# Program Assessment Plan

**Program: B.A.**  
**Department: Biology**  
**College/School: Arts and Sciences**  
**Date: 1-29-2018**  
**Primary Assessment Contact: Dr. Thomas Valone**

## Program Learning Outcomes
What do the program faculty expect all students to know, or be able to do, as a result of completing this program?

- **Note:** These should be measurable, and manageable in number (typically 4-6 are sufficient).

## Assessment Mapping
From what specific courses (or other educational/professional experiences) will artifacts of student learning be analyzed to demonstrate achievement of the outcome? Include courses taught at the Madrid campus and/or online as applicable.

## Assessment Methods
What specific artifacts of student learning will be analyzed? How, and by whom, will they be analyzed?

- **Note:** the majority should provide direct, rather than indirect, evidence of achievement.

Please note if a rubric is used and, if so, include it as an appendix to this plan.

## Use of Assessment Data
How and when will analyzed data be used by faculty to make changes in pedagogy, curriculum design, and/or assessment work?

How and when will the program evaluate the impact of assessment-informed changes made in previous years?

## Table

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<th>Program Learning Outcomes</th>
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<tr>
<td>1</td>
<td>Students will be able to effectively apply core biological concepts to solve problems</td>
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<td>2</td>
<td>Students will be able to critically solve problems</td>
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<tr>
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<th>Assessment Mapping</th>
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| 1 | BIOL 1245 & 1265 (freshmen)  
|   | BIOL 3020 & 3040 (sophomores)  
|   | BIOL 3010 (juniors & seniors)  
|   | BIOL 4070 (seniors)  
|   | BIOL 4480 (seniors)  
|   | BIOL 4960; 4970 4980 (seniors) |
| 2 | BIOL 1245 & 1265 (freshmen) |

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| 1 | Lab reports  
|   | Embedded exam questions & pre-test post-test exams  
|   | Quizzes and assignments  
|   | Exam questions; written reports  
|   | Written paper  
|   | Lab notebooks; research posters  
|   | -All of the above will be scored by the instructor AND at least 2 members of the Program-level assessment committee |
| 2 | Lab reports |

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<td>Each fall the Program-level assessment committee will report findings to the faculty. The committee will lead a discussion about how the data can inform changes to the program to improve student learning of the outcome. After a change has been made, we will assess the impact on student learning in the next academic year.</td>
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<td>Each fall the Program-level assessment committee will report findings to the faculty. The committee will lead a discussion about how the data can inform changes to the program to improve student learning of the outcome. After a change has been made, we will assess the impact on student learning in the next academic year.</td>
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| Evaluate scientific information from multiple sources, including that from the primary literature | BIOL 3010 (juniors & seniors)  
BIOL 3030 (juniors & seniors)  
BIOL 4070 (seniors)  
BIOL 4360 (juniors & seniors)  
BIOL 4480 (seniors)  
BIOL 4960 4970 4980 (seniors) | Class assignments  
Class assignments  
Class assignments  
Written assignments  
Written paper  
Lab notebooks; research posters  
-All of the above will be scored by the instructor AND at least 2 members of the Program-level assessment committee | Each fall the Program-level assessment committee will report findings to the faculty. The committee will lead a discussion about how the data can inform changes to the program to improve student learning of the outcome. After a change has been made, we will assess the impact on student learning in the next academic year. |
|---|---|---|---|
| Students will be able to apply biological principles to global societal issues | BIOL 1245 & 1265 (freshman)  
BIOL 3010 (juniors & seniors)  
BIOL 4480 (seniors) | Lab reports  
Class assignments & discussions  
Written paper  
-All of the above will be scored by the instructor AND at least 2 members of the Program-level assessment committee | Each fall the Program-level assessment committee will report findings to the faculty. The committee will lead a discussion about how the data can inform changes to the program to improve student learning of the outcome. After a change has been made, we will assess the impact on student learning in the next academic year. |
| Students will be able to draw valid conclusions from quantitative data | BIOL 3040 (sophomores) | On-line homework assignments  
-Scored by 2 instructors and 2 members of the Program-assessment committee | Each fall the Program-level assessment committee will report findings to the faculty. The committee will lead a discussion about how the data can inform changes to the program to improve student learning of the outcome. After a change has been made, we will assess the impact on student learning in the next academic year. |
| Students will be able to formulate hypotheses that address research questions | BIOL 4250, 4980 (seniors) | Research papers/posters  
-Scored by 2 members of the Program-assessment committee | Each fall the Program-level assessment committee will report findings to the faculty. The committee will lead a discussion about how the data can inform changes to the program to improve student learning of the outcome. After a change has been made, we will assess the impact on student learning in the next academic year. |
| 6 | Students will be able to correctly perform common laboratory and/or field techniques | BIOL 1245 & 1265 (freshmen)  
BIOL 3060, 4050, 3470, 4650 4750 (juniors and seniors) | Lab reports  
- Scored by the instructor and 2 members of the Program-assessment committee | Each fall the Program-level assessment committee will report findings to the faculty. The committee will lead a discussion about how the data can inform changes to the program to improve student learning of the outcome. After a change has been made, we will assess the impact on student learning in the next academic year. |
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**Additional Questions**

1. On what schedule/cycle will faculty assess each of the above-noted program learning outcomes? *(It is *not recommended* to try to assess every outcome every year.)*

   Each year, we will focus on 1-2 outcomes for the BA.

2. Describe how, and the extent to which, program faculty contributed to the development of this plan.

   The Program-level assessment committee is comprised of 6 faculty members. The outcomes the committee developed were discussed at two faculty meetings and the faculty unanimously approved them.

3. On what schedule/cycle will faculty review and, if needed, modify this assessment plan?
Each semester, the program-level assessment committee will meet monthly to discuss how the plan is working. Each year the committee reports to the faculty and can recommend changes to the plan.

**IMPORTANT:** Please remember to submit any assessment rubrics (as noted above) along with this report.