

Annual Program Assessment Report

Academic Year Assessed: 2018-2019

College: Agriculture

Department: Plant Science and Plant Pathology

Submitted by: Horticulture Science Faculty members Tracy Dougher and William Hoch

Assessment reports are to be submitted annually by program/s. The report deadline is September 15th.

Program(s) Assessed:

Indicate all majors, minors, certificates and/or options that are included in this assessment:

Majors/Minors/Certificate	Options
Environmental Horticulture	Environmental Horticulture Science

Annual Assessment Process (CHECK OFF LIST)

1. Data are collected as defined by Assessment Plan
 YES NO
2. Population or unbiased samples of collected assignments are scored by at least two faculty members using scoring rubrics to ensure inter-rater reliability.
 YES NO
3. Areas where the acceptable performance threshold has not been met are highlighted.
 YES NO NA
4. Assessment scores were presented at a program/unit faculty meeting.
 YES NO
5. The faculty reviewed the assessment results, and responded accordingly (Check all appropriate lines)
 - Gather additional data to verify or refute the result.
 - Identify potential curriculum changes to try to address the problem
 - Change the acceptable performance threshold, reassess
 - Choose a different assignment to assess the outcome
 - Faculty may reconsider thresholds
 - Evaluate the rubric to assure outcomes meet student skill level
 - Use Bloom’s Taxonomy to consider stronger learning outcomes
 - Choose a different assignment to assess the outcome

OTHER: Continue to monitor student performance on case studies, increase the number of courses included in the evaluation.

6. Does your report demonstrate changes made because of previous assessment results (closing the loop)? YES NO

1. Assessment Plan, Schedule and Data Source.

a. Please provide a multi-year assessment schedule that will show when all program learning outcomes will be assessed, and by what criteria (data). (You may use the table provided, or you may delete and use a different format).

ASSESSMENT PLANNING CHART					
PROGRAM LEARNING OUTCOME	2016-2017	2017-2018	2018-2019	2019-2020	Data Source*
Our graduates will:					
have the content knowledge required to be successful in a horticulture field.		X			Content knowledge test administered to seniors
have the skills needed to be able to function successfully in their horticulture field.		X			Skills questions on cooperator and student evaluations of internships
be able to identify and analyze plant growth problems and develop solutions or strategies to solve those problems.			X		Case study questions on exams
be able to effectively communicate both written and verbally.				X	Research Presentation and Report
be able to design a plant experiment and analyze data				X	Research Presentation

***Data sources can be items such as randomly selected student essays or projects, specifically designed exam questions, student presentations or performances, or a final paper. Do not use course evaluations or surveys as primary sources for data collection.**

b. What are your threshold values for which you demonstrate student achievement? (Example provided in the table should be deleted before submission)

Threshold Values		
PROGRAM LEARNING OUTCOME	Threshold Value	Data Source
Our graduates will:		
have the content knowledge required to be successful in a horticulture field.	70% of students score at the "acceptable" or higher level.	Content knowledge test administered to seniors

have the skills needed to be able to function successfully in their horticulture field.	70% of students score at the "acceptable" or higher level.	Skills questions on cooperator and student evaluations of internships
be able to identify and analyze plant growth problems and develop solutions or strategies to solve those problems.	70% of students score at the "acceptable" or higher level.	Case study questions on exams
be able to effectively communicate both written and verbally.	70% of students score at the "acceptable" or higher level.	Research Presentation and Report
be able to design a plant experiment and analyze data	70% of students score at the "acceptable" or higher level.	Research Presentation

2. What Was Done

a) Was the completed assessment consistent with the plan provided? YES NO

If no, please explain why the plan was altered.

b) Please provide a rubric that demonstrates how your data was evaluated.

(Example provided below should be deleted before submission – your rubric may be very different, it just needs to explain the criteria used for evaluating student achievement).

Example: Rubric for outcome #6

Performance Area	Rating = 4	Rating = 3	Rating = 2	Rating = 1
Structure	Written work has clear and appropriate beginning, development and conclusion. Paragraphing and transitions are also clear and appropriate.	Written work has adequate beginning, development and conclusion. Paragraphing and transitions are also adequate.	Written work has weak beginning, development and conclusion. Paragraphing and transitions are also deficient.	Organizational structure and paragraphing have serious and persistent errors.
Content	The length of the written work provides in-depth coverage of the	The length of the written work is sufficient to cover the topic, and	Written work does not do an adequate job of covering the	Written work does not cover the assigned topic, and assertions are not supported by evidence.

	topic, and assertions are clearly supported by evidence.	assertions are supported by evidence.	assigned topic, and assertions are weakly supported by evidence.	
Mechanics	Written work has no major errors in word selection and use, sentence structure, spelling, punctuation, and capitalization.	Written work is relatively free of errors in word selection and use, sentence structure, spelling, punctuation, and capitalization.	Written work has several major errors in word selection and use, sentence structure, spelling, punctuation, and capitalization.	Written work has serious and persistent errors in word selection and use, sentence structure, spelling, punctuation, and capitalization.

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 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.

3. How Data Were Collected

a) How were data collected? (Please include method of collection and sample size).

The written research reports from HORT 486 Senior Capstone II were used to score the student's on the two learning outcomes defined in Section 1b:

- be able to effectively communicate both written and verbally: 72.7%
- be able to design a plant experiment and analyze data: 100%

b) Explain the assessment process, and who participated in the analysis of the data.

Two faculty members independently scored the written research reports using the rubric defined in section 2, and the scores were averaged.

NOTE: Student names must not be included in data collection. Totals of successful completions, manner of assessment (publications, thesis/dissertation, or qualifying exam) may be presented in table format if they apply to learning outcomes.

4. What Was Learned

Based on the analysis of the data, and compared to the threshold values provided, what was learned from the assessment?

a) Areas of strength

The Senior Capstone Courses (HORT 485-486) are meeting threshold for the learning outcomes of being able to effectively communicate both written and verbally, and being able to design a plant experiment and analyze data.

b) Areas that need improvement

None needed, though our ability to evaluate verbal communication skills was not able to be tested this round.

5. How We Responded

a) Describe how “What Was Learned” was communicated to the department, or program faculty. Was there a forum for faculty to provide feedback and recommendations?

The results are communicated to the faculty through department program assessment meetings.

b) Based on the faculty responses, will there any curricular or assessment changes (such as plans for measurable improvements, or realignment of learning outcomes)?

YES _____ NO X _____

If yes, when will these changes be implemented?

Please include which outcome is targeted, and how changes will be measured for improvement. If other criteria is used to recommend program changes (such as exit surveys, or employer satisfaction surveys) please explain how the responses are driving department, or program decisions.

c) When will the changes be next assessed?

6. Closing the Loop

a) Based on assessment from previous years, can you demonstrate program level changes that have led to outcome improvements?

We continue attempts to meet student needs and keep the horticulture curriculum current. This fall the HORT 310 Turfgrass Management course was changed to incorporate three modules: turfgrass, apiculture and fruit production, in response to student feedback and changes in the student demographics (decreased student interest in the turfgrass industry).

Submit report to programassessment@montana.edu