# Annual/Biennial Program Assessment Report

Undergraduate Assessment reports are to be submitted annually. The report deadline is October 15th .

Academic Year Assessed: 2022-2023
College: Agriculture
Department: PSPP
Submitted by: Claire Luby, Mac Burgess

Graduate Assessment reports are to be submitted biennially. The report deadline is October 15th .

**Program(s) Assessed**
*List all majors (including each option), minors, and certificates that are included in this assessment:*

Environmental Horticulture

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**Have you reviewed the most recent Annual Program Assessment Report submitted and Assessment and Outcomes Committee feedback? (*please contact Assistant Provost Deborah Blanchard if you need a copy of either one).***

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The Assessment Report should contain the following elements, which are outlined in this template and includes additional instructions and information. Additional instructions and information should be deleted from final reports.

1. Past Assessment Summary.
2. Action Research Question.
3. Assessment Plan, Schedule, and Data Source(s).
4. What Was Done.
5. What Was Learned.
6. How We Responded.
7. Closing the Loop.

Sample reports and guidance can be found at: <https://www.montana.edu/provost/assessment/program_assessment.html>

1. **Past Assessment Summary.** Briefly summarize the findings from the last assessment report conducted related to the PLOs being assessed this year. Include any findings that influenced this cycle’s assessment approach. Alternatively, reflect on the program assessment conducted last year, and explain how that impacted or informed any changes made to this cycle’s assessment plan.

The Horticulture faculty has entirely new faculty as of 2023 and some courses used in previous assessment plans are no longer being offered. The last assessment report indicated that this turnover was happening in the program and the assessment was not complete. We have examined the past assessment plan and are adapting it to current courses and instructors.

1. **Action Research Question.** What question are you seeking to answer in this cycle’s assessment? *Note: Research questions should be meaningful (focus on an area you need to know the answer to), relatable (tied to program goals), and measurable. Focus on: What will we be able to improve on if we answer this question? The question should be tied to the PLOs. Formulate the question so it is specific to an observable action – not on something that is difficult to measure. E.g., If you have a PLO related to students developing problem-solving skills. An actionable research question could be: Can students apply problem-solving steps?*

In this cycle, we are assessing our communication PLO: Be able to effectively communicate verbally and through writing. Specifically, we are assessing: Can students communicate plant propagation knowledge through oral presentations?

1. **Assessment Plan, Schedule, and Data Source(s).**
2. Please provide a multi-year assessment schedule that will show when all program learning outcomes will be assessed, and by what criteria (data).  *Note: This schedule can be adjusted as needed. Attempt to assess all PLOs every three years. You may use the table provided, or you may delete and use a different format.*

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| **ASSESSMENT PLANNING SCHEDULE CHART** |
| **PROGRAM LEARNING OUTCOME** | **COURSES MAPPED TO PLOs** | **2021-2022** | **2022-2023** | **2023-2024** | **2024-2025** |
| 1. have the content knowledge required to be successful in a horticulture field.
 | Hort 231 |  |  |  | X |
| 1. have the skills needed to be able to function successfully in their horticulture field.
 | AGSC 356  |  |  |  | X |
| 1. be able to identify and analyze plant growth problems and develop solutions or strategies to solve those problems.
 | Hort 343 |  |  |  | X |
| 1. Be able to effectively communicate verbally and through writing
 | Hort 245, Hort 499R |  | X |  |  |
| 1. be able to design a plant experiment and analyze data
 | Hort 499R |  |  | X |  |
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b) What are the threshold values for which your program demonstrates student achievement? *Note: Example provided in the table should be deleted before submission.*

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| **Threshold Values** |
| **PROGRAM LEARNING OUTCOME** | **Threshold Value** | **Data Source(s)\*** |
| 1. Be able to effectively communicate verbally and through writing.
 | *The threshold value for this outcome is for 70% of assessed students to score above 2 on a 1-4 scoring rubric.* | *Student final presentations* |
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*\*Data sources should be examples of* ***direct evidence*** *of student learning: specifically designed exam questions, written work, performances, presentations, projects (using a program-specific rubric – not a course grading rubric); scores and pass rates on licensure exams that assess key learning goals; observations of student skill or behavior; summaries classroom response systems; student reflections.*

***Indirect evidence*** *of student learning includes course grades, grade distributions, assignment grades, retention and graduation rates, alumni perceptions, and questions on end-of-course evaluations forms related to the course rather than the instructor. These may provide information for identifying areas of learning that need more direct assessment but should NOT be used as primary sources for direct evidence of student learning.*

1. **What Was Done.**
2. Was the completed assessment consistent with the program’s assessment plan? If not, please explain the adjustments that were made.

 Yes No





We do not have a current assessment plan that has been shared with new faculty. We have adjusted the previous plan to make sure we are assessing all PLO in this timeframe.

## How were data collected and analyzed and by whom? Please include method of collection and sample size.

Data was collected by a faculty member who was not teaching the class. They watched all student presentations and assessed them with a rubric.

1. Please provide a rubric that demonstrates how your data were evaluated. *Note: Rubrics are program-specific NOT course grading rubrics. Example provided below should be deleted before submission – your rubric may be very different; it just needs to explain the criteria used for evaluating the student artifacts as they relate to the PLOs being assessed.*

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| **Indicators** | **Beginning - 1** | **Developing- 2** | **Competent- 3** | **Accomplished- 4** |
| Demonstration of plant propagation technique  | 1: Limited or no demonstration of plant propagation techniques. | 2: Some demonstration with inaccuracies or unclear presentation. | 3: Clear and accurate demonstration of plant propagation techniques. | 4: Exceptional demonstration with precise and expert-level execution. |
| Description and uses | 1: Incomplete or inaccurate description of the propagation technique and its uses. | 2: Basic description with some inaccuracies or incomplete coverage. | 3: Comprehensive and accurate description of the technique and its uses. | 4: In-depth, insightful description with a thorough understanding of application |
| Synthesis of information | 1: Little to no integration of information, lacks coherence. | 2: Limited synthesis with some connections between information. | 3: Effective synthesis, demonstrating a clear understanding of the topic. | 4: Outstanding synthesis, integrating diverse information seamlessly. |
| Communication clarity | 1: Poorly organized and difficult to follow, unclear communication. | 2: Adequate organization, but some confusion in communication. | 3: Well-organized, clear communication with good engagement. | 4: Exceptionally organized, articulate, and engaging communication. |

*Note: This type of rubric can be used for all levels of assessment (the anticipated evaluation score may vary according to the course level). Some rubrics/assessments may be more tailored for specific levels of courses (e.g., designed to assess outcomes in upper division courses or for lower division) and therefore the scores might be similar across course levels. Or, if you are assessing more basic learning outcomes, you might expect outcomes to be established earlier in the academic career.*

*Student names must NOT be included in data collection. Reporting on successful completions, or manner of assessment (publications, thesis/dissertation, or qualifying exam) may be presented in table format if they apply to learning outcomes. In programs where numbers are very small and individual identification can be made, focus should be on programmatic improvements rather than student success. Data should be collected throughout the year on an annual basis – this is especially helpful for biennial reporting. Proprietary program information (e.g., exam questions and examples) must not be included in the report if the program does not want that information to be included in any public-facing access.*

1. **What Was Learned.**
2. Based on the analysis of the data, and compared to the threshold values established, what was learned from the assessment?

What we learned is that students in the 200-level Hort 245 have not mastered this learning outcome, as is expected in a 200 level class. From both an oral communication skills and content knowledge perspective, most students scored a 2 or above on this rubric, however there is quite a bit of improvement needed to master this PLO.

1. What areas of strength in the program were identified from this assessment process?

We have incorporated oral communication into several other courses, so that should help students master this goal.

1. What areas were identified that either need improvement or could be improved in a different way from this assessment process?

We need to improve communication skills by having students practice these skills starting at the introductory course stage, and having more required, but low-stakes opportunities to give oral presentations throughout the curriculum to build skills and confidence in this area.

1. **How We Responded.**
2. Describe how “What Was Learned” was communicated to the department, or programfaculty. How did faculty discussions re-imagine new ways program assessment might contribute to program growth/improvement/innovation beyond the bare minimum of achieving program learning objectives through assessment activities conducted at the course level?

Because we are all new faculty in the program, we are taking this as an opportunity to assess the entire horticulture curriculum and make improvements. We are in the process of evaluating learning objectives for each of our required courses, as well as what types of assessments these courses might have. We have met with affiliated faculty and discussed strategies to increase opportunities to practice oral communication throughout the curriculum.

1. How are the results of this assessment informing changes to enhance student learning in the program?

The results of this assessment are adding more low-stakes oral communication opportunities to courses throughout the curriculum.

1. If information outside of this assessment is informing programmatic change, please describe that.

As mentioned, we are taking this as an opportunity to assess the entire curriculum and make changes. This involves the faculty involved in horticulture meeting regularly to discuss the objectives of different courses and what changes need to be made.

1. What support and resources (e.g. workshops, training, etc.) might you need to make these adjustments?

We are currently short a faculty position in horticulture, so we are teaching just the bare minimum of courses. There are a number of courses listed on the Environmental Horticulture curriculum that are not currently being offered, and we do not have the faculty capacity to offer more courses currently.

## 7. Closing the Loop(s). Reflect on the program learning outcomes, how they were assessed in the previous cycle (refer to #1 of the report), and what was learned in this cycle. What action will be taken to improve student learning objectives going forward?

## In reviewing the last report that assessed the PLO(s) in this assessment cycle, what changes proposed were implemented and will be measured in future assessment reports?

N/A since the last report was incomplete.

## Have you seen a change in student learning based on other program adjustments made in the past? Please describe the adjustments made and subsequent changes in student learning.

## We are new to the horticulture curriculum, as we are not able to comment on this. We will make observations on this moving forward.

## *Delete the following in the final report.*

## Next Steps:

## 1) Submit report to programassessment@montana.edu

## 2) Upload report to Department website. Reach out to University Information Technology for support related to CMS or website management.