

Academic Year 2025-2026

BS in Environmental Science - BS-EVSC Learning Outcomes

Outcome 1 - Limnological research skills **MET**

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.

MEASURES	RESULTS	ACTIONS
Measure 1 - Limnological research skills 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. The following rubric will be used for assessment of each Environmental Science student enrolled in the Limnology class. The instructor will circle the level that applies for each student. Direct - Assignment <i>Limnology: BIOL 4430</i> Target Target - 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. limnology_assessment.pdf	MET Summary Findings - There were eight Environmental Science students in Limnology during the Spring 2026 semester. One student did not submit a lab report. The mean performance level for Environmental Science students in the Limnology class was 3.3 ± 0.2 out of a four-point scale on the Limnology rubric. The desired level of performance was exceeded for all four of the rubric dimensions (means $\pm$ standard errors are shown). Data collection in field 4.9 ± 0.1 Laboratory analyses 3.4 ± 0.3 Interpretation of results 2.9 ± 0.2 Communication of results 2.8 ± 0.2 Analysis Findings - There were eight Environmental Science students in Limnology during the Spring 2026 semester. One student did not submit a lab report. The mean performance level for Environmental Science students in the Limnology class was 3.3 ± 0.2 out of a four-point scale on the Limnology rubric. The desired level of performance was exceeded for all four of the rubric dimensions (means $\pm$ standard errors are shown). Data collection in field 4.9 ± 0.1 Laboratory analyses 3.4 ± 0.3 Interpretation of results 2.9 ± 0.2 Communication of results 2.8 ± 0.2	<i>No actions have been added.</i>

Conclusion

Target was met

Outcome 2 - Population and community structure research **MET**

Students will perform field and laboratory protocols for studying populations and community structure and interpret these data in a scientific report.

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.

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.

MEASURES	RESULTS	ACTIONS
Measure 2 - Population and community structure research 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. The following rubric will be used for assessment of each Environmental Science student enrolled in the Ecology class. The instructor will circle the level that applies for each student. Direct - Assignment Ecology: BIOL 4460 Target Target - 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. ecology assessment.pdf	MET Summary Findings - There were five Environmental Science students in Ecology during the Fall 2025 semester. Three students did not submit lab reports. The mean performance level for Environmental Science students in the Ecology class was 3.6 ± 0.2 out of a four-point scale on the Ecology rubric. The desired level of performance was exceeded for two of the four rubric dimensions (means $\pm$ standard errors are shown). Data collection in field 4.0 ± 0.0 Calculations 4.0 ± 0.0 Interpretation of results 3.5 ± 0.3 Communication of results 2.0 ± 0.5 Analysis Findings - There were five Environmental Science students in Ecology during the Fall 2025 semester. Three students did not submit lab reports. The mean performance level for Environmental Science students in the Ecology class was 3.6 ± 0.2 out of a four-point scale on the Ecology rubric. The desired level of performance was exceeded for two of the four rubric dimensions (means $\pm$ standard errors are shown). Data collection in field 4.0 ± 0.0 Calculations 4.0 ± 0.0 Interpretation of results 3.5 ± 0.3 Communication of results 2.0 ± 0.5	<i>No actions have been added.</i>

Conclusion

The target was met

Outcome 3 - Apply knowledge in environmental science internship experience **MET**

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.

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.

MEASURES	RESULTS	ACTIONS
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Measure 3 - Apply knowledge in environmental science internship experience The following rubric will be used to assess each Environmental Science student in the internship program. 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. Direct - Other <i>Undergraduate Problems: BIOL 4300</i> Target 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. internship assessment.pdf	MET Summary Findings - There were six Environmental Science students enrolled in the Environmental Science Internship Experience during the Summer 2025 through Spring 2026 semesters. The mean performance level for Environmental Science students in the internship program was 3.8 ± 0.1 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 (means $\pm$ standard errors are shown). Work environment 3.7 ± 0.2 Expectations 3.9 ± 0.1 Professional development 3.8 ± 0.1 Improvements in skills 3.8 ± 0.1 Accomplishments 3.8 ± 0.1 Analysis Findings - There were six Environmental Science students enrolled in the Environmental Science Internship Experience during the Summer 2025 through Spring 2026 semesters. The mean performance level for Environmental Science students in the internship program was 3.8 ± 0.1 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 (means $\pm$ standard errors are shown). Work environment 3.7 ± 0.2 Expectations 3.9 ± 0.1 Professional development 3.8 ± 0.1 Improvements in skills 3.8 ± 0.1 Accomplishments 3.8 ± 0.1	<i>No actions have been added.</i>
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Conclusion

The target was met