**#1. Undergraduate Program Assessment Plan: Student Outcomes – Gen Ed**

To be completed by Departments and submitted by the Department Chair to the BlackBoard Assessment Site**.**

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| **Department:** **Natural Sciences** |
| **General Education Committee** has selected the following area for the 2014-2015 assessment cycle:  Knowledge: to gain a base level of knowledge in core disciplines |
| **General Education Committee** has selected the following Student Outcome for the 2014 – 2015 assessment cycle:  The student will be able to gain a broad understanding of key concepts. |
| **General Education Committee: Background**: What factors caused the committee to choose this particular assessment outcome? If this outcome was selected because of a perceived problem, please explain.  The committee selected this outcome based upon two criteria, 1) it is broad enough that each department can collect artifacts for direct assessment, and 2) students acquiring knowledge across numerous disciplines is a key goal of our general education curriculum. |
| **Department:** What student outcome will the department assess that addresses: **“**The student will be able to gain a broad understanding of key concepts?” Do non-science majors gain an understanding of foundational concepts in the sciences in courses designed to be taken primarily by non-science majors? |
| **Department:**  What specific question(s) are you attempting to answer through assessing this student outcome? What are you trying to find out? There may be more than one question, but no more than three.  Understanding of the foundational concept taught in each course below will assessed:  Sci 202 Science of Everyday Things: The difference between a scientific law and scientific theory  Chem 109 Introductory Chemistry: Understanding phase changes in the real world  Physics 109 Introductory Physics: Newton's 2nd law  Bi0 207 Human Genetics: The Central Dogma |
| **Methodology**:   1. OBJECT\* - What data (i.e. artifact, exam score, detailed description of assignment) will be collected? In each class a pre-test (question) will be given to determine the level of understanding of the concept before the concept is covered in the class. After the concept is covered in class and the concept has been tested in an exam/quiz/test, the specific questions used to test the concept will be evaluated. Specifically, the percent of students who understood the concept before the unit was covered will be compared to the percent of students who understood the concept after it was covered    1. How does this data address the assessment question? This assessment will allow us to determine the following: 1. Did the students already understand the concept before it was covered in class? 2. Was there better understanding of the concept after the concept after the concept was presented?       1. Include/attach a description/example of assessment tool to be used. 2. How will data be collected? Answers to pre-test questions will be retained for comparison to answers to specific questions on unit exams/tests/quizzes. |
| **Analysis of Artifacts:** PERFORMANCE CRITERIA**\* -**  Discuss 1) How the artifacts will be analyzed (attach rubrics/scoring tools if used) Professors from the selected classes will determine whether answers on the pre-test and exam questions were answered correctly. All answers will be placed in one of two categories: concept understood or concept not understood. The percent of those who understood the concept before and after the concept was covered in class will be compared.  2) How you will know if it is good? (i.e. score required by % of students). If less than 50% of the students demonstrate understanding of the concepts on questions before the unit was taught and those same students demonstrate 80% or more understanding after the concept was taught, then we will assume that students gained an understanding in the classes. If less than 50% of the students demonstrate understanding of the concepts on questions before the unit was taught and those same students demonstrate <80% understanding after the concept was taught, then we will evaluate how the concepts were taught to see if we can improve on understanding. If 70% or more of the students demonstrate understanding of the concepts on questions before the unit was taught then we will evaluate learning outcomes. |
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| **Submitted by: Joe Gubanyi Date: 1/9/2015** |
| **Reviewed by the Assessment Committee (Date): 1/12/2015** |
| **Approved: Yes Not Approved:** |
| **Department Chair notified/additional action: 1/12/2015** |