2026 – 27 Departmental Assessment Plan

Department/Program/Unit: Natural Science **Date: 10/8/2026**

Members involved with development of Plan: Kristy Jurchen, John Jurchen, Raegan Skelton, Connie Callahan, Alison Ermisch, Kim Clark, Andrea Watson, Rob Hermann, Kregg Einspahr

Departmental/Program/Unit Student Outcome: *What student outcome from the departmental matrix will be assessed? (It is suggested that you cut and paste directly from the matrix. Outcomes should represent the absolute priorities for learning- students must be able to do [this] when they finish our program).*
State as follows: Students should be able to [action verb] [something].
Students should be able to apply and describe appropriate research methods to investigate a scientific question.

Background: *What factors caused you to choose this particular assessment outcome? If you chose this outcome because of a perceived problem, please explain*.
We have not yet assessed the Research goal for our department in any of the formal assessment cycles. Research is the process by which new scientific knowledge is discovered, and appropriate research methods are necessary when conducting research. We want to assess how well our students can apply appropriate research methods to see whether they would benefit from additional specific instruction on research methods.

Question: *What specific question(s) are you attempting to answer through assessing this student outcome? (What are you trying to find out? There may be more than one question, but no more than three.)*
"Are students able to apply and describe appropriate research methods to investigate a scientific question?"

Methodology:

1. *OBJECT* - What data (i.e. artifact, exam score, detailed description of assignment) will be collected?* Research poster from Chem 356, Research presentation (slides) from Bio 399, Research paper from Phys 399, Research experiment final report from Agri 305, Final research paper from Sci 490
    a. *How does this data address the assessment question?* Each of these assignments requires students to conduct research before completing the project. A description of the students' methods should be part of the assignment, and the department will be able to evaluate whether those research methods are appropriate.
        i. *Include/attach a description/example of assessment tool to be used*.
2. *How will data be collected?* Research reports, posters, and presentation slides will be collected as part of the normal classroom process. Identifying details will be removed, and copies of the artifacts will be distributed to departmental faculty.

Analysis of Artifacts: *PERFORMANCE CRITERIA* - Discuss:*

1) *How the artifacts will be analyzed (attach rubrics/scoring tools if used):* Artifacts will be assessed using the attached Likert scale, which evaluates the student's ability to apply and describe appropriate research methods to investigate a scientific question.

2) *How you will know if it is good (i.e. score required by % of students):* We will use the attached rubric to assess collected artifacts with the goal that 80% of students score 3 or better. We will use the artifacts to assess whether courses and activities in the program adequately prepare students to apply appropriate research methods when investigating scientific questions.

Submitted by: Kristy Jurchen Date: 10/8/2026 Assessment Committee Reviewed (Date): 10/27/26

Department Chair notified of approval/or additional action needed: Approved