2012-2013 Undergraduate Academic Assessment Plan

Natural Resource Conservation

College of Agricultural and Life Sciences

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Mission Statement

The Mission of the School of Forest Resources and Conservation is to develop and communicate new knowledge and technologies that advance the production, management and conservation of natural resources in an environmentally, economically and socially sustainable manner on local, regional, national and global levels. The School supports the mission of the University of Florida by supporting teaching at the undergraduate and graduate levels, research and scholarship, and service (including Extension) within the broad field of natural resources.

Student Learning Outcomes (SLOs)

Existing SLOs in the 2012-13 undergraduate catalog:

1. Knowledge in the competency in biology/ecology, quantification, policy/administration, and management of natural resources.
2. Ability to analyze, interpret, synthesize and communicate information and data, including the use of mathematical and statistical methods.
3. Create, interpret and analyze written text, oral messages and multimedia presentations.

Revised SLOs for the 2013-14 undergraduate catalog:

Content

1. Demonstrate competency in biology/ecology, quantification, policy/administration, and management of natural resources.
2. Analyze, interpret, synthesize and communicate information and data, including the use of mathematical and statistical methods.

Critical Thinking

1. Solve novel problems in natural resource management.

Communication

1. Create, interpret and analyze written text, oral messages, and multi-media presentations.

New/Revised SLOs, 2013-14*	Link to 2012-13* SLOs
Content	
Demonstrate competency in biology/ecology, quantification, policy/administration, and management of natural resources.	Knowledge in the competency in biology/ecology, quantification, policy/administration, and management of natural resources.
Analyze, interpret, synthesize and communicate information and data, including mathematical and statistical methods.	Ability to analyze, interpret, synthesize and communicate information and data, including mathematical and statistical methods.
Critical Thinking	
Solve novel problems in natural resource management.	Ability to analyze, interpret, synthesize and communicate information and data, including the use of mathematical and statistical methods.
Communication	
Create, interpret and analyze written text, oral messages, and multi-media presentations.	Create, interpret and analyze written text, oral messages, and multimedia presentations.

*undergraduate catalog dates

Curriculum Map

Curriculum Map for:

Natural Resource Conservation College of Agricultural and Life Sciences

Key: **I**ntroduced **R**einforced **A**ssessed

Courses SLOs	FOR 3200C	FNR 3410C	FNR 3131C	FOR 3153C	FOR 3202	FNR 4660	FOR 4754C	FNR 4623C	Program Exit Exam
Content Knowledge									
#1	I	I	I	I	I	I	R	R	A
#2	I	I		I			R	R	A
Critical Thinking									
#1	I			R	R	R		A=Final Group Project	
Communication									
#1	I		I	I	R	R		A=Final Group Project	

Assessment Cycle

Results will be collected and a basic analysis conducted annually. A more comprehensive, strategic planning exercise based on assessment results will occur on a three-year cycle (indicated as XC in the table below).

Assessment Cycle Chart

Assessment Cycle for:

Natural Resource Conservation — College of Agricultural and Life Sciences

Analysis and Interpretation: April – May of each year
Improvement Actions: July – September of each year
Dissemination: July 30, 2014 and July 30, 2017

Year / SLOs	11-12	12-13	13-14	14-15	15-16	16-17
Content Knowledge						
#1	X	X	XC	X	X	XC
#2	X	X	XC	X	X	XC
Critical Thinking						
#1	X	X	XC	X	X	XC
Communication						
#1	X	X	XC	X	X	XC

Methods and Procedures

SLO Assessment Matrix

SLO Assessment Matrix for 2012-13

2012-13 Student Learning Outcome	Assessment Method	Measurement Procedure
Demonstrate competency in biology/ecology, quantification, policy/administration, and management of natural resources.	Program Exit Exam	Exam score
Analyze, interpret, synthesize and communicate information and data, including the use of mathematical and statistical methods.	Program Exit Exam	Exam score
Solve novel problems in natural resource management.	Final Group Project	Grading Guide
Create, interpret and analyze written text, oral messages, and multi-media presentations.	Final Group Project	Grading Guide

Students working towards a Bachelor of Science in Natural Resource Conservation are required to take a core set of classes and then and then work with their advisor to develop the remainder of their curriculum based on personal and professional interests. The following tools will be used to assess SLOs:

1. The capstone course taken by all NRC majors is FOR 4623C Integrated Natural Resource Management. Students work in small groups (3-4 students) to develop an integrative management plan for a particular piece of property. This project involves using all the knowledge and skills developed during their tenure in the core classes and electives. Students will be evaluated based on their individual ability to demonstrate critical thinking skills and ability to communicate during final presentation of their project.
2. A final exam will be given to all students online prior to being allowed to apply for graduation. This exam will examine students "Content" knowledge based on questions from the eight core courses that all students will have taken.

The final project presentation will be evaluated by the course instructor as well as a rotating panel from the SFRC Undergraduate Program Committee. Individual students will be orally questioned by this panel to ascertain achievement of SLOs for "Critical Thinking" and "Communication." A copy of the current grading guide for this presentation is attached. It is anticipated that the guide will be revised to provide more specific guidance relative to the assessment required.

Questions for the final exam will be solicited from the instructors of each of the core courses. They will be divided into content question pools and a subset from each pool will be randomly selected and delivered to the student in an online exam format. The online exam will be required to be taken by all students applying for graduation. This exam is currently under development.

Data for each NRC student will be compiled as the student completes their program and compiled within a SLO report. All students' reports will be filed with the Education/Training Coordinator, a senior staff position within the School of Forest Resources and Conservation. Data will be analyzed from each report to determine an overall assessment of SLO achievement for the BS NRC degree at the completion of an academic year.

Indirect assessment will be conducted during an existing "exit interview" conducted as students graduate, by the SFRC Director, during which students have the opportunity to discuss any curriculum deficiencies they have identified, opportunities to enhance the program, courses or instructors they found especially beneficial, and similar. In addition, informal feedback on curriculum, and on the capabilities of graduates, are regularly sought from the SFRC Advisory Board, and in particular the FRC/NRC Advisory Council. Both entities meet twice a year.

Assessment Oversight

This Academic Assessment Plan for the Bachelor of Science in Natural Resource Conservation will be overseen by the SFRC Undergraduate Programs Committee (UPC). This Committee is composed of faculty and staff members, many of whom hold teaching responsibilities in the degree program, and which typically rotate on and off the committee every 3-5 years. The current composition of the Committee is described below.

Name	Department Affiliation	Email Address	Phone Number
Dr. Michael Andreu	UPC Chair and SFRC Undergraduate Coordinator, School of Forest Resources and Conservation	mandreu@ufl.edu	352-846-0355
Dr. Rob Ahrens	UPC Member, School of Forest Resources and Conservation	rahrens@ufl.edu	352-279-3630
Dr. Shirley Baker	UPC Member, School of Forest Resources and Conservation	sbaker25@ufl.edu	352-273-3627
Dr. Doug Carter	UPC Member, School of Forest Resources and Conservation	drcart@ufl.edu	352-846-0893
Dr. Matt Cohen	UPC Member, School of Forest Resources and Conservation	mjc@ufl.edu	352-846-1277
Dr. Bon Dewitt	UPC Member, School of Forest Resources and Conservation	bon@ufl.edu	352-392-4957
Dr. Francesco Escobedo	UPC Member, School of Forest Resources and Conservation	fescobed@ufl.edu	352-846-0856
Dr. Henry Hochmair	UPC Member, School of Forest Resources and Conservation	hhhochmair@ufl.edu	954-577-6317
Scott Sager	UPC Member, School of Forest Resources and Conservation	sasager@ufl.edu	352-846-0846
Kristina Haselier	UPC Member, School of Forest Resources and Conservation	khaselier@ufl.edu	352-846-0847

FNR4623 -- INTEGRATED NATURAL RESOURCE MANAGEMENT FINAL PROJECT PRESENTATIONS EVALUATION FORM

Group: Evaluator: :

Overall Grade: _____/65_

1 or 2. Basic Property Information: Grade (0-5):_____

-general description of property
-location, aerial photo, acreage, etc.
-surrounding land uses

1 or 2. Landowners and Objectives: Grade (0-5):_____

-description of landowners
-landowner objectives

3. Abbreviated Resource Inventory: Grade (0-10):_____

- stand delineations, general descriptions (community type), acreages
- include information on understory, midstory and overstory
- map of stand delineations w/ legend
- forest inventory (even or uneven-aged, age, volume, dbh dist., stocking, value, site index, disease/pest incidence)
- summarize values and volumes per acre and in total on a slide
- wildlife inventory or occurrence info.
- soils (descriptions and importance)

4. Regulatory and Other Issues: Grade (0-5):_____

relevant federal, state, and local laws and regulations
how laws may affect development of management alternatives
how other issues (adjacent properties, landowner needs, existing contractual arrangements, scale of property, etc) may impact development of alternatives

5. Management Alternatives and Activities Grade (0-20):_____

-Present two management alternatives in the report. One of them is your Preferred Alternative. -General description/theme of each alternative

-what is each alternative trying to achieve? -Physical activities over time for each alternative by stand -Economic and non-economic or physical outputs or effects of each alternative

- bar or line graphs of costs and revenues over time, quantified activities on the ground over time, including acres treated by period by management activity or other quantifiable metrics -Summary of economic analysis of each alternative (costs, revs, NPVs, EAEs, B/C) -Information about targeted wildlife species -Final stand map -Anticipated effects of management activities on objectives, including wildlife

6. Justification of Preferred Alternative Grade (0-10):_____

- justify why one alternative is better than the other. It should include references to the following criteria:

- overall goals of landowner
multiple use considerations
ecological/biological feasibility
economic efficiency or returns to the landowner
social and cultural acceptability - operational practicality
includes regulatory and financial constraints, etc - overall sustainability of activities - other nontangibles as required

7. Overall Quality of Presentation and Mgmt Plan Grade (0-10):_____

knowledge of subject matter
ability to handle questions

-professionalism -
overall quality of;
-management plan structure
-slide show
- photos / images
-maps, etc
- did all members present?
-preparation, organization and flow

Other General Comments: