

Degree: B.S. in Environmental Science
2023-2024 Assessment Plan

	Student Learning Outcome #1	Limnological research skills Students will perform limnological field and laboratory protocols with technical accuracy. Rational: Limnology is a practical course that teaches students the necessary field and laboratory skills to be successful in environmentally related professions. The class project is a cumulative field and laboratory exercise where students apply the knowledge and skills learned in the Limnology class
PLAN	Assessment Method(s)	Students will perform limnological field and laboratory protocols with technical accuracy. Rational: Limnology is a practical course that teaches students the necessary field and laboratory skills to be successful in environmentally related professions. The class project is a cumulative field and laboratory exercise where students apply the knowledge and skills learned in the Limnology class Environmental Science students enrolled in Limnology (4430) will: 1. Collect field and laboratory data. 2. Analyze and interpret the data using acceptable techniques. 3. Develop written reports that are well organized and clear to a lay person.
	Proficiency	The desired level of performance for Environmental Science students in the Limnology class was 2.5 out of a four-point scale on the Limnology rubric. This desired level of performance was chosen because it represents a value that is 0.5 greater than average on a four-point scale.

DO	Benchmark	The desired level of performance for Environmental Science students in the Limnology class was 3.0 out of a four point scale on the Limnology rubric. This represents an increase from a target of 2.5, which was used prior to 2024
	Results of Assessment	<p>There were seven Environmental Science students in Limnology during the Spring 2024 semester. The mean performance level for Environmental Science students in the Limnology class was 3.41 ± 0.14 out of a four point scale on the Limnology rubric. The desired level of performance was exceeded for three of the four rubric dimensions (mean \pm standard error are shown).</p> <p>Data collection in field 4.0 ± 0.0</p> <p>Laboratory analyses 3.7 ± 0.1</p> <p>Interpretation of results 3.1 ± 0.2</p> <p>Communication of results 2.9 ± 0.2</p>
S T U D Y	Analysis of Results	
ACT	Improvement Plan for 2024-2025	

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	Student Learning Outcome #2	Population and community structure research
PLAN	Assessment Method(s)	<p>Students will perform field and laboratory protocols for studying populations and community structure and interpret these data in a scientific report.</p> <p>Rational: Populations and communities are quantified and described in ecology using a standard set of procedures and statistics. This laboratory exercise and paper will evaluate the student's ability to collect data, calculate and interpret the statistics, and describe the populations and community.</p> <p>Environmental Science students enrolled in Ecology (Biology 4460) during Fall semester will perform field and laboratory methods used to describe community structure of a tree and shrub community in southeast Texas.</p>
	Proficiency	The desired level of performance for Environmental Science students in the Ecology class was 2.5 out of a four-point scale on the Ecology rubric. This desired level of performance was chosen because it is 0.5 greater than the average level of performance on a four-point scale.
DO	Benchmark	The desired level of performance for Environmental Science students in the Ecology class was 3.0 out of a four point scale on the Ecology rubric. This represents an increase from a target of 2.5, which was used prior to 2024.

	Results of Assessment	<p>Findings - There were eight Environmental Science students in Ecology during the Fall 2021 semester. The mean performance level for Environmental Science students in the Ecology class was 3.47 ± 0.10 out of a four point scale on the Ecology rubric. The desired level of performance was exceeded for three of the four rubric dimensions (mean \pm standard error are shown).</p> <p>Data collection in field 4.0 ± 0.0</p> <p>Calculations 3.9 ± 0.1</p> <p>Interpretation of results 3.2 ± 0.2</p> <p>Communication of results 2.8 ± 0.1</p>
S T U D Y	Analysis of Results	

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Degree: B.S. Environmental Science 2023-2024 Assessment Plan	Student Learning Outcome #3	Apply knowledge in environmental science internship experience
PLAN	Assessment Method(s)	<p>Students will apply the knowledge gained from the environmental science curriculum in a one term internship in which they must learn the duties of their internship and conduct themselves in a professional manner.</p> <p>Rational: The internship is the actual application of the knowledge learned in the Environmental Science curriculum to real world situations. The student gets on the job experiences and learns how to behave in a professional manner.</p> <p>Entries in the student's daily journal, the student's summary report, and the evaluation from the student's supervisor will be used to score the assessment dimensions.</p>
	Proficiency	The desired level of performance for Environmental Science students in the Ecology class was 2.5 out of a four-point scale on the Internship rubric. This desired level of performance was chosen because it is 0.5 greater than the average level of performance on a four-point scale.
DO	Benchmark	At least 70% of students will achieve an average score of 2.5 on the different components of the Internship rubric.
	Results of Assessment	Target - The desired level of performance for Science students in the internship program was 3.0 out of a four point scale on the Environmental Science Internship Experience rubric. This represents an increase from a target of 2.5, which was used prior to 2024.

S T U D Y	Analysis of Results	<p>Findings - There were two Environmental Science students enrolled in the Environmental Science Internship Experience during the Summer 2023 through Spring 2024 semesters. The mean performance level for Environmental Science students in the internship program was 3.63 ± 0.27 out of a four point scale on the Environmental Science Internship Experience rubric. The desired level of performance was exceeded in all four of the rubric dimensions (mean \pm standard error are shown).</p> <p>Expectations 3.8 ± 0.3</p> <p>Professional development 3.8 ± 0.3</p> <p>Improvements in skills 3.5 ± 0.3</p> <p>Accomplishments 3.5 ± 0.3</p>
ACT	Improvement Plan for 2024-2025	