

2012-2013 Undergraduate Academic Assessment Plan

Plant Science

College of Agricultural &
Life Sciences

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Mission Statement

The mission of the Plant Science major, offered collaboratively by the Departments of Agronomy, Environmental Horticulture, and Plant Pathology, is to provide undergraduate and graduate students with a high quality education that results in knowledge and abilities for gainful employment and additional education, productive citizenship and lifelong learning. Students will be able to effectively solve plant related problems through the collection, critical evaluation, and hands-on application of science-based information related to the production, use, and improvement of plants. This program will prepare students to work in a broad range of occupations related to plants in both the private and public sectors including research, education, industry, sales, production, management, and restoration. The program mission supports the missions of the college and university to serve the nation's and the state's critical needs by contributing to a well-qualified and broadly diverse citizenry, leadership and workforce.

Student Learning Outcomes (SLOs)

Existing SLOs in the 2012-13 undergraduate catalog:

1. Knowledge of agronomy and plant pathology related to crop production systems; environmentally sound management practices; genetic and molecular principles related to crops.
2. Apply knowledge and principles of plant science through classroom and/or laboratory settings.
3. Create, interpret and analyze written text, oral messages and multimedia presentations used in agricultural life sciences.

Revised SLOs for the 2013-14 undergraduate catalog:

Content

1. Describe plant growth and development in terms of plant morphology and physiology and evaluate the abiotic and biotic factors that impact plant growth and management.
2. Recommend practices that growers and managers can implement to address the abiotic and biotic components of their cropping system.

Critical Thinking

1. Analyze and apply science-based data to solve problems in plant production, distribution and/or utilization.
2. Design and evaluate a project that addresses a problem or challenge related to their area of interest.

Communication

1. Create, interpret and analyze written text and multimedia presentations.
2. Communicate effectively through oral and multimedia presentations.

New/Revised SLOs, 2013-14*	Link to 2012-13* SLOs
Content	
Describe plant growth and development in terms of plant morphology and physiology and evaluate the abiotic and biotic factors that impact plant growth and management.	Knowledge of agronomy and plant pathology related to crop production systems; environmentally sound management practices; genetic and molecular principles related to crops.
Recommend practices that growers and managers can implement to address the abiotic and biotic opponents of their cropping system.	
Critical Thinking	
Analyze and apply science-based data to solve problems in plant production, distribution and/or utilization.	Apply knowledge and principles of plant science through classroom and/or laboratory settings.
Design and evaluate a project that addresses a problem or challenge related to their area of interest.	
Communication	
Create, interpret and analyze written text and multimedia presentations.	Create, interpret and analyze writing text, oral messages and multimedia presentations used in agricultural life sciences.
Communicate effectively through oral and multimedia presentations.	

*undergraduate catalog date

Curriculum Map

Plant Science

College of Agricultural and Life Sciences

Key: **I**ntrouduced

Reinforced

Assessed

SLOs	Courses				
	AEC 3033C	AEC 3030C	PLS 3004C	PLS 4941	PLS 4932
Content Knowledge					
#1			I	R	A = Standardized post-test
#2			I	R	A = Standardized post-test
Critical Thinking					
#1			I	R	A = Capstone project
#2			I	R	A = Capstone project
Communication					
#1	I, R A = Course grade			R	A = Individual project graded by rubric
#2		I, R A = Course grade		R	A = Individual project graded by rubric

Assessment Cycle

Analysis and Interpretation: Data are collected at the end of the spring semester each year for the content and critical thinking SLOs. The data are summarized and shared with the Agronomy, Environmental Horticulture, and Plant Pathology faculty. The chair of the Plant Science Coordinating Committee is responsible for collecting data on the communication SLOs.

Improvement Activities: Courses are updated by individual faculty members as needed to reflect new trends in plant science.

Dissemination: The results of the assessment are shared with the Agronomy, Environmental Horticulture, and Plant Pathology faculty on an annual basis.

Assessment Cycle Chart

Assessment Cycle for:

Plant Science

College of Agricultural and Life Science

Analysis and Interpretation:

May-June annually

Improvement Actions:

Completed by August 15 of each year

Dissemination:

Completed by September 15 of each year

SLOs	Year	10-11	11-12	12-13	13-14	14-15	15-16
Content Knowledge							
#1		√	√	√	√	√	√
#2		√	√	√	√	√	√
Critical Thinking							
#3		√	√	√	√	√	√
#4		√	√	√	√	√	√
Communication							
#5		√	√	√	√	√	√
#6		√	√	√	√	√	√

Methods and Procedures

SLO Assessment Matrix for 2012-13

2012-13 Student Learning Outcome	Assessment Method	Measurement Procedure
Describe plant growth and development in terms of plant morphology and physiology and evaluate the abiotic and biotic factors that impact plant growth and management.	Standardized post-test	Test score
Recommend practices that growers and managers can implement to address the abiotic and biotic components of their cropping system.	Standardized post-test	Test score
Analyze and apply science-based data to solve problems in plant production, distribution and/or utilization.	Capstone project	Rubric
Design and evaluate a project that addresses a problem or challenge related to their area of interest.	Capstone project	Rubric
Create, interpret and analyze written text and multimedia presentations.	Individual project graded by rubric	Rubric (example provided)
Communicate effectively through oral and multimedia presentations.	Individual project graded by rubric	Rubric

Students in the B.S. and B.A. tracks complete a common set of core courses and are evaluated on the same Student Learning Outcomes.

The content SLOs are evaluated using a pre-test administered upon admission into the degree program and a post-test to be administered in PLS 4932, Plant Science Capstone. Critical-thinking SLOs are evaluated based on a comprehensive capstone project that will be introduced in PLS3004C and completed in PLS 4932. All of the components of the project are graded using a rubric approved by the faculty members of the Agronomy, Environmental Horticulture, and Plant Pathology departments. Grades in oral communication and technical writing courses are used to assess achievement of the communication SLOs. In the technical writing courses all of the points awarded are for written work that is graded by rubric. An example rubric for a writing assignment is attached. In the oral communications courses all but 5% of the points awarded are based on oral presentations that are graded by rubric. Grades will be compiled by the Dean's office and provided to the Plant Science Coordinating Committee. Students are tracked annually to account for the scholarships, honors, and awards received. Feedback is received from mentors hosting students participating in the internship program. Graduates are tracked to collect job placement data as well as graduate school enrollment. The Plant Science Coordinating Committee meets annually to review results and discuss the curriculum.

Assessment Oversight

Name	Department Affiliation	Email Address	Phone Number
Jason Kruse	Chair, Plant Science Coordinating Committee; Environmental Horticulture	jjk@ufl.edu	352-273-4569
Kimberly Moore	Environmental Horticulture	kmoores@ufl.edu	954-577-6328
Diane Rowland	Agronomy	drowland@ufl.edu	352-273-3408
Rose Koenig	Agronomy	rlkoenig@ufl.edu	352-273-3422
Jeff Jones	Plant Pathology	jjones@ufl.edu	352-273-4673
Brantlee Spakes Richter	Plant Pathology	bsr@ufl.edu	352-273-2014

AEC 3033C Introduction & Literature Review

75 Points

Assignment Objectives

1. To create a document that introduces your topic and explains the need for your research through the support of secondary sources.
2. To apply proper APA style to your writing.
3. To build a foundation for your analytical report.

Required Elements

- 1) Length of 1 ½ pages or more
- 2) Double spaced
- 3) 12 pt font
- 4) 1 inch margins
- 5) At least 5 sources (in-text citations & reference page) – DON'T OVERUSE DIRECT QUOTES
 - a. At least 2 specialized/government sources (i.e. academic journals, government documents)
 - b. At least 2 trade/business sources (i.e. field specific or trade publications, books)
 - c. At least 1 popular media source (i.e. newspapers, radio, blogs, magazines, TV, etc...)
 - d. Make sure you include a reference page

Description

- Your introduction & literature review should provide the reader with information that explains and provides background information regarding your topic. Your introduction should build a case for your research topic and indicate why it is important. In other words, if the reader was to ask “So what?” about your research, your introduction and literature review should answer the so what question. Your introduction and literature review should demonstrate that you have begun thinking about and answering questions in your question web. Eventually this will be the first page of your final analytical report. The first page needs to attract the reader’s attention and draw them into the topic. The information in your introduction and literature review should be supported by sources and be formatted in APA style.

Introduction and Literature Review (75 points)

Item	Unacceptable	Acceptable	Superior	Pts Available	Pts Earned
"So What" question and need for research	An introduction and literature review that needs extensive revisions to appropriately answer the "so what" question and describe the need for research (0-7points)	An introduction and literature review that satisfies most of these requirements, but could do more to answer the "so what" question, describe the need for research, or provide more supporting literature (8-15 points)	An introduction and literature review that meets professional requirements, answers the "so what" questions and describes the need for the research, is supported by literature (16-20 points)	20	
Content and Detail	An introduction and literature review that needs extensive revisions to demonstrate adequate content and detail (0-7 points)	An introduction and literature review that satisfies most of these requirements, but could benefit from additional content and detail (7.5-10 points)	An introduction and literature review that meets professional requirements, provides adequate content and detail, is supported by literature (11-15 points)	15	
Grammar/Mechanics/Formatting /Page Length	An introduction and literature review that has more than 6 grammar/mechanical mistakes, or the type or amount of mechanical, rhetorical, or formatting errors that would distract readers, length of	An introduction and literature review that has between 3 and 6 grammar/mechanical mistakes, does not contain appropriate formatting, and is short of being 1 page long (9-15 points)	An introduction and literature review that has less than 3 grammar/mechanical mistakes, is formatted appropriately, and has an appropriate page length (16-20 points)	20	

	document is 1/2 page or less (0-8 points)				
Sources	Three or less of the required sources included, does not meet all requirements for each source level, all source not cited in-text or included on reference page (0-5 points)	Four of the required five sources included, or five sources included but does not meet the some requirements for each source level (6-8 points)	At least 5 sources included (at least 2 specialized/government sources, 2 trade/business sources, and 1 popular media source) both in in-text citations and on the reference page, no excessive use of direct quotes (9-10 points)	10	
APA Style	Correct APA style in-text citations and reference sheet with more than 6 errors (0-4points)	Correct APA style in-text citations and reference sheet with 6 or less errors (5-7 points)	Correct APA style in-text citations and reference sheet with 3 or less errors (8-10 points)	10	
Total Points				75	
Assignments submitted late (-10% each day)					
File not named correctly (-10%)					
Total Points Earned					
Comments:					

