Department of Horticulture
Graduate Program Learning Outcomes Assessment
M.S. and Ph.D. in Horticulture

July 2014

Mission Statement

The mission of the graduate degree programs in Horticulture is to provide students with an innovative education focused on their area of interests in horticulture within which they may be prepared to achieve their professional goals as horticultural researchers, teachers, Extension educators, and/or as industry, government, or other professionals.

Objectives

1. To prepare students to enter successfully into the many and varied professions of horticulture and/or its related fields.

2. To prepare students to be successful researchers in horticultural science and/or related fields.

Learning outcomes for each of the program's objectives are:

1. To prepare students to enter the many and varied professions of horticulture and/or its related fields, the program provides students with:

    a. Advanced knowledge and skills necessary to function as a creative and professional practitioner, communicator, educator, or investigator in the field of horticulture.

    b. Intellectual means of identifying and assessing the interactions among the many issues associated with horticulture and society at large.

    c. Skills and intellectual means of contributing new knowledge to the profession of horticulture.

2. To prepare students to be successful researchers in horticultural science and/or related fields, the program provides students with:

    a. Ability to design, conduct, analyze, and communicate a research plan and results.

    b. Critical thinking skills and ability to question or re-evaluate current thinking and standards related to horticultural science.

    c. Skills to identify, locate, and apply knowledge discovered from horticultural science and related fields of study.

    d. Opportunities to develop and communicate scientific hypotheses and problem solving.

Outcomes Assessment Plan

Learning outcome	*Data source*	*Assessment method*	*Expectations*
1. To prepare students to enter the many and varied professions of horticulture and/or its related fields, the program provides students with:			
Advanced knowledge and skills necessary to function as a creative and professional practitioner, communicator, educator, or investigator in the field of horticulture (1a)	Performance in courses on Program of Study Final thesis/dissertation exam Annual progress evaluations Exit survey	GPA in courses on Program of Study Exam rubric by advisory committee Major advisor Academic Coordinator	GPA ≥ 3.0 (B) Minimum PhD 4.0, MS 3.0 Satisfactory progress Self-evaluation
Intellectual means of identifying and assessing the interactions among the many issues associated with horticulture and society at large (1b)	Performance in seminar (Hort 510) PhD preliminary exam Final thesis/dissertation exam Exit survey	Grades in initial & final Hort 510 Exam rubric by advisory committee Exam rubric by advisory committee Academic Coordinator	Average grade ≥ 3.0 (B) Minimum PhD 4.0, MS 3.0 Minimum PhD 4.0, MS 3.0 Self-evaluation
Skills and intellectual means of contributing new knowledge to the profession of horticulture (1c)	Performance in seminar (Hort 510) PhD preliminary exam Final thesis/dissertation exam Publications, posters, presentations Exit survey	Grades in initial & final Hort 510 Exam rubric by advisory committee Exam rubric by advisory committee Self-reported on exit survey Academic Coordinator	Average grade ≥ 3.0 (B) Minimum PhD 4.0, MS 3.0 Minimum PhD 4.0, MS 3.0 Minimum PhD 4, MS 2 Self-evaluation
2. To prepare students to be successful researchers in horticultural science and/or related fields, the program provides students with:			
Ability to design, conduct, analyze, and communicate a research plan and results (2a)	Performance in seminar (Hort 510) Research proposal PhD preliminary exam Final thesis/dissertation exam Publications, posters, presentations Exit survey	Grades in initial & final Hort 510 Advisory committee review Exam rubric by advisory committee Exam rubric by advisory committee Self-reported on exit survey Academic Coordinator	Average grade ≥ 3.0 (B) Satisfactory Minimum PhD 4.0, MS 3.0 Minimum PhD 4.0, MS 3.0 Minimum PhD 4.0, MS 2.0 Self-evaluation
Critical thinking skills and ability to question or re-evaluate current thinking and standards related to horticultural science (2b)	Performance in seminar (Hort 510) PhD preliminary exam Final thesis/dissertation exam Exit survey	Grades in initial & final Hort 510 Exam rubric by advisory committee Exam rubric by advisory committee Academic Coordinator	Average grade ≥ 3.0 (B) Minimum PhD 4.0, MS 3.0 Minimum PhD 4.0, MS 3.0 Self-evaluation

Learning outcome	*Data source*	*Assessment method*	*Expectations*
Skills to identify, locate, and apply knowledge discovered from horticultural science and related fields of study (2c)	Performance in seminar (Hort 510) PhD preliminary exam Final thesis/dissertation exam Exit survey	Grades in initial & final Hort 510 Exam rubric by advisory committee Exam rubric by advisory committee Academic Coordinator	Average grade ≥ 3.0 (B) Minimum PhD 4.0, MS 3.0 Minimum PhD 4.0, MS 3.0 Self-evaluation
Opportunities to develop and communicate scientific hypotheses and problem solving (2d)	Performance in seminar (Hort 510) PhD preliminary exam Final thesis/dissertation exam Publications, posters, presentations Exit survey	Grades in initial & final Hort 510 Exam rubric by advisory committee Exam rubric by advisory committee Self-reported on exit survey Academic Coordinator	Average grade ≥ 3.0 (B) Minimum PhD 4.0, MS 3.0 Minimum PhD 4.0, MS 3.0 Minimum PhD 4.0, MS 2.0 Self-evaluation

Summary: Data to be collected and when

Required data to be collected	*When collected*
Term and/or cumulative GPA for students enrolled in the Horticulture Graduate program	Annually
Annual progress evaluations (from Major advisor)	Annually
Performance in seminar (Grades in initial & final Hort 510)	Annually
PhD preliminary exam (Exam rubric by advisory committee)	After exam
Final thesis/dissertation exam (Exam rubric by advisory committee)	After exam
Exit survey (from Academic Coordinator)	Completion of program
Professional publications, posters & presentations (Exit survey)	Completion of program

Complementary measures and related activities that align with program goals:

- Professional development workshops attended by graduate students
- Grants received by graduate students
- Graduate student awards, fellowships, and scholarships
- Professional career placement following graduation

Summary: Responsibility for data collection, analysis, and reporting

The Johnson Hall Graduate Center Academic Coordinator will provide data to the Horticulture Graduate Coordinator, who in consultation with the Program Director and Graduate Executive Committee will evaluate and prepare the necessary reports as required.

Thesis/Dissertation Defense Examination Assessment Rubric
Master of Science or Doctor of Philosophy in Horticulture

Candidate: _____ MS _____ PhD_____ Date: _____

Title of thesis: _____

Evaluator: _____

For each learning outcome below, choose the score, based on **whole number ratings from 5 to 1, with 5 = Mastery (excellent), 3 = Developing (competent), and 1 = Minimal (poor),** which best represents the overall level demonstrated by the student in their final thesis/dissertation and defense examination.

	Rating
1. Reviews the literature in a manner that demonstrates comprehensive knowledge of previous and current research in the field of study.	
2. Identifies a viable question within the field of study and poses a worthwhile hypothesis or problem related to the question.	
3. Discusses support for hypothesis or solution to problem in a manner that effectively documents the contribution of research to area of study.	
4. Designs and implements appropriate research experiments to test hypothesis or solve problem.	
5. Analyzes and interprets research data appropriately.	
6. Demonstrates sufficient knowledge of appropriate concepts, theories, and emerging methodologies in horticultural science.	
7. Demonstrates qualities of independent, self-motivated research with the ability to recognize problems in the field of study and formulate solution to those problems.	
8. Demonstrates the ability to effectively communicate at different levels results of research in written, graphic, and verbal modes.	

Comments:

Scan and return the completed assessment form to: Deb Marsh <marshdj@wsu.edu>, Academic Coordinator, Johnson Hall Graduate Center, Johnson Hall 125. Phone: 509- 335-2615.

Preliminary Examination Assessment Rubric
Doctor of Philosophy in Horticulture

Candidate: _____ Date: _____

Title of thesis: _____

Evaluator: _____

For each learning outcome below, choose the score, based on **whole number ratings from 5 to 1, with 5 = Mastery (excellent), 3 = Developing (competent), and 1 = Minimal (poor)**, which best represents the overall level demonstrated by the student in their written and oral preliminary examination.

	Rating
1. Demonstrates comprehensive understanding of the primary literature relevant to the discipline.	
2. Demonstrates ability to synthesize knowledge from courses and primary literature, and apply this knowledge to a novel problem or question.	
3. Demonstrates ability to apply the principles and technical knowledge of horticultural science and related disciplines to a novel problem or question.	
4. Demonstrates a broad understanding of the scientific principles of related disciplines relevant to horticulture.	
5. Demonstrates comprehensive understanding of the scientific problems, principles, and methodologies related horticultural science.	

Comments:

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