

## Student Learning Outcomes (SLOs) Report for Non-Accredited Programs

(updated 9/19/23)

Program Type: **Non-Accredited Program**

Program Name: BS in Clinical Laboratory Science

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Review Cycle:

- Even Year**
- Odd Year

Review Round:

- Round A (Associate Dean review)**
- Round B** (Associate Dean + VPAA review)

All SLO reports are archived here: <https://www.eiu.edu/assess/majorassessment.php>

DUE: **October 15<sup>th</sup>** to your Associate Dean or designee

Each academic program is expected to prepare a Summary of the Assessment Data by Student Learning Outcome. This summary may take the form of a chart or other means of presentation that describes the annual data collected, when it is collected, in which course(s), through which assignment or activity, and by whom. This summary should clearly indicate what the program seeks to discover in its students' learning. The summary should correspond to the record-keeping documents maintained by the academic program.

**Program Name:** BS in Clinical Laboratory Science

**PART 1. OVERVIEW OF STUDENT LEARNING OUTCOMES AND MEASURES**

Student Learning Outcome (SLO)	What <b>measures and instruments</b> are you using? This could be an oral or written exam, a regularly assigned paper, a portfolio—administered early and later in coursework.	How are you using this info to improve student learning? What are you hoping to learn from your data? Include <b>target score(s) and results</b> , and specify whether these were met, not met, or partially met for each instrument.	Does your SLO correspond to an <b>undergraduate learning goal (ULG)</b> : writing, speaking, quantitative reasoning, critical thinking, responsible citizenship?
Students will demonstrate the ability to communicate and understand Molecular and Cellular Biology (BIO 3120). They will need to demonstrate the quantitative and analytical skills to analyze data sets generated by biological experiments and surveys.	<p>Evaluation rubrics as evaluated by course instructors.</p> <p>Evaluation rubrics as evaluated by course instructors.</p> <p>CLS Student Survey.</p>	<p><b>Target:</b> &gt;80% of the students in BIO 3120 will demonstrate proficiency by attaining grades of C or higher.  <b>Results:</b> 50% of CLS students (4 of 8) earned a B or higher in BIO 3120. <b>Goal not met.</b></p> <p><b>Target:</b> &gt;75% of students in BIO 3120 will have an acceptable to superior range of understanding of cell and molecular biology.  <b>Results:</b> 100% of students (7 total) in BIO 3120 were rated as having acceptable to superior range of understanding in FY23 and FY24. <b>Goal met.</b></p> <p><b>Target:</b> &gt;75% graduating seniors agree or strongly agree that they have an understanding of molecular and cell biology.</p>	CT, W, QR

	<p>National Accrediting Agency for Clinical Laboratory Sciences exam (NAACLS): Molecular and cellular biological components are a significant portion of the exam. Passing this exam would indicate strength in molecular and cellular biological science knowledge.</p>	<p><b>Results:</b> Only one student responded to survey. Respondent strongly agreed to statement. <b>Goal met.</b></p> <p><b>Target:</b> 100% passing rate on the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) exam.</p> <p><b>Results:</b> 100% passing rate of graduates in FY23 and FY24. <b>Goal met.</b></p>	
<p>Students will demonstrate the ability to communicate and understand immunological concepts in BIO 3210 (Immunology). They will need to demonstrate the quantitative and analytical skills to analyze data sets generated by biological experiments and surveys.</p>	<p>Lecture examinations and laboratory exercises and research projects, assessed by faculty.</p> <p>Evaluation rubrics as evaluated by course instructors.</p> <p>CLS Student Survey.</p>	<p><b>Target:</b> &gt;80% of the students in BIO 3210 (Immunology) will demonstrate proficiency by attaining grades of C or higher</p> <p><b>Results:</b> 100% of CLS students (7 total) earned a B or higher in BIO 3210 in FY23 and FY24. <b>Goal met.</b></p> <p><b>Target:</b> &gt;75% of students in BIO 3210 (Immunology) will have an acceptable to superior range of understanding.</p> <p><b>Results:</b> 100% of CLS students (7 total) in BIO 3210 in FY23 and FY24 were rated to have at least acceptable level of analytical and quantitative laboratory skills, with 90% (6 of 7) rated superior. <b>Goal met.</b></p> <p><b>Target:</b> &gt;75% of graduating seniors agree or strongly agree that they have an understanding of immunology.</p> <p><b>Results:</b> Only one student responded to survey. Respondent strongly agreed to statement. <b>Goal met.</b></p>	<p>CT, S, W, QR</p>

	National Accrediting Agency for Clinical Laboratory Sciences exam (NAACLS): Molecular and cellular biological components are a significant portion of the exam. Passing this exam would indicate strength in molecular and cellular biological science knowledge.	<b>Target:</b> 100% passing rate on the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) exam <b>Results:</b> 100% passing rate of graduates in FY23 and FY24. <b>Goal met.</b>	
Students will enhance global citizenship and demonstrate ethical behavior by participation in clubs, including volunteering and internship experience.	Internship is inherent in the clinical year of the CLS major.	<b>Target:</b> Close to 100% as this is incorporated into the internship experience. A drop in this percentage will be due to failure in the internship or withdrawal. As the expectations for admission to the internship is competitive, it should deter failure or withdrawal. <b>Results:</b> 100% (4 of 4) of students successfully completed their clinical year in FY23 and FY24. <b>Goal met.</b>	RC
Students will demonstrate critical thinking skills. A necessary component as a clinical laboratory scientist. At the very least the student needs to identify different experimental approaches, be able to extract some information from descriptive passages and present results.	Laboratory exercises on course projects as reported through the evaluation rubrics.	<b>Target:</b> 75% of students will have an acceptable to superior range of demonstrated critical thinking skills. <b>Results:</b> 100% of CLS students (7 of 7) in BIO 3210 in FY23 and FY24 were rated to have at least acceptable level of critical thinking skills, with 90% at rated superior. <b>Goal met.</b>	CT, QR
Students will demonstrate their ability to write effectively. To succeed as a professional student, need to have strong written communication skills.	CLS Student Survey.  Electronic Writing Portfolio data.	<b>Target:</b> 75% of students will indicate that they had an acceptable to superior range of demonstrated writing skills <b>Results:</b> Only one student responded to survey. Respondent strongly agreed to statement. <b>Goal met.</b>  <b>Target:</b> Students will obtain at least a passing rating (3-4) on the EWP. <b>Results:</b> Of the 8 CLS program students who submitted a total of 20 EWP writings, that	RC

		were evaluated by faculty in FY23-FY24, 100% of the submissions were rated at or above 3.0 of a 4.0 scale. <b>Goal met.</b>	
Students will display professional work habits and attitude during the hospital training.	Rubric provided to hospital instructors.	<b>Target:</b> Students will receive an average or above average rating on all ratings in this category. <b>Results:</b> 100% of CLS students (4 of 4) in clinical year in FY23 and FY24 received above-average ratings in all categories related to work habits and attitude toward training. <b>Goal met.</b>	RC
Students will display a positive attitude toward learning during the hospital training.	Rubric provided to hospital instructors.	<b>Target:</b> Students will receive an average or above average rating on all ratings in this category. <b>Results:</b> 100% of CLS students (4 of 4) in clinical year in FY23 and FY24 received above average ratings in all categories related to attitude toward learning. <b>Goal met.</b>	RC

## PART 2. IMPROVEMENTS AND CHANGES BASED ON ASSESSMENT

- A. Provide a short summary (1-2 paragraphs) or bulleted list of any **curricular actions** (revisions or additions) that were approved over the past two years as a result of reflecting on the student learning outcomes data. Are there any additional future changes, revisions, or interventions proposed or still pending?
- Although it was not a direct result of SLO data, a new course (CLS 4080: Urinalysis) was approved by CAA in early FA24. This was added because NAACLS (National Accrediting Agency for Clinical Laboratory Sciences) and at least one affiliate hospital added this course to their curriculum.
  - The Clinical Laboratory Science (CLS) program has consistently placed 3-4 CLS majors per year in our four affiliate hospitals over the past few decades. The past few years had seen a decrease in numbers, with 5, 8, 3 and 1 students in FY21, FY22, FY 23 and FY24, respectively. However, 5 students have been accepted into hospitals for FY25, suggesting that the dip was temporary.
  - Nearly all assessment goals were met or exceeded, including grades in key courses, rating of analytical and quantitative skills, attitudes in the clinical setting and overall knowledge of filed based on 100% pass rate of CLS certification exam). Hospital directors uniformly provided high praise for each EIU student in their programs over the past two years. The low response rate to graduating student surveys was noted.
- B. Provide a brief description or bulleted list of **any improvements (or declines)** observed/measured in student learning. Be sure to mention any intervention made that has not yet resulted in student improvement (if applicable).

- It was noted that one goal (>80% of the students in BIO 3120 (Molecular and Cellular Biology) will demonstrate proficiency by attaining grades of C or higher) was not met, despite meeting a similar goal in BIO 3210 (Immunology) and meeting goal of critical thinking and lab skills as rated by professors of courses. We will monitor this outcome to see if a pattern is emerging, or if this was an anomalous group of students.
- It was noted that critical thinking skills still hover around “average” in a profession where this is a critical component.
- Once placed at hospitals, students continue to do very well in terms of attitude, grades, professionalism and pass rate on the certification exam (100%). Note that hospitals decide who to accept and therefore some academically less adept students are not selected and often change to the BIO major.
- Job placement rate post-graduation remains at 100% for students in this program, as a nationwide shortage remains for individuals with this training.

### C. HISTORY OF DATA REVIEW OVER THE PAST TWO YEARS

Please document annual faculty and committee engagement with the assessment process (such as the review of outcomes data, revisions/updates to assessment plan, and reaffirmation of SLOs).

Date of annual (or periodic) review	Individuals or groups who reviewed the assessment plan	Results of the review (i.e., reference proposed changes from any revised SLOs or from point 2.A. curricular actions)
August 17, 2023	Faculty Retreat (faculty and staff of the department)	Student research presentation opportunities were discussed with plan to implement the department poster fair. Discussions were had with faculty about needs that would help increase student research output.
August 16, 2024	Faculty Retreat (faculty and staff of the department)	Results of our new poster fair in 2024 was discussed. Discussions were had with faculty about needs that would help increase student research output.

### Dean Review and Feedback

The BS in Clinical Laboratory Sciences 2-year assessment report draws from multiple data points to measure seven SLOs including evaluation rubrics, a CLS student survey, student completion of the National Accrediting Agency for Clinical Laboratory Sciences exam, and faculty assessed laboratory exercises. In the report, the department indicated that with one exception, assessment goals were met in each of the SLO subfields. In the one case where assessment goals were not met (in relation to student performance in BIO 3210), the department will monitor the outcome and will take corrective measures if a pattern emerges in future reports. Assessment results were shared most recently at a faculty retreat at the beginning of fall semester, 2024. The results of the department’s new poster fair were addressed along with a discussion about increasing student research output. Assessment of the program informed the development of CLS 4080: Urinalysis, a new course that was recently approved by CAA. The report notes that once students are placed in hospitals, they do well in terms of attitude, grades, professionalism, and pass rate on the certification

exam. Overall, the CLS assessment plan provides a solid feedback loop that informs departmental curricular and program decisions, though efforts should be made to increase student survey response rates.



Dean or Designee

11/26/24

Date