

From: Hillenius, Willem Jacob
Sent: Thursday, January 21, 2016 1:53 PM
To: Dillon, Robert T <DillonR@cofc.edu>
Cc: Deavor, James <DeavorJ@cofc.edu>
Subject: Re: Student Learning Outcome

Dear Rob,

While your Explicit Learning Outcome for BIOL 305L may be a fine overall course philosophy (see below), it does not meet the minimum requirements for student learning outcomes (SLOs) in a university course.

2. Explicit Learning Outcome – “It is the business of a University to impart to the rank and file of the men whom it trains the right thought of the world, the thought which it has tested and established, the principles which have stood through the seasons and become at length part of the immemorial wisdom of the race. The object of education is not merely to draw out the powers of the individual mind: it is rather its right object to draw all minds to a proper adjustment to the physical and social world in which they are to have their life and their development: to enlighten, strengthen and make fit. The business of the world is not individual success, but its own betterment, strengthening, and growth in spiritual insight-- 'So teach us to number our days, that we may apply our hearts unto wisdom' is its right prayer and aspiration.” Woodrow Wilson, 1896.

Below are two examples for genetics lab courses taught elsewhere.

EXAMPLE 1. Learning Outcomes in the Laboratory: Specifically you will be able to...

1. Perform hands-on laboratory skills related to genetics such as gel electrophoresis, DNA manipulation, microscopy, forensics, gene mapping, enzyme assays, and spectrophotometry.
2. Analyze and interpret the data collected in the laboratory experiments
3. Communicate and present on a topic related to genetics
4. Identify and discuss controversial and ethical issues related to genetics
5. Graph data in excel software

EXAMPLE 2. STUDENT LEARNING OUTCOMES FOR THIS COURSE As a result of successfully completing this course, the student will be able to do the following:

1. Manipulate *Drosophila melanogaster* (the fruit fly) as a genetic research organism.
2. Demonstrate classic Mendelian laws governing monohybrid and dihybrid inheritance.
3. Explain the use and role of fungi, bacteria, and viruses (bacteriophages) in genetic research.
4. Utilize the Hardy-Weinberg Equation for solving population genetic problems.
5. Collect, analyze, and interpret experimental data upon which to draw sound scientific conclusions in a scientifically written paper.
6. Demonstrate sound safety procedures within a molecular genetics laboratory.
7. Demonstrate molecular genetic techniques including PCR, gel electrophoresis, restriction enzyme digestion and mapping, DNA ligations, transformations, plasmid isolation, and DNA fingerprinting.

You are free to develop SLOs particular to your course, but a set of five to eight SLOs must be generated.

Realizing all of our days are numbered and our hearts should be applying themselves to wisdom, there are some things we must do (e.g. file an IRS 1040- by April 15 each year). And according to our

employer, this task of writing SLOs must be done. If you need assistance in writing these I will be glad to answer questions that you might have.

Cheers,
Jaap

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