



## Biology| 2016-2017 Assessment Plan

1. Please review last year's assessment results (2015-2016) as well as the Academic Program Assessment Report with the faculty in your program. How does your program plan to take these results into consideration in future programmatic planning?
  - Last year's assessment results were discussed at the Biology Faculty Meeting 9th September 2016 (2:00-3:00).
  - Discussed assessment report from 2015-2016 which summarized assessment of learning outcome 1 ("Describe the organization and diversity of life at levels of complexity from subcellular to ecosystems"). Embedded assessments by Pott and Mueller led to meaningful assessment (see Assessment Report 2015-2016). Students showed marked improvement in most areas (comparing pre and post test scores). However, two difficult concepts (metabolism and genome organization) were identified as areas that students had difficulty mastering. Mueller and Pott plan to devote additional class and review sessions to these concepts in order to improve student learning.
  
2. Please review your program's Learning Outcomes. Do any of them need to be updated or clarified? Please provide brief indications of the kinds of assessment that might be used to assess each outcome. Please compare your Learning Outcomes to the University's main learning objectives. Which programmatic outcomes match university mission outcomes?

**Biology Student Learning Outcome Assessment Plan**

Learning Outcome	Assessment techniques	Courses	Assessor	Semester	University Mission Outcomes
1) describe the organization and diversity of life at levels of complexity from subcellular to ecosystem	Embedded assessment (exam questions, pre and post assessment)	Principles of Biology (201/202)	Pott Mueller	2015-2016	critical thinking diversity
2) demonstrate an understanding of genetic information, hereditary processes, and their relevance to evolutionary change as a product of mutation and natural selection	Embedded assessment (exam questions)	Biology Capstone	Wolf Howe	2014-2015	critical thinking diversity

3) explain the important processes and pathways that sustain living organisms including functional systems for exchange of energy and matter	Embedded assessment (exam questions) Class projects	Plant Physiology Comparative Physiology	Stahlheber ? New faculty member?	2017-2018	critical thinking diversity
4) solve problems by applying a scientific process of inquiry, including the effective use of appropriate techniques, instrumentation, and data analysis	Embedded assessment (exam questions and semester lab projects)	Microbiology Biochemistry	Brian Merkel Warren Johnson	2013-2014	problem-focused education interdisciplinary
5) identify and interpret findings of scientists and communicate results of scientific work to others in the scientific community and the general public	Oral presentation Poster presentation Class projects	Ecology Conservation Biology Capstone Mycology or Environmental Micro.	Wolf Wolf Howe Grubisha	2016-2017	problem-focused education interdisciplinary

3. Which outcome will you assess this year (2016-2017)?

Learning outcome 5 will be addressed: identify and interpret findings of scientists and communicate results of scientific work to others in the scientific community and the general public.

4. Which technique will you use to assess this outcome?

Performance on lab reports, papers, posters and oral presentations will be used to assess this outcome.

5. Which course or group of students will you assess on the outcome chosen above and when?

Principles of Ecology, Conservation Biology, Mycology or Environmental Microbiology and Biology Capstone will all be assessing this learning outcome.