

Course Outcomes Guide (COG)

Directions: Please complete this form to document your progress toward improving student learning. For each item, indicate your progress and your anticipated next steps. Thank you!

Course/Program Title: BTC-202 Biomanufacturing/ Biotechnology Program

Date: May 21, 2013

Course/Program Team: Dr. Cynthia Dove

Expected Learning Outcomes

1. Apply a basic core of scientific and quantitative knowledge to enhance understanding of biomanufacturing processes and methods.
2. Understand and apply basic skills essential for following Standard Operating Procedures (SOPs).
3. Develop and maintain a notebook of laboratory records.
4. Analyze and evaluate the effect of variables on experimental results including enzymes, reaction time and protocol adherence.

Assessment (How do or will students demonstrate achievement of each outcome? Please attach a copy of your assessment electronically.)

Students complete a comprehensive final exam each semester.
Complete mid-term lab exam and final lab exam.

Validation (What methods have you used or will you use to validate your assessment?)

Content of the cumulative lab exam is based on the textbook written by the Northeast Biomanufacturing Center and Collaborative and the conference I attended in the summer 2012 on biomanufacturing.

Results (What do your assessment data show? If you have not yet assessed student achievement of your learning outcomes, when is assessment planned?)

See attached data sheet. Students seem to be weak on risk assessment and the different ways of growing cultures. The comprehensive exam needs to be examined. I wrote it using questions from the previous exams the first semester I taught the class. I really need to review the objectives and make sure the exam is measuring what we want them to learn.

Follow-up (How have you used or how will you use the data to improve student learning?)

We will meet with facilities director at MedImmune to review the course and the biotech program to see if we are training our students to meet their needs. Right now, MedImmune only hires B.S. students as technicians.

Lab skills – develop a skills list using resources from the Northeast Biomanufacturing Center and Collaborative and Biolink and use this as an assessment for lab. This will be developed for Spring 2014.

Budget Justification (What resources are necessary to improve student learning?)
None needed currently.

Course: BTC 202**SLOA Data****Faculty Team: C. Dove**

	SP 2010	SP 2011	SP 2012	SU 2012	FA 2012	SP 2013
# Active students	12	14	11	X	X	12
%W	0	14.3	0			0
*% walk-away Fs No final exam/grade = F	0	0	0			0
% Success (A,B,C)	100	85.7	100			100
Mean Common Lab Practical Score		93	**			Mid-term – 83% Final – 92%
Common Comprehensive Final Exam Score		82	77.4			83%
Mean course grade	3.0	3.08	3.09			
Item Analysis Weakest Content Areas			**Modified lab final to make it a cumulate lab report that summarized the major experiment conducted in the last half of the semester.			The questions students got wrong: Critical process parameters, types of culture, risk assessment

*% Walk-away Fs = Did not take the final exam and received a grade of F.