

**MAJOR PROGRAM ASSESSMENT PLAN 2021-2026**  
**Biology (BA-NS-BIO) and (BS-NS-BIL)**  
**Biology Department**

| Student Learning Goals/Objectives  | Courses* Resulting in Outcomes/Goals  | Activities Resulting in Outcomes/Goals                                 | Measures/Criteria/Rubrics of Student Achievement of Goals/Objectives  | Timetable                                 |
|--|---|--|---|---|
| 1) Students will demonstrate an understanding of core concepts and principles in Biology | <p>BA: Concepts introduced in required courses BIO111/211/213 and reinforced in BIO333 as well as upper division BIO electives. Concept mastery in BIO 314/315/405/440</p> <p>BS: Concepts introduced in required courses BIO111/211/213 and reinforced in BIO300/303/316/333. Concept mastery in BIO 314/440</p> | Class assignments, projects, written exams, and laboratory activities. | <p>BA: Students demonstrate subject area mastery measured using the ETS Biology subject exam offered to students enrolled in BIO 314/315/405/440.</p> <p>BS: Students demonstrate subject area mastery measured using the ETS Biology subject exam offered to students enrolled in BIO 314/440.</p>   | Spring 2021<br>Spring 2023<br>Spring 2025 |
| 2) Students will demonstrate proficiency in scientific writing                           | <p>BA: Writing introduced in required courses BIO211/213 and reinforced in BIO333 as well as upper division BIO electives. Mastery in BIO 314/315/405/440</p> <p>BS: Writing introduced in required courses BIO211/213 and reinforced in BIO300/303/316/333. Mastery in BIO 314/440</p>                           | Essays, short papers, lab reports, and written exams.                  | <p>BA: Students master writing proficiency in BIO 314/315/405/440. Measured based on score (out of 100) on one revised, formal writing assignment as follows: Exceeding 83-100; Meeting 73-82, Approaching 60-72; Does Not Meet &lt;60.</p> <p>BS: Students master writing proficiency in BIO 314/440. Measured based on score (out of 100) on one revised, formal writing assignment as follows: Exceeding 83-100; Meeting 73-82, Approaching 60-72; Does Not Meet &lt;60.</p> | Spring 2022<br>Spring 2024<br>Spring 2026 |

\*Course titles: Course titles and descriptions are available from the Buffalo State Undergraduate Catalog (<http://catalog.buffalostate.edu/undergraduate/bio---biology.htm>)

**Process/procedures for making changes if suggested by assessment results:**

The Biology Department's Assessment Committee will meet during the semester following assessments to discuss the summary of major program assessment and will prepare a report for the faculty. Based on results of student performance with regard to each goal/objective, the Department will identify strengths and weaknesses in the curriculum. Courses and/or curriculum will be revised if necessary; or, the goals/objectives might be modified.

## Rubrics

### List SLO

Assessment measure: Score on written component of research proposal

|                      | Exceeds Standard<br>(83-100 out of 100) | Meets Standard<br>(73-82 out of 100) | Approaching Standard<br>(60-72 out of 100) | Does Not Meet Standard<br>(< 60 out of 100) |
|----------------------|---|--------------------------------------|--|---|
| Introduction         |   |                                      |  |   |
| Literature<br>review |   |                                      |  |   |