

Assessment, Improvement, Measurement (AIM) Report: 04/03/2013**Plan Year:** 2011-2012**Unit:** Biotechnology**Coordinator(s):** Deborah Sullivan-Davis, Karman Wheeler**Reviewer:** Tammy Liles

Objective or Outcome	Measure(s)				
	Measure Text	Achievement Target	Results	Achievement Target Result	Use of Findings/Next Steps
SLO 1 - PLO # 10 - Students will be able to design experiments, perform assays and suggest improvements.	Evaluate lab notebooks with rubric of checklist for inclusion and completeness	All notebooks will score at least 80%	Student notebooks were reviewed and graded for those students who enrolled and completed a biotechnology course. It should be noted that many students take more than one biotech course in a semester. Every biotech course requires students to keep a lab notebook. Therefore, the number of notebooks collected and graded will be more than the actual head count of students who declare biotechnology as their major. One hundred twenty-seven notebooks were collected. Of those 100% scored above 80%.	Met	Laboratory notebooks are a critical skill students must acquire in order to be successful in a lab. The rubric used to assess completeness & accuracy was a simple "checklist," ie: completed or not completed. However, the range or level, which would indicate the degree to which the outcome was measured was not evident. The laboratory notebook rubric needs to be fleshed out further so students may reflect on their own achievement. In 2012-2013 more attention and activities will be given to instructing students on the importance of incorporating raw data into laboratory notebooks.
SLO 2 - PLO # 12 - Students will be able to perform documentation and data analysis, create documents, and communicate results.	1. Lab Notebooks 2. Homework assignments (creating and interpreting graphs in BTN 202) 3. Evaluation of data and unknown on components on the exam 4. Project in BTN	At least 80% of students will score an average of 90% on work requiring careful analyses and communication of results.	All work, assignments, exams and papers require careful analyses, therefore all work was assessed. Seventy percent of all students scored an average of 90% on all work assessed.	Not Met	A more careful analysis needs to be done with regard to the effectiveness of student's ability to document, analyze, and communicate data. I will

	202 - Project that evaluate creating and interpreting documents in a final formalized report.				work with instructors and communicate attainable expectations required of students and establish guidelines for quality.
SLO 3 - PLO #14 - Students will be able to demonstrate proficiency in preparing, maintaining, and storing biological and/or chemical materials.	1. Solution preparation - By measuring conductivity in multiple solution preparations (reproducibility and conductivity evaluations, storage, and label completeness with less than 30% error points. 2. Storage - Rubric for storage and preparation.	90% of students will be able to prepare solutions with less than 30% error as measured by solution conductivity, and then properly store and label the solutions.	All students who completed the biotech courses demonstrated 100% reproducibility with regard to accurate and precise solution preparation. All students properly labeled each solution container, and each solution was stored at the proper conditions.	Met	This measure was achieved by all students, and as such will remain in the curriculum without changes. However, it was noted that students need more in depth understanding of reagent monitoring and usage.