<table>
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<tr>
<th><strong>Degree Granting Program Name</strong></th>
<th><strong>(1)</strong> List ONLY the program learning objective(s) assessed during the current reporting period</th>
<th><strong>(2)</strong> For each learning objective listed in column (1), other than GPA, what data/evidence was used to determine that graduates have achieved the stated objectives? (e.g., capstone assignment, portfolio review, licensure examination)</th>
<th><strong>(3)</strong> What were the results/outcomes/findings/conclusion(s) of the assessment? Explain results/findings/conclusions for each program learning objective listed in column (1) .</th>
<th><strong>(4)</strong> Who interprets the evidence? Describe the process (e.g. annually by the curriculum committee).</th>
<th><strong>(5)</strong> What changes/improvements have been made as a result of using the data/evidence (3)? Link discussion in this column with a learning objective (1) and the results of assessing that objective (3)</th>
<th><strong>(6)</strong> Date of most recent program review</th>
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<tr>
<td><strong>Biology</strong></td>
<td>5a – Communicate effectively in written form</td>
<td>Posters prepared as part of the capstone Research Experience in Biology were assessed via the Biology Departments Written Communication Rubric. The rubric assessed seven categories: Purpose, Sources, Content, Conclusions, Citations, Grammar and Mechanics, and Figures and Tables. Three reviewers independently assessed each of 18 artefacts, which</td>
<td>Based on the average of ratings from three reviewers for 18 artefacts, 0% of assessed students showed beginning written communication skills. 17% of students demonstrated developing skills, 50% demonstrated proficiency, and 33% demonstrated exemplary skills. Thus, <strong>83% of assessed students demonstrate overall proficient or exemplary written communication.</strong> The individual criteria used for assessing written communication are Purpose, Sources, Content, Conclusions, Citations, Grammar and Mechanics, and Figures and</td>
<td>Evidence is compiled by the departmental assessment committee. Biology assessment data is discussed annually at a department meeting and reviewed by the Biology Department Faculty.</td>
<td>Early in the assessment process, the department assessment committee realized that the existing rubric for assessment failed to account for the importance of presenting and evaluating visual data in written scientific communication. The assessment committee worked to revise the Written</td>
<td>Fall 2017</td>
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Tables. Review of the individual assessment criteria suggests that Biology students are weakest in integrating sources of information (only 33% proficient or exemplary) and presentation of conclusions (25% proficient or exemplary).

These weaknesses may reflect the diversity of projects that students choose to present in poster format, as some projects can be less easily pigeonholed into these rubric categories.

Based on these revisions, we are in the process of revising the rubric for objective 5b (Oral Communication).

After completing the assessment, variability among the reviewers suggests that the rubric for Written Communication should be further revised to better articulate the criteria for assessing Purpose and Sources.

The posters collected as artefacts for this assessment were prepared as summative assessments of a variety of
different kinds of projects, supervised by individual faculty. The differences in presentation style for those diverse projects made it challenging to assess certain artefacts in all categories. The department is currently discussing ways to modify the assignment prompts for the artefacts.

Along with the revisions to the assessment rubrics, these changes should streamline the assessment process in future years.

The Biology Department Curriculum committee is currently revising our department
writing curriculum. Students are currently required to take two half-courses, Biol308 Reading for the Biological Sciences and Biol318 Writing for the Biological Sciences. The revised curriculum will replace these two half courses with a single full course that incorporates the learning objectives from both 308 and 318.

Insert URL of the program web page where Program Learning Objectives for this program are published (NECHE requires this as part of being transparent to stakeholders): https://www.framingham.edu/academics/colleges/science-technology-engineering-and-mathematics/biology/