Program (ALP) - Range and Wildlife Management MS

College or Division: Agricultural and Natural Resource Sciences
Department: Natural Resource Management
Assessment Coordinator: Dr. Ryan Luna
Strategic Plan Goal(s) Supported: Strategic Goal 1 - Promote growth in academics - research - and artistic excellence
Program Marketable Skills have been identified: Yes
Program Marketable Skills: Students able to communicate scientific research results to a wide variety of audiences
Students will be able to analyze a data set with a wide variety of statistics
Students will demonstrate competence in scientific writing--also includes appropriate literature review.
Marketable Skills Dissemination Strategy: Assignments in speaking and writing are utilized in a variety of classes
Require students to present data at a minimum of one conference.
Upon completion of their coursework, students will have an open thesis defense to present their data/research to a diverse audience.
Statement of Purpose: In the Natural Resource Management Program, we educate students to become successful conservation biologists, wildlife biologists, and range managers. Once they graduate and go into the work force, our students are expected to be able to manage natural resources successfully through complex decision making about plant and animal populations and how they interact with one another in a community as well as with the non-living components of the environment. The Natural Resource Management Master of Science program is structured to introduce students to higher order concepts in Natural Resource Management and the principles and application of research within the NRM field. All majors are required to complete a common set of courses that includes Biostatistics, Research Methods, and Scientific Writing. Integration of the scientific literature and understanding of the application of statistics and proper field methodology to the collection and analysis of data is emphasized. A research project is required of each student completing this program.

Annual Updates

2019 - 2020

Evidence of Improvement from Previous Assessment Cycle: Overall, the assessments were met this year. The only assessment that was not met was met were scores associated with the statistics course. This course requires use of computer systems to analyze data. It is a very difficult course to teach through an online format, as was required to finish the spring semester. Due to the fact that students were not able to work through homework problems in the lab with the instructor there to offer individual assistance, concepts might not have been as easily understood for some students. Even with the changes implemented in courses due to COVID-19, overall the students still performed well.
Review History: Reviewer #1 Name, Date, and Comments: Bonnie J Warnock, 6/22/2020, Good comments and observations on statistics and change in the classes. You might want to think about how we can use the data as we prepare for the NRM program reviews.

Student Learning Outcomes	Assessment Methods	Results	Use of Results
SLO 1 - Student will be able to apply statistical concepts and procedures to research. **Outcome Status:** Active **Planned Assessment Cycle:** 2014 - 2015 **Start Date:** 09/01/2014	**Project -** a. Final Project Faculty use a rubric to analyze each portion of the final project in Biostatistics I and II. **Target:** Biostatistics I and II, comprehensive final project; Target is 90% of students scoring 90% or better	**Reporting Period:** 2019 - 2020 **Conclusion:** Target Not Met Biostats 1: 80% (8/10) students scoring 90% or better on final project exam Biostats 2: 75% (6/8) (87.5%, 7/8 if you count one student's grade of 89) students scoring 90% or better on final exam (05/26/2020)	**Use of Results:** The class is going to be revamped to focus on the fundamentals the first semester and then on application the second semester. Hopefully, this will give students a stronger foundation on their statistical knowledge. (05/26/2020)
	Written Assignment - b. Thesis or Record of Study Defense Three-person faculty committee use a rubric to score various portions of the thesis defense. **Target:** Target is 100% of students defending their thesis or Record of Study during the assessment cycle score 3 or better on the statistical application portion of the rubric.	**Reporting Period:** 2019 - 2020 **Conclusion:** Target Met We use the rubric to verify that targeted questions come from each category we want to grade the student on. This has been a successful way to determine student's knowledge and application abilities. (05/20/2020)	**Use of Results:** Often, may of the questions that we used are recycles and we use their answers to give feedback to professors to help with making classes challenging and meaningful. (05/20/2020)
SLO 2 - Student will be able to evaluate literature and references to substantiate the applied research project. **Outcome Status:** Active **Planned Assessment Cycle:** 2014 - 2015 **Start Date:** 09/01/2014	**Written Assignment -** a. Thesis or Record of Study Literature Review Evaluation Three-person faculty committee assesses the literature review within the thesis proposal or record of study. **Target:** Thesis or Record of Study Proposal; Target is 100% of students satisfactorily writing a proposal that is approved by all three committee members by the end of the first enrollment in thesis proposal or NRM 5304 Research	**Reporting Period:** 2019 - 2020 **Conclusion:** Target Met We had 3 defenses and all students passed with their written thesis portraying solid use of literature. (05/20/2020)	**Use of Results:** students are performing well with current format--will continue using similar style (06/08/2020)
	Written Assignment - b. Rubric Applied to Research Proposal Professor and peers in NRM 5305 Range and Wildlife Research	**Reporting Period:** 2019 - 2020 **Conclusion:** Target Met 3/3 students completed with scores of 90 or better. (05/20/2020)	**Use of Results:** students are performing well with current format--will continue similar style in upcoming year (06/08/2020)

Student Learning Outcomes	Assessment Methods	Results	Use of Results
	Methods course evaluate the research proposal using a rubric. **Target:** Research Methods, Written proposal and manuscript; Target is 90% of students scoring 85% or better on the written proposal rubric		
SLO 3 - Student will be able to justify and defend the research questions and design. **Outcome Status:** Active **Planned Assessment Cycle:** 2014 - 2015 **Start Date:** 09/01/2014	**Presentation/Performance -** a. Oral Defense of Thesis or Record of Study Faculty assess the student's oral defense of the thesis Each student is required to present an oral defense of the research project. For successful completion, the student must justify and defend the research objectives and the overall design and findings of the project. **Target:** Research Methods; oral presentation; Target is 90% of students scoring 90% or better on the oral presentation rubric	**Reporting Period:** 2019 - 2020 **Conclusion:** Target Met We had 3 oral defenses--each student passed with scores better than 90%. We will likely also have 1-2 defenses over the summer that may be completed through zoom due to COVID-19. (05/20/2020)	**Use of Results:** students performed well during defense. We will continue to require them to present at state and national conferences during their thesis to gain experience. (06/08/2020)
	Presentation/Performance - b. Professor and Peer Evaluation of Presentation Faculty and peers within Research Methods evaluate oral presentations. Each student gives an oral presentation detailing the objectives and methodology of a research project. **Target:** Research Methods; oral presentation; Target is 90% of students scoring 90% or better on the oral presentation rubric	**Reporting Period:** 2019 - 2020 **Conclusion:** Target Met 3/3 students performed at 90% or better for their oral presentations. (05/20/2020)	**Use of Results:** students are performing well. This will be continued--we require multiple presentations so students are gaining experience and building confidence. (06/08/2020)