

## **Assessment, Improvement, Measurement (AIM): 09/20/2013**

**Plan Year:** 2012-2013

**Unit:** Biotechnology

**Coordinator(s):** Deborah Sullivan-Davis, Karman Wheeler

**Reviewer:** Tammy Liles

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**Program Health Review:** Use the Annual Program Health Review to evaluate student achievement and, if warranted based upon analysis of the results, make program changes to improve student achievement.

Identify expected student learning outcomes, assess the extent to which these outcomes are achieved, and provide evidence of improvement based on analysis of the results.

**Reviewed:** Yes

**Measure Text:** PROGRAM HEALTH REVIEW - LEVEL 1 1. Program Health Review - Refer to the attached Annual Program Summary for longitudinal information related to enrollment, graduates, employment, employer and alumni satisfaction, and licensure pass rates. 2. Student Learning outcomes Three student learning outcomes – Plan an assessment for each outcome identified, and assess the extent to which these outcomes are achieved, and provide evidence of improvement based on analysis of the results.

**Achievement Target:** Program Health Review Target - Maintain a level 1 assessment with comments from program coordinator, assistant dean, dean and vice president according to attached time schedule. Student Learning Outcome Target - Student learning outcomes are identified, assessed on level of achievement, and evidence of improvement are provided based on analysis of the results according to the attached time schedule.

**Results:** Program Coordinator:

1. Strengths of the Program:

- a. Faculty and staff members understand the importance of being part of team. The team understands the collaborative effort involved with creating and sustaining a specialized technical program.
- b. Students are strongly encouraged to support each other as "peer buddies" or "peer mentors," which helps increase success in the program as well as increase retention beyond the first few weeks of class.
- c. Industry partners in the central Kentucky region increasingly recognize the quality of BCTC's biotechnology students.

2. Items Requiring Continued Attention:

- a. The laboratory notebook still gives students problems. The biotechnology team will develop a plan to increase student's documentation skills.
- b. Grant funding is in the final year. Continued funding will depend largely on filling the position of college grant writer, which is currently vacant.

3. Document and provide evidence indicating how last year's program review resulted in improvements in the program/department.

**AD Comments:** The Biotech team under the leadership of Dr. Davis continues to work tirelessly to provide a skilled biotech workforce in the bluegrass region. The continued success of the program is contingent upon additional grant funding and student recruitment. Soft skills and laboratory notebooks continue to be expressed as a need for improvement by advisory board members and local businesses. Additional exercises and courses are being developed to meet that need. We are in talks to promote biotech (bridge to biotech and biotechnician) through Opportunity College for fall 2013.

**Dean Comments:** The program is progressing nicely and providing good training for students and opportunities in the workplace for graduates.

**VP Comments:** Biotechnology is an excellent program meeting critical industry needs. Deborah, Tammy, and Sandy provide strong and visionary leadership. They are to be applauded for having the ratio of full-time-equivalent students to full-time-equivalent faculty increase from 5.7 to 9.2 over the past year.

**Target Results:**

**Findings:** A new procedure for laboratory notebooks was initiated fall 2013. Rather than having students turn in their laboratory notebook at the end of the semester, each lab activity was assessed individually. Lab reports were completed in three separate parts: written pre-lab, documentation of work completed, and post-lab conclusion. By receiving periodic feedback, students recognized strengths and weaknesses of their documentation skills. Improvement in preparation and maintenance was noted, and students appeared more diligent in keeping good records.

The current NSF ATE grant (#1003499) was approved for a no-cost extension until June 2014. Still, many funding opportunities were lost because of the vacant grant-writing position. In addition, the college has not been able to provide an ongoing operating budget, so the program continues to rely on available non-recurring funds.

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