

CLAS Deans' comments on
BS in Clinical Laboratory Science, Non-Accredited Program Report

Reviewer: Michael Cornebise, Associate Dean

Last report submitted by department: Fall 2020 (Initial Assessment Plan).

Comments:

The BS in Clinical Laboratory Sciences 4-year assessment report is comprehensive and draws from multiple data points to measure SLOs including evaluation rubrics, a CLS student survey (which was not administered this cycle due to COVID restrictions), student completion of the National Accrediting Agency for Clinical Laboratory Sciences exam, and faculty assessed laboratory exercises. In the report, the department indicates whether their assessment goals were met or not met (based on available data). Assessment results were shared with the faculty who addressed concerns at a faculty retreat at the beginning of fall semester, 2022. The report indicates that COVID accommodations impacted the ability to gather some of their data, but, overall, they were able to successfully measure all seven of their defined SLOs (though some goals were only partially measured). The report indicates that nearly every assessment goal was either met or exceeded. The department has determined that there is no need for changes in the assessment program other than to reinstitute data collection that was interrupted due to COVID. Indeed, the report notes that hospital directors provided high praise for EIU students in their programs over the past two years.

Year 4

Student Learning Outcomes (SLOs) for Academic Programs

Please list all of the student learning outcomes for your program as articulated in the assessment plan.

1. Students will demonstrate the ability to communicate and understand molecular and cell biology BIO 3120. They will need to demonstrate the quantitative and analytical skills to analyze data sets generated by biological experiments and surveys
2. 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
3. Students will enhance global citizenship and demonstrate ethical behavior by 1) Participation in clubs including volunteering and 2) Internship experience

4. 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.
5. Students will demonstrate their ability to write effectively. To succeed as a professional student, need to have strong written communication skills.
6. Student will display professional work habits and attitude during the hospital training.
7. Student will display a positive attitude toward learning during the hospital training.

Overview of Measures/Instruments

Assessment of the CLS program includes student's understanding of quantitative and analytic skills in key core courses (Molecular and Cell biology and immunology), overall knowledge of the profession through the standardized exam in the field, global citizenship, critical thinking skills, writing skills, and professional work and attitude during their one year of clinical training at affiliate hospitals.

<p>SLO(s)</p> <p><i>Note: Measures might be used for more than 1 SLO</i></p>	<p>ULG*</p>	<p>Measures/Instruments</p> <p><i>Please include a clear description of the instrument including when and where it is administered</i></p>	<p>How is the information Used?</p> <p><i>(include target score(s), results, and report if target(s) were met/not met/partially met for each instrument)</i></p>
<p>Students will demonstrate the ability to communicate and understand molecular and cell biology BIO 3120. They will need to demonstrate the quantitative and analytical skills to analyze data sets generated by biological experiments and surveys</p>	<p>C W Q</p>	<p>Target: >80% of the students in BIO 3120 will demonstrate proficiency by attaining grades of C or higher</p> <p>Evaluation rubrics as evaluated by course instructors</p> <p>CLS Student Survey</p> <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>Target: >80% of the students in BIO 3120 will demonstrate proficiency by attaining grades of C or higher</p> <p>Results: 100% of CLS students (10) earned a B or higher in BIO3120 in FY21 and FY22. Goal met.</p> <p>Target: >75% of students in BIO 3120 will have an acceptable to superior range of understanding.</p> <p>Results: Unable to assess lab skills- Labs delivered online due to COVID-19 in FY21 and FY22.</p> <p>Target: >75% graduating seniors agree or strongly agree that they have an understanding of molecular and cell biology</p> <p>Results: CLS-specific exit survey not administered.</p> <p>Target: 100% passing rate on the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) exam</p> <p>Results: 100% passing rate of graduates in Fy21 and FY22 (although 23 students left the CLS program early in the hospital experience) . Goal met.</p>
<p>Students will demonstrate the ability to communicate and understand immunological concepts in BIO 3210 Immunology. They will need to demonstrate the quantitative</p>	<p>C S W Q</p>	<p>Lecture examinations and laboratory exercises and research projects, assessed by faculty</p> <p>valuation rubrics as evaluated by course instructors</p>	<p>Target: >80% of the students in BIO 3210 Immunology will demonstrate proficiency by attaining grades of C or higher</p> <p>Results: 100% of CLS students (9) earned a B or higher in BIO3210in FY21 and FY22. Goal met.</p> <p>Target: >75% of students in BIO 3210 Immunology will have an acceptable to superior range of understanding.</p> <p>Results: 100% of CLS students (10) in BIO3210 in FY21 and FY22 were rated to have at least acceptable level of analytical and quantitative laboratory skills, with 90 % at rated good to superior. Goal met.</p>

<p>SLO(s)</p> <p><i>Note: Measures might be used for more than 1 SLO</i></p>	<p>ULG*</p>	<p>Measures/Instruments</p> <p><i>Please include a clear description of the instrument including when and where it is administered</i></p>	<p>How is the information Used?</p> <p><i>(include target score(s), results, and report if target(s) were met/not met/partially met for each instrument)</i></p>
<p>and analytical skills to analyze data sets generated by biological experiments and surveys</p>		<p>CLS Student Survey</p> <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>Target: >75% graduating seniors agree or strongly agree that they have an understanding of molecular and cell biology</p> <p>Results: CLS-specific exit survey not administered.</p> <p>Target: 100% passing rate on the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) exam</p> <p>Results: 100% passing rate of graduates in Fy21 and FY22 (although 23 students left CLA program early in hospital experience) . Goal met.</p>
<p>Students will enhance global citizenship and demonstrate ethical behavior by:</p> <p>Participation in clubs including volunteering</p> <p>Internship experience</p>	<p>R</p>	<p>Response to CLS student survey</p> <p>Inherent to working/learning environment during internship</p>	<p>Target: >50% of graduating seniors will indicate that they have participated in clubs.</p> <p>Results: CLS-specific exit survey not administered.</p> <p>Target: 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.</p> <p>Results: An unprecedented 2 of 13 s(15%) of students dropped during their clinical year in FY21 and FY22. Goal not met.</p>

<p>SLO(s)</p> <p><i>Note: Measures might be used for more than 1 SLO</i></p>	<p>ULG*</p>	<p>Measures/Instruments</p> <p><i>Please include a clear description of the instrument including when and where it is administered</i></p>	<p>How is the information Used?</p> <p><i>(include target score(s), results, and report if target(s) were met/not met/partially met for each instrument)</i></p>
<p>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.</p>	<p>C Q</p>	<p>Laboratory exercises on course projects as reported through the evaluation rubrics</p>	<p>Target: 75% of students will have an acceptable to superior range of demonstrated critical thinking skills</p> <p>Results: 100% of CLS students (10) in BIO3210 in FY21 and FY22 were rated to have at least acceptable level of critical thinking skills, with 90 % at rated good to superior. Goal met.</p>
<p>Students will demonstrate their ability to write effectively. To succeed as a professional student, need to have strong written communication skills.</p>	<p>R</p>	<p>CLS Student Survey</p> <p>Electronic Writing Portfolio data</p>	<p>Target: 75% of students will indicate that they had an acceptable to superior range of demonstrated writing skills</p> <p>Results: CLS-specific exit survey not administered.</p> <p>Target: Students will obtain at least a passing rating (3-4) on the Electronic Writing Portfolio</p> <p>Results: Although previous assessments were above EIU average, we were unable to capture this information for FY21 and FY22 before the submission deadline.</p>

<p>SLO(s)</p> <p><i>Note: Measures might be used for more than 1 SLO</i></p>	<p>ULG*</p>	<p>Measures/Instruments</p> <p><i>Please include a clear description of the instrument including when and where it is administered</i></p>	<p>How is the information Used?</p> <p><i>(include target score(s), results, and report if target(s) were met/not met/partially met for each instrument)</i></p>
<p>Student will display professional work habits and attitude during the hospital training.</p>	<p>R</p>	<p>Rubric provided to hospital instructors.</p>	<p>Target: Students will receive an average or above average rating on all ratings in this category. Results: 100% of CLS students (10) in clinical year in FY21 and FY22 received above average ratings in all categories related to work habits and attitude toward training. Goal met.</p>
<p>Student will display a positive attitude toward learning during the hospital training.</p>		<p>Rubric provided to hospital instructors.</p>	<p>Target: Students will receive an average or above average rating on all ratings in this category. Results: 100% of CLS students (10) in clinical year in FY21 and FY22 received above average ratings in all categories related to attitude toward learning. Goal met.</p>

**Please reference any University Learning Goal(s) (ULG) that this SLO, if any, may address or assess. C=Critical Thinking, W=Writing & Critical Reading; S=Speaking and Listening; Q=Quantitative reasoning; R=Responsible Citizenship; NA=Not Applicable*

Improvements and Changes Based on Assessment

1. Provide a short summary (1-2 paragraphs or bullets) of any curricular actions (revisions, additions, and so on) that were approved over the past four 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?

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 an increase in numbers, with 5 placed in FY21 and 8 in FY22. However, we also saw an un precedented two students who left the program early in their hospital rotations, perhaps related to COVID-19 restrictions. Some student learning goals were not measured due to failure to administer the CLS graduating student exit survey in FY21 and FY22. However, 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 assessment committee recognizes the importance of reinitiating the exit survey for FY23.

2. Please provide a brief description or bulleted list of any improvements observed/measured in student learning over the past four years. Be sure to mention any intervention made that has not yet resulted in student improvement (if applicable).
 - It was noted that the overall understanding of molecular biology and immunological concepts of students in Blo3120 and BIO 3210 showed slight improvement over previous years
 - 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%).
 - Two curricular changes were implemented in the CLS program that were not influenced by survey data- reduction of the number of Electronic Writing portfolio submissions from 3 to 2 for CLS students and removal of one of the chemistry coursework options from a checklist to align with affiliate hospitals preferences.

3. Using the form below, 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).

History of Annual Review		
Date of Annual Review	Individuals/Groups who Reviewed Plan	Results of the Review (i.e., reference proposed changes from #1 above, revised SLOs, etc..)
8-17-22	Faculty retreat	No changes suggested in assessment

Dean Review & Feedback



Dean or designee

November 22, 2022

Date

Academic Affairs – Review & Feedback

Date

Academic Affairs – Review & Feedback

B.S. Clinical Laboratory Sciences

The B.S. in Clinical Laboratory Sciences program clearly prepares its students for success in the work environment of the hospital. The internship experience allows the students to put their knowledge of molecular and cellular biology into practice (measured with an impressive 100% pass rate on the National Accrediting Agency for Clinical Laboratory Sciences exam). The dip in hospital rotation participation in 2020-22 (due to health setting restrictions) was only temporary, as the affiliate hospital directors' assessments of our students indicates continued satisfaction and growing interest in the program.



VPAA Office Dr. Suzie Park

3/8/23

Date