

Natural Resource Conservation Management [NRCM]

Cycles included in this report:
Jun 1, 2017 to May 31, 2018

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Program Name: Natural Resource Conservation Management [NRCM]

Reporting Cycle: Jun 1, 2017 to May 31, 2018

1 Is this program offered via Distance Learning?

100% Traditional or less than 50% Distance/Traditional

2 Is this program offered at an off-site location?

No

2.1 If yes to previous, provide addresses for each location where 50% or more of program credits may be earned.

3 Example of Program Improvement

In 2014-2015 the master plan benchmarks were rebuilt. After 2016-2017 data is collected, decisions about assessments and benchmarks will be made.

2017-2018:

We continue to look for appropriate methods to evaluate our students and the skills that they have acquired while participating in the NRCM program. Our students are successful in gaining employment post graduation. We feel this is due to their readiness to enter the workforce. We made the internship a required course for our students which has provided them with opportunities to gain employment in their field of study. We have also developed relationships with agencies in the natural resources field. They are pleased with our students and ask for them to apply for internships and permanent positions. We continue to visit with industry leaders to develop appropriate skills for our students.

4 Program Highlights from the Reporting Year

2016-2017:

NRCM students continue to exceed all currently established benchmarks.

2017-2018:

NRCM students help at a bird banding station established at Sam Houston Jones State Park in conjunction with the Louisiana Bird Observatory and The Audubon Society. Bird banding occurs monthly throughout the year, and students participate in setting up and taking down mist nets, bird removal from nets, and data entry.

NRCM students helped organize the annual Louisiana Association of Biologists/LA Chapter of the Wildlife Society meeting held August 2017 and August 2018 at McNeese. In August 2018, three graduate students presented oral presentations of their thesis research and one undergraduate presented a poster of research findings from her summer internship at Rockefeller Wildlife Refuge.

NRCM students are engaged with the community as they are involved with projects such as: 1000 Trees in 1000 Days, deer check point stations, Gulf Coast marsh grass vegetation projects, and others.

5 Program Mission

The Bachelor of Science in Natural Resource Conservation Management program will provide education and training in all aspects of agricultural and natural resource education while focusing specifically on the following criteria: a) preparing students for careers in agriculture and natural resources, b) preparing students for graduate or professional school, c) introducing students to the role of research and biotechnology through agriculture and natural resources, d) contribute to the intellectual development of students, and e) enable students to effectively participate in and make significant contributions to contemporary society.

6 Institutional Mission Reference

The Bachelor of Science in Natural Resource Conservation Management program supports McNeese State University's fundamental mission to provide successful education of the

undergraduate students and services to the employers and communities in its region. The natural resource conservation management program provides services unique to our area, training students in environmental testing and wetland delineation. Natural resource graduates work to maintain and/or preserve natural ecosystems and habitats.

7 Assessment and Benchmark AGRI 401 Project

Assessment: Students are required to design and conduct an experiment and apply acceptable statistical methods to evaluate this research project.

Benchmark: 80% of the students will pass this assignment with a minimum score of 75% or higher.

Course Links

AGRI401 [Agricultural Statistics (Lec. 3, Lab. 3, Cr. 4)]

7.1 Data

Academic Year	Students that completed the assignment with a score of 75%	
	#	%
2015-2016	7/7	100%
2016-2017	3/3	100%
2017-2018	7/7	100%

Course Links

AGRO401 [Soil Fertility (Lec. 3, Lab. 3, Cr. 4)]

7.1.1 Analysis of Data and Plan for Continuous Improvement [Approved]

2016-2017:

All NRCM students met the benchmark. Continue to track data and determine if benchmark should be adjusted.

2017-2018:

NRCM students are competent in completing this task. We will look at other competencies to evaluate to get a better understanding of the students needs.

Course Links

AGRI401 [Agricultural Statistics (Lec. 3, Lab. 3, Cr. 4)]

8 Assessment and Benchmark AGRI 441 Written and Oral Presentations

Assessment: Students are required to research a relevant topic, write an abstract, and present the abstract at the conclusion of the course.

Benchmark: 80% of NRCM students will earn a grade of 80% or higher on their final presentation in AGRI 441.

Prior to 2017-2018, the benchmark was:

Students will perform at the C level or higher to be proficient in the course.

An initial mini seminar will be required that will allow the student to present a topic in front of peers and faculty. It is expected that 25% of these students will perform at the C level or higher according to the selected matrix.

There will be a 70% increase in students completing their final presentation with a C or better.

Course Links

AGRI441 [Seminar (Lec. 1, Cr. 1)]

8.1 Data [Approved]

2013-2018:

Academic Year	# of students that completed AGRI 441	Students that improved their grade from initial presentation		Students that completed AGRI 441 with a C or better	
		#	%	#	%
2013-2014	N/A	N/A	N/A	N/A	N/A
2014-2015	N/A	N/A	N/A	N/A	N/A
2015-2016	69	60	87%	65	94%
2016-2017	63	60	95%	63	100%
2017-2018	52	50	96%	52	100%

Academic Year	NRCM students with a C or better in AGRI 441	
	#	%
2013-2014	N/A	N/A
2014-2015	13/13	100%
2015-2016	7/7	100%
2016-2017	12/12	100%
2017-2018	3/3	100%

2018-2019:

Academic Year	Students scoring 80% or higher	
	#	%
2018-2019		

Course Links

AGRI441 [Seminar (Lec. 1, Cr. 1)]

8.1.1 Analysis of Data and Plan for Continuous Improvement [Not Approved]

2016-2017:

All NRCM students have met the benchmark for two years; however, the benchmark will be revised for 2017-2018 to state: 80% of NRCM students will earn a grade of 80% or higher on their final presentation in AGRI 441.

2017-2018:

All NRCM students met the benchmark.

Course Links

AGRI441 [Seminar (Lec. 1, Cr. 1)]

9 Assessment and Benchmark AGRI 441 Case Studies

Assessment: AGRI 441 Case Studies.

Benchmark: 80% of students will demonstrate a command of the scientific method by scoring an average of 80% or better on the case study assignment.

Prior to 2017-2018, the benchmark was 80% of students will score an average of 75% or greater.

Course Links

AGRI441 [Seminar (Lec. 1, Cr. 1)]**9.1 Data**

Academic Year	# of students that completed AGRI 441	NRCM students that demonstrated a command of the scientific method	
		#	%
2013-2014	N/A	N/A	N/A
2014-2015	13	13	100%
2015-2016	7	6	86%
2016-2017	11	10	91%
2017-2018	5	5	100%

Academic Year	Students scoring 80% or higher	
	#	%
2018-2019		

Course Links**AGRI441 [Seminar (Lec. 1, Cr. 1)]****9.1.1 Analysis of Data and Plan for Continuous Improvement**

2016-2017:

Raise the benchmark to 80% of students will score 80% or better on case study assignment.

2017-2018:

NRCM students are competent in meeting this assessment. We will review the desired outcomes of NRCM students and create new competencies to assess.

Course Links**AGRI441 [Seminar (Lec. 1, Cr. 1)]****10 Assessment and Benchmark AGRO 301 and 401 Pre-test/Post-test [Not Approved]**

Assessment: AGRO 301 and 401 pre-test/post-test.

Benchmark: AGRO 301 and AGRO 401 students will be required to take a pre-test on basic soil and soil collection methods. At the conclusion of the course, the students will be tested on the same concepts and 90% of the students will perform at the C level or higher.

Course Links**AGRO301 [Soils (Lec. 3, Lab. 3, Cr. 4)]****AGRO401 [Soil Fertility (Lec. 3, Lab. 3, Cr. 4)]****10.1 Data**

2017-2018:

Pre- and post-test assessments were still being developed and will be implemented in the next academic year.

Course Links**AGRO301 [Soils (Lec. 3, Lab. 3, Cr. 4)]****AGRO401 [Soil Fertility (Lec. 3, Lab. 3, Cr. 4)]****10.1.1 Analysis of Data and Plan for Continuous Improvement**

2017-2018:

Begin gathering pre-test/post-test data next year. Establish benchmarks after several years of gathering data.

Course Links

AGRO301 [Soils (Lec. 3, Lab. 3, Cr. 4)]

AGRO401 [Soil Fertility (Lec. 3, Lab. 3, Cr. 4)]

11 Assessment and Benchmark NRCM 485 Sampling Assignments

Assessment: Completion of courses that instruct students in environmental sampling methods such as NRCM 485.

Benchmark: 90% of NRCM graduates will conduct air, water, and soil sampling assignments at an achievement level of 70% or higher.

Prior to 2017-2018, the benchmark was 100% of NRCM graduates will demonstrate competency in air, water and soil sampling by completing NRCM 485.

Course Links

NRCM485 [Methods and Techniques of Environmental Science (Lec. 3, Lab. 3, Cr. 4)]

11.1 Data

Academic Year	Students that completed courses in methods and techniques of environmental science		Students competent in the methods of air, water, and soil sampling	
	#	%	#	%
2014-2015	13/13	100%	13/13	100%
2015-2016	7/7	100%	7/7	100%
2016-2017	N/A	N/A	N/A	N/A
2017-2018	N/A	N/A	N/A	N/A

Academic Year	Students scoring 70% or higher	
	#	%
2018-2019		

Course Links

NRCM485 [Methods and Techniques of Environmental Science (Lec. 3, Lab. 3, Cr. 4)]

11.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

All NRCM students have met the benchmark for two years; however, the benchmark will be revised for 2017-2018 to state: 90% of NRCM graduates will conduct air, water, and soil sampling assignments at an achievement level of 70% or higher. This benchmark is being changed in an effort to collect more meaningful information.

2017-2018:

Due to the retirement of a faculty member and not being able to replace the position, we remove NRCM 485 as a required course. Hopefully we will be able to hire this position in the future, until that time we have replaced NRCM 485 with AGRO 401. We will begin collecting data on students content knowledge beginning in spring 2019.

Course Links

NRCM485 [Methods and Techniques of Environmental Science (Lec. 3, Lab. 3, Cr. 4)]**12 Assessment and Benchmark** NRCM 499 Presentation and Daily Logs [Not Approved]

Assessment: NRCM 499 Presentation and Daily Logs.

Benchmark:

Course Links**NRCM499 [Internship in Natural Resource Conservation and Management (Lab. 12, Cr. 6)]****12.1 Data**

2016-2017:

A sample of a weekly journal entry is provided. We have not devised a rubric to evaluate the material included in the journal. Currently, we have only evaluated completeness and grammar.

2017-2018:

Collecting data and reviewing to devise an appropriate method to evaluate these entries.

Files: See list of attachments to view. (Requires Adobe Reader or compatible viewer).

Intern Evaluation - Mid-Term

June 26

Course Links**NRCM499 [Internship in Natural Resource Conservation and Management (Lab. 12, Cr. 6)]****12.1.1 Analysis of Data and Plan for Continuous Improvement** [Approved]

2016-2017:

Students enrolled in and completing the internship are required to produce both written and oral communication projects, a weekly journal is completed throughout the course and an oral presentation is required at the termination of the internship. Students are completing with competency.

2017-2018:

Our students are improving writing skills. We teach the IMRAD (Introduction, Materials and Methods, Results, and Discussion) method for abstract, journal, and presentation formats. This method is utilized in AGRI 340, AGRI 441, and any other courses that requires presentation and writing assignments. Students are completing with competency.

Course Links**NRCM499 [Internship in Natural Resource Conservation and Management (Lab. 12, Cr. 6)]****13 Assessment and Benchmark** Senior Exit Exam

Assessment: Senior Exit Exam questions pertaining to methods of problem solving.

Benchmark: 80% of graduating students will be able to identify the scientific method as an appropriate mechanism of problem solving.

13.1 Data

Academic Year	Students that identified the scientific method as appropriate	
	#	%
2014-2015	13/13	100%
2015-2016	6/7	86%
2016-2017	12/12	100%

2017-2018	3/3	100%
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13.1.1 Analysis of Data and Plan for Continuous Improvement

2016-2017:

All NRCM students have met the benchmark for two years. Continue to track and determine if the benchmark should be raised if this trend continues.

2017-2018:

We only had three NRCM graduates during this time frame. 2/3 were able to successfully recognize the appropriate scientific method. We will continue to teach the scientific method throughout the curriculum and courses from the freshmen level to seniors. We will also continue to test the students on their proficiency in utilizing this method of problem solving.

Program outcomes

Content Knowledge

Students will demonstrate competency in environmental testing procedures and other content knowledge, including photosynthesis, respiration, and the six essential nutrients.

Communication

Students will develop and master soft skills, including oral, written and/or technological communications, in academic and professional environments.

Scientific Method

Students will understand and apply the scientific method.

End of report