M.S. in Horticultural Sciences Academic Assessment Plan 2012-2013

College of Agricultural and Life Sciences
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Office of the Provost

University of Florida

Institutional Assessment

Continuous Quality Enhancement

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2012-2013 Academic Assessment Plan for M.S. in Horticultural Sciences

College of Agricultural and Life Sciences

A. Mission

Overview, Mission Statement and Goals

The Horticultural Sciences Graduate Program is administered jointly by the Departments of Horticultural Sciences and Environmental Horticulture. These two departments are the core academic units that fulfill the University of Florida's land-grant mission related to fruit, vegetable, and ornamental crops. The departments maintain statewide responsibilities for teaching (undergraduate and graduate education), Cooperative Extension, and research programs. Statewide coordination of these responsibilities with other IFAS departments and Research & Education Centers belongs to the department Chairs.

The Horticultural Sciences graduate program supports the missions of the college and university to serve the nation's and state's critical needs by contributing to a well-qualified and broadly diverse citizenry, leadership and workforce through graduate education and to expand our understanding of the natural world, the intellect and the senses through graduate student research.

The goals of the Horticultural Sciences Program are consistent with the basic role of agriculture and reflect the needs of a changing world environment:

1. Teaching

- Provide undergraduate students with a scientific understanding of plant growth and development, sustainable horticulture production, harvest and postharvest biology and technology.
- Train graduate students with the basic scientific knowledge to teach effectively, to conduct significant research and to consult with the industry
- Make a continuous, concerted effort to attract and maintain qualified teachers for the undergraduate and graduate Horticultural Sciences programs and to take positive measures to recruit and train the best possible students at both levels for their future careers in industry, business, academia, research, or extension

2. Research

- Develop basic information on plant growth and development that is at the fore front of knowledge applicable immediately or in the future, through a balanced pool of research in the areas of breeding and genetics, biotechnology and molecular biology, biochemistry, and physiology
- Solve current technical problems facing the horticulture industries
- Develop new information, materials and techniques to increase the efficiency of production, harvest and postharvest handling

3. Extension

- Develop, adapt and disseminate research-based recommendations to the commercial horticulture industries through electronic resources and county extension faculty
- Develop and disseminate recommendations to home gardeners and youth organizations through electronic resources and county extension faculty

B. Student Learning Outcomes and Assessment Measures

SLO Type	Student Learning Outcome	Assessment Method	Degree Delivery
Knowledge	Describe and explain theories and concepts the various disciplines of Horticultural Sciences including understanding of plant physiology and plant genetics as related to horticultural plant growth and development, and the integration of structure and function of the whole plant.	Evaluation of the final examination (non-thesis) or thesis defense by the Supervisory Committee using a faculty-developed rubric.	Campus
Knowledge	Describe new techniques and technologies from associated disciplines.	Evaluation of the final examination (non-thesis) or thesis defense by the Supervisory Committee using a faculty-developed rubric.	Campus
Knowledge	Evaluate horticultural systems, components and/or processes to meet industry and societal needs within realistic economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability constraints.	Evaluation of the final examination (non-thesis) or thesis defense by the Supervisory Committee using a faculty-developed rubric.	Campus
Skills	Design and conduct experiments required for successful production of fruits, vegetables and ornamental crops and analyze results.	Evaluation of progress in coursework, scholarly research activities and final examinations by the Supervisory Committee using a faculty-developed rubric.	Campus
Skills	Communicate horticultural ideas, technical data and design information clearly and professionally to other	Evaluation of progress in coursework, scholarly research activities and final examinations by the Supervisory Committee using a	Campus

	students, scientists and the public.	faculty-developed rubric.	
Professional Behavior	Display ethical behaviors, cultural sensitivity, teamwork skills and professional conduct.	1) Adherence to the UF Honor Code; 2) Observations by faculty of professional behavior during seminars, participation and presentations at professional meetings, in scientific writings and in interpersonal relationships. Observations will be reported to the Supervisory Committee and summarized in the annual evaluation.	Campus

C. Research

Although a nonthesis M.S. degree can be obtained in Horticultural Sciences, most M.S. students do research and prepare a thesis. Accepted students are paired with a faculty major advisor, who is a member of the graduate faculty. The student's thesis topic is selected based on the interests of the major advisor. Typically the student prepares a research proposal outlining the research to be completed. This is read and discussed with the major advisor, often in much iteration. Once both parties are satisfied with the proposal, it is given to the other members of the student's advisory committee. The student will then arrange a committee meeting to discuss the proposed research. Regular meetings are planned with the student and his major advisor and supervisory committee. The culmination is a M.S thesis that is read and edited by the committee. This is followed by a final seminar and oral defense.

D. Assessment Timeline

M.S. in Horticultural Sciences College of Agricultural and Life Sciences

Assessment SLOs	Final Exam or Thesis Defense	Annual Evaluation
Knowledge		
#1	X	
#2	X	
#3	X	
Skills		
#4	X	
#5	X	
Professional Behavior		
#6		X

E. Assessment Cycle

Assessment Cycle for:
M.S. in Horticultural Sciences College of Agricultural and Life Sciences
Analysis and Interpretation: May to June annually
Program Modifications: Completed by August 15 of each year
Dissemination: Completed by September 15 of each year

Year SLOs	12-13	13-14	14-15	15-16
Content Knowledge				
#1	X	X	X	X
#2	X	X	X	X
#3	X	X	X	X
Skills				
#4	X	X	X	X
#5	X	X	X	X
Professional Behavior				
#6	X	X	X	X

F. Measurement Tools

Evaluation of dissertation defense: The evaluation is performed by the advisory committee at a published meeting where all committee members must be present and other interested parties can attend. This is often preceded by an oral seminar by the student. Also, the student must present their dissertation to each committee member for reading and corrections. The committee members will have prepared questions to ask of the student at the final defense. These frequently pertain to the dissertation other questions are not prohibited. These questions are usually asked and answered verbally. After each of the advisory committee members have asked their questions, the student is directed to leave the room and his performance is evaluated by the committee members. If everyone is satisfied with the student's performance, all of the committee members sign a form stating this. Few students fail at this point; if the process is working properly, a struggling student will be identified before this point.

Evaluation of progress in coursework and scholarly activities: Each student is evaluated at least annually by the major professor, and more often if the advisor thinks it is necessary. A verbal meeting is held, followed by a written assessment, which is placed in the student's file. The student has the ability to respond to any comments, in writing, which also become part of the permanent record. Progress in coursework is also assessed by the student's GPA. If a student is not making good progress on their research project or is not performing their work effectively in the lab, they may get an unsatisfactory grade for research credits.

Evaluation of professional behavior: In courses, all students are made aware of the UF Honor Code, the seriousness of violating the code is discussed, and adherence to the code is monitored. Professional behavior will be evaluated, especially by the major advisor and the graduate Supervisory Committee during seminars, participation and presentations at professional meetings, scientific writings and in interpersonal relationships; concerns are noted on the annual evaluation.

Rubric for Use in Oral Defense Examinations for the M.S. in Horticultural Sciences

Name of student: _____

Criteria	Satisfactory	Not Satisfactory
1. Problem Definition: Delineates the area of research investigated, including new techniques and technologies as appropriate. (SLO2)		
2. Literature: Describes and explains theories and concepts relevant to the research area and its literature. (SLO 1)		
3. Quality of oral communication: Communicates horticultural ideas, technical data and design information clearly and professionally in oral form. (SLO 5)		
4. Quality of research (worth 2 X): Designs and conducts independent research in the area of study and accurately analyzes results. (SLO 4)		
5. Context: Places the research completed into a larger context and discusses potential for further research and application, particularly as related to industry and societal needs. (SLO 3)		

Passed _____ **Did not pass _____**

Committee Chair: _____ Signature _____

Committee Member: _____ Signature _____

Committee Member: _____ Signature _____

Committee Member: _____ Signature _____

Committee Member: _____ Signature _____

Committee Member: _____ Signature _____

Date: _____

G. Assessment Oversight

Name	Department Affiliation	Email Address	Phone Number
Gloria A. Moore, Graduate Coordinator	Horticultural Sciences	gamoore@ufl.edu	352-273-4786
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