or excellent understanding of basic cellular structure. Additionally, 50% (30/60) students reported that they had an above average or excellent understanding of basic cellular function. This is surprising since the students did possess the knowledge as illustrated in Measure 1.1 from that academic cycle. The department head met with faculty prior to the start of AC 2023-2024 to discuss ideas to improve student confidence. This included active assignments to apply knowledge learned in this area, but it did not help.

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Based on the analysis on the AC 2023-2024 results, in AC 2024-2025, the following changes were made. The department head met with the faculty prior to the start of the AC 2024-2025 and discussed how we have seen an improvement over the past couple of years, but students were not confident. We decided to keep the qualifiers that were provided for each answer in the quiz which were created in the prior AC. These seem to have helped. The faculty decided to give the quiz with the final at the end of the semester. As a result of the changes in AC 2023-2024, the target was not met for AC 2024-2025, with 32% (17/53) of students reporting that they had an above-average or excellent understanding of basic cellular structure. Additionally, 23% (12/53) of students reported that they had an above-average or excellent understanding of basic cellular function. This is a decrease of 13% and 27%, respectively, from AC 2023-2024. Students are mastering the content in measure 1.1, yet they lack confidence in the knowledge they possess.

Decision: In AC 2024-2025, the target was not met. Based on the analysis of the AC 2024-2025 assessment results, in AC 2025-2026, the faculty will implement the following changes to drive the cycle of improvement. In the prior 2 years, we had seen growth in student confidence about their knowledge. This year there was a decrease in confidence. Thus, the department head will meet with the faculty prior to the start of the AC 2025-2026, to discuss changes to improve student outcomes in this measure. We have met and improved the survey, yet do not meet the measure in SLO 1.2. We will discuss enhancing the time spent on student confidence in the class, and how best to achieve this goal. A new faculty member is joining the department, and this addition may provide a fresh perspective.

SLO 2. Students will describe the role of evolution and ecology in the diversity of life.

Course Map: Tied to the course syllabus objectives

BIOL 1020: Biological Principles II. All majors are required to complete BIOL 1020.

Measure 2.1. (Direct – knowledge):

Throughout the course, students will learn about evolution and ecology. The topics covered include natural selection, evolution, ecology, population genetics, taxonomy, the diversity of prokaryotes, protists, fungi, plants, and animals. Each student is required to pass a quiz covering these concepts. The target is to have 70% of students attain a quiz grade of ≥70%.

Findings: Target met.

Analysis: In AC 2023-2024, the target was not met with 65% (37/57) of students in BIOL 1020 attaining a quiz grade of 70% or higher. The students struggled with the topics of

evolution and ecology. The percentage of students who mastered the material improved for the second consecutive year. Faculty spent extra time on this material in class, and course stewards ensured consistency of content across all sections.

Based on the analysis on the AC 2023-2024 results, in AC 2024-2025, the following changes were made. The faculty met and improved the content quiz by making minor changes without changing the questions. Faculty also spent extra time explaining ecology topics in the course. As a result of the changes in AC 2023-2024, the target was met for AC 2024-2025 with 80% (24/30) of students in BIOL 1020 attaining a quiz grade of 70% or higher. This is an increase of 15% from AC 2023-2024. This is the first time in 3 years that the target was met and demonstrates that students mastered content about evolution and ecology. There was concern about whether the content questions for this measure were appropriately aligned. Thus, faculty met and made minor changes to these questions and enhanced focus on this content area in the classroom.

Decision: In AC 2024-2025 the target was met. Based on the analysis of AC 2024-2025, the faculty will implement the following changes in AC 2025-2026 to drive the cycle of improvement. Prior to the start of AC 2025-2026, the department head will meet with the course steward and the faculty to discuss content, delivery of content, and timing of this assessment.

Measure 2.2. (Indirect – survey)

At the end of the course, a survey is administered to students to gauge their appraisal of their understanding of the basic concepts covered in the course. The target is to have 70% of the students report an above average or excellent knowledge of the indicated concepts.

Findings: Target not met.

Analysis: In AC 2023-2024, the target was not met, with 54% (27/50) of students in BIOL 1020 reporting an above average or excellent understanding of basic concepts in evolution and 36% (24/50) of biology majors reporting an above average or excellent understanding of basic concepts of ecology. Prior to the start of the AC 2023-2024, the department head met with the faculty to discuss how well assignments could be utilized to drive confidence in knowledge that the students have acquired, as verified by measure 2.1.

Based on the analysis on the AC 2023-2024 results, in AC 2024-2025, the following changes were made. The questions in Measure 2.1 were improved for clarity. Faculty decided to make these questions part of the final. Extra time was spent on ecology since that was where the biggest gap in confidence of knowledge was situated. As a result of the changes in AC 2023-2024, the target was not met, with 37% (11/30) of students in BIOL 1020 reporting an above-average or excellent understanding of basic concepts in evolution and 37% (11/30) of biology majors reporting an above average or excellent understanding of basic concepts of ecology. This performance is -16% and +1%,

respectively, compared to AC 2023-2024. Students met the measure in 2.1, but do not feel confident of their knowledge. Faculty used active learning assignments to drive confidence by applying learned knowledge, but this was not effective.

Decision: In AC 2024-2025, the target was not met. Based on the analysis of the AC 2024-2025 results and to drive the cycle of improvement in AC 2025-2026, the department head will meet with the faculty and course steward to discuss additional assignments to enhance student confidence in the content as well as timing and delivery of this assessment.

SLO 3: Students will be able to communicate scientific information.

Course Map: Tied to the course syllabus objectives

BIOL 4995: Scientific Communication. All majors are required to complete BIOL 4995.

Measure 3.1. (Direct – ability):

Throughout all sections of Scientific Communication courses, students will learn about the various aspects of communication in the sciences. Each student will write a scientific article which will be assessed using a standard rubric. The target is to have 70% of students attain a final average quiz grade of ≥70%.

Findings: Target met.

Analysis: In AC 2023-2024, the target was met with 90% (17/19) of biology majors scoring ≥70% on the assessment. After the department head met with faculty to discuss best practices in this course, rubrics were updated and shared among the instructors by the course steward.

Based on the analysis on the AC 2023-2024 results, in AC 2024-2025, the following changes were made. We had a meeting to discuss improving this Measure which led to resource sharing of effective materials (i.e., rubrics and handouts on how to write a scientific article). As a result of the changes in AC 2023-2024, the target was met in AC 2024-20245 with 90% (34/38) of biology majors scoring ≥70% on the assessment. This is the same score from the previous AC. This target has been consistently met verifying that Biology majors are graduating with the ability to communicate science to other scientist in written form within their respective fields.

Decision: In AC 2024-2025, the target was met. Based on the analysis of AC 2024-2025, the faculty will implement the following in AC 2025-2026 to drive the cycle of improvement. Prior to the start of the next AC, the department head will meet with faculty to ensure that content is delivered in an intuitive manner for students. To ease the pressure on students and enhance outcomes, faculty will assign the article to be completed in smaller sections and then combined to form a complete and final article for submission.

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Measure 3.2. (Direct – ability): Throughout all sections of Scientific Communication courses, students will learn about the various aspects of communication in the sciences. Each student will present to the public a non-traditional communication of a scientific article/project developed by the student; the communication will be assessed using a standard rubric. The target is to have 70% of students attain a final score on this assignment of ≥70%.

Findings: Target met.

Analysis: In AC 2023-2024, the target was met with 100% (19/19) of biology majors scoring ≥70% on the assessment. The department head met with faculty and the course steward to update rubrics and ensure consistency across sections. Faculty discussed handouts to help students develop their non-traditional communications. The course steward dispersed these among the faculty. As a result, students created a diverse type of non-traditional science communications including podcasts, websites, short videos, pamphlets, etc. to deliver scientific information in a manner that was easy to absorb and interesting to engage.

Based on the analysis on the AC 2023-2024 results, in AC 2024-2025, the following changes were made. The faculty met to share rubrics and handouts (i.e., guides) for creating non-traditional communications that were effective at driving results and to ensure that students have access to rubrics. As a result of the changes in AC 2023-2024, the target was met in AC 2024-2025, with 97% (37/38) of biology majors scoring ≥70% on the assessment. This is a decrease (-3%) from AC 2023-2024. This result demonstrates that students can effectively communicate science in a non-traditional manner, such as a podcast or infographics for social media (i.e., Instagram, etc.), or some other manner that effectively targets the general public. The extra time and focus helped students better understand the expectations of the instructor.

Decision: In AC 2024-2025, the target was met. Based on the analysis of AC 2024-2025 and to drive the cycle of improvement in AC 2025-2026, the faculty will meet to discuss what has worked best and share these materials with other professors. The department head will meet with the faculty before the start of AC 2025-2026 to discuss delivery and order of content being used in class to drive the student generation of non-traditional communication. Based on those conversations, course content will be adjusted as needed. The course steward will determine what constitutes as a non-traditional scientific communication to maintain rigor across sections.

SLO 4: Students will employ critical thinking to interpret scientific literature.

Course Map: Tied to the course syllabus objectives

BIOL 4970: Capstone Course for Biology, or BIOL 4990, CHEM 4910, or PHYS 4930. All majors are required to complete BIOL 4970.

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Measure 4.1. (Direct - ability): Throughout all sections of capstone courses, students will read the same scientific article from the primary literature and be required to pass quizzes over the material. The target is to have 70% of students attain a final average quiz grade of ≥90%.

Findings: Target met.

Analysis: In AC 2023-2024, the target was not met with 52% (17/33) of biology majors scoring ≥90% on the assessment. After the department head met with the faculty and course stewards, we identified that there was some variability in providing and grading this assignment. As a result, the course steward standardized how this assessment was provided to students and discussed grading outcomes.

Based on the analysis on the AC 2023-2024 results, in AC 2024-2025, the following changes were made. The Department Head met with the faculty prior to the start of AC 2024-2025, to discuss spending additional time on critical analysis skills and sharing of effective materials in the class including papers to review and break down for using these skills. As a result of the changes in AC 2023-2024, in AC 2024-2025, the target was met with 70% (16/23) of biology majors scoring ≥90% on the assessment. This meets the target measure of 70%, and is above (+18%) the score of the previous AC. This demonstrates that students can critically analyze a scientific article and effectively communicate this information when required. However, there was concern shared in the meeting that scoring ≥90% on the assessment is too high a bar considering most rubrics target a score of ≥70%, and that some questions on the assessment need improving. The time and work of the faculty to spend more time was highly effective this year but may not be sustainable due to the high target (≥90%) requirement.

Decision: In AC 2024-2025 the target was met. Based on the analysis of AC 2024-2025, the faculty will implement the following to drive the cycle of improvement in AC 2025-2026. The Department Head will meet with the faculty prior to AC 2025-2026 to discuss the amount of time spent on critical analysis skills in this class. Further discussion will focus on determining which assessments/assignments were the most effective, and to ensure everyone has this material. The critical learning exam questions will also be re-evaluated for improvement. The grade of 90% on this exam demonstrates superior critical thinking skills and is a high target goal. Next year, we will reduce this goal to 80%, which is still above average and 10% higher than the target of measures 1, 2, and 3.

Measure 4.2. (Direct – ability): Throughout all sections of capstone courses, students will write a proposal about their capstone project. The target is to have 70% of students attain a final average written assignment grade of ≥90% based on a standard rubric.

Findings: Target met.

Analysis: In AC 2023-2024, the target was not met, with 60% (20/33) of biology majors scoring ≥90% on the assessment. The course steward and faculty met to standardize what works in the class and to ensure that this was reflective across all sections. However,

this did not result in higher scores and failed to meet the goal of the measure. Students struggled to write a proposal for their projects.

Based on the analysis on the AC 2023-2024 results, in AC 2024-2025, the following changes were made. Successful faculty (those with a high percentage of students meeting the target), shared guides on how to draft project proposals with specific information on the different sections. Faculty also shared rubrics to ensure that students had rubrics and that faculty were working with the same requirements. As a result of the changes in AC 2023-2024, in AC 2024-2025, the target was met with 96% (22/23) of biology majors scoring ≥90% on the assessment. This result is +26% above the target of 70% and +36% above the score in AC 2023-2024. The target of this measure was met for the first time since the course expanded to include more students. The goal of 70% of students attaining a final average written assignment grade of ≥90% on the written assignment may be too high of an assignment grade to achieve with so many students, and this year may be an outlier. However, students did effectively produce a research proposal. Handouts on the parts of a research proposal and the extra time spent on this topic successfully helped students.

Decision: In AC 2024-2025, the target was met. Based on the analysis of AC 2024-2025, the faculty will implement the following in AC 2025-2026 to drive the cycle of improvement. The Department Head will meet with the faculty to discuss materials to help students draft proposals. Some faculty are more successful than others. So, we will discuss what has worked in that particular classroom and what has not worked in others. The faculty will enhance time and effort spent on this topic in the class. The target will be changed to 70% of students attaining a final average written assignment grade of ≥80% based on a standard rubric. At 80%, students are exhibiting an above average ability to write a project proposal, and the goal is better attainable and less stressful for students to achieve.

SLO 5: Students will demonstrate professional development.

Course Map: Tied to the course syllabus objectives

BIOL 4970: Capstone Course for Biology or BIOL 4990, CHEM 4910, or PHYS 4930. All majors are required to complete BIOL 4970.

Measure 5.1. (Direct – skill): Students will be required to give a final presentation assessed using a standard rubric across all sections of capstone classes. The target is to have 100% of students give a final presentation that meets ≥70% of the prescribed guidelines.

Findings: Target not met.

Analysis: In AC 2023-2024, the target was not met with 88% (14/16) of biology majors scoring ≥70% on the assessment. Two students failed to meet this requirement. The department head and course steward met with faculty. They discussed ideas about material that provided guidance on the parts of a successful scientific presentation. These

were dispersed among instructors, and rubrics were altered accordingly by the course steward. These rubrics were shared by the course steward as well.

Based on the analysis on the AC 2023-2024 results, in AC 2024-2025, the following changes were made. Faculty met with the department head to discuss why 2 students failed to meet the target. The faculty discussed how to reach out to students who miss class to ensure they are keeping up with the work. They also ensured that all faculty had rubrics and that they were consistent across all sections of this course. Some faculty taught this course for the first time and needed to spend additional time on the components of a successful presentation in class. As a result of the changes in AC 2023-2024, in AC 2024-2025, the target was not met, with 96% (22/23) of biology majors scoring ≥70% on the assessment. This result is 4% below the target of 100% but is +8% above the score in AC 2023-2024. Only one student was not able to successfully present their work in a final presentation due to lack of attendance and interaction with the instructor. Therefore, the student did not understand the expectations of the instructor, nor were they present to get the work done. Faculty were concerned about the target goal of this measure which is well above the targets with the other measures and may be set too high to be achieved. No other measure is set with a target of 100%.

Decision: In AC 2024-2025, the target was not met. Based on the analysis of AC 2024-2024, the faculty will implement the following in AC 2025-2026 to drive the cycle of improvement. Prior to the start of the next cycle, the department head will meet with the course steward and faculty to discuss when the appropriate time is to contact students who are not regularly attending class or getting their work done. There will be an increase in effort to motivate students to successfully create and present their capstone project. This may be achieved in a variety of ways (i.e. dividing the creation of the presentation into smaller assignments that can be combined with a complete presentation or having checkpoints to ensure students are on track, etc.) For the third year in a row, students who have attendance issues have not met the target goal. The target goal will be adjusted to 80% for the next cycle. No other measure in this report has a target of 100% of students needing to reach an assessment score of 70%. This is unnecessarily high, which was not immediately recognized when classes were very small with highly-motivated students.

Measure 5.2. (Direct – skill): At the end of the course, students will find a current entry-level job in a field of biology related to their Capstone experiment. This will allow them to relate their “research” with the current state of the workforce and needs of society. The target is to have 100% of the students meet the requirements of the grading rubric.

Findings: Target met.

Analysis: In AC 2023-2024, the target was not met, with 75% (12/16) of biology majors scoring ≥90% on the assessment. Four students failed to meet this requirement and thus could not match their project with the needs of society and the workforce. The department head met with the faculty to discuss this measure since some were new to this class. Some faculty were unaware of this workforce requirement. This may be why some

students were not fulfilling or forgetting to fully complete this measure. Very little time was devoted to discussing this in class.

Based on the analysis on the AC 2023-2024 results, in AC 2024-2025, the following changes were made. Faculty added the requirement to find a job related to their project as part of the rubric, and the department head ensured that all faculty were aware of this Measure. An in-class project was introduced to get students used to looking at these type of entry-level jobs. As a result of the changes in AC 2023-2024, in AC 2024-2025 the target was met with 100% (23/23) of biology majors scoring ≥100% on the assessment. This result matches the target of 100% and is +25% above the scores in previous AC. Extra time was spent in class making sure students were aware of this requirement. It was stressed on the rubric that the course steward shared among the instructors of the course. At the meeting with the department head, faculty expressed that the target of 100% of students effectively relating their research to the current state of the workforce and needs of society was a lofty goal worth pursuing, but the measure was too high for students to consistently attain.

Decision: In AC 2024-2025, the target was met. Based on the analysis of AC 2024-2025, the faculty will implement the following in AC 2025-2026 to drive the cycle of improvement. Prior to the start of AC 2025-2026, the department head will meet with faculty to discuss giving a pre-assessment prior to this one to ensure that students are aware of this measure and are on-track to complete it. The target of 100% of students achieving this goal will be reduced and changed to 90% of students meeting the requirements of the grading rubric to find a current entry level job based on their project. This makes the target more achievable for students and is still a high bar driving real-world connections to their capstone projects.

Comprehensive summary of key evidence of improvements based on analysis of results. The following reflects all the changes implemented to drive the continuous process of seeking improvement in AC 2024-2025. These changes are based on the knowledge gained through the analysis of AC 2023-2024 results.

- The faculty enhanced time spent on these topics for all measures.
- The department head met with the faculty prior to the start of the next academic cycle to discuss how data is being tracked and asked the course stewards, to help track data for Measures 1 and 2.
- The faculty met to discuss how to promote confidence in Measures 1.2 and 2.2 and determine which class materials best drive confidence.
- Rubrics were used and aligned along all sections of classes in SLOs 3, 4, and 5.
- A meeting to share materials and ideas that are successful was done for SLOs 3, 4, and 5.
- The course steward checked that rubrics were available to students and had proper expectations in SLOs 4 and 5.

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Plan of action moving forward.

- Prior to the start of the next AC, the department head will meet with faculty to discuss content and delivery to match what works best for students.
- Course stewards will be more involved, facilitating real time changes to content as needed to drive success during the semester.
- A new faculty member will be involved in SLO 1 in the Fall and possible SLO 2 in the Spring. Thus, we will individually meet with him to ensure that he has all materials and knowledge of these measures to ensure student success.
- New assignments will be devised for Measure 1.2 and 2.2 to help students feel better about their knowledge base on the topics.
- Assignments in Measure 3.1 and 5.1 will be provided in smaller pieces allowing students to reduce stress and to promote success. Then these pieces will be merged into a complete and final submission for assessment.
- The course steward in Measure 3.2 will create guidelines for consistency and rigor for non-traditional scientific communications.
- The critical learning exam in Measure 4.2 will be reviewed to determine whether questions are appropriate or need updating/clarification to assess critical thinking skills.
- For Measure 5.1, we will discuss developing an early warning for students who have poor attendance and/or struggling with completing/passing assignments or goals in class. Faculty will better engage these students once they are identified.
- A pre-assessment will be provided to students in Measure 5.2 to ensure that they are working to connect their capstone project to a real-world job.
- In Measure 4 and 5, targets will be adjusted to more reasonable goals that are achievable by students and are more like the targets of the other measures while maintaining rigor.