Attachment 1: Student Learning Outcomes

Student learning outcomes (SLOs) describe what students are expected to do in order to demonstrate what they have learned. The SLOs required for course syllabi are presented in a list:

By the end of this course, the students will be able to:

1. Outcome 1
2. Outcome 2
3. Outcome 3
4. Etc.

Because SLOs describe an action that is observable and measureable or produces something that is observable and measureable, they always begin with an active verb that describes the action, such as *analyze*, *create*, *critique*, *summarize*, *evaluate*, *demonstrate*, *define*, *synthesize*, or *apply*. You can observe and measure how well students can perform these actions.

It is best practice to avoid verbs that describe actions that are not observable and measureable, such as *know*, *be familiar with*, *gain knowledge*, and *appreciate*. If you have such verbs in your SLOs, ask yourself what students will *do* to demonstrate that they know or are familiar with something. That action is what you should describe with a verb.

Here are some examples of SLOs drawn from different courses that illustrate the use of action verbs to describe what students are expected to do.

By the end of this course, the students will be able to:

1. Differentiate between the structure and function of each of the systems that enable the bird to maintain homeostasis, flight, and egg production
2. Interpret, critique, and communicate life cycle results
3. Define what organic agriculture is and what makes it unique from other forms of agriculture
4. Explain the basic physics of transport, mixing and dispersion of mass, biochemical species, and heat due to fluid motions
5. Use dynamical systems theory to characterize the mathematical behavior of low-dimensional population models

Sometimes faculty confuse SLOs with course assignments. An assignment is the particular task you ask students to perform to determine how well they have achieved an outcome. You can use different assignments to evaluate learning of a single outcome. For example, the teacher who expects his or her students to "Interpret, critique, and communicate life cycle results" could ask the students to write a report, to give an oral presentation, to respond to an essay exam question, or to create a poster. These assignments are not the outcome but a way of measuring students' achievement of the outcome.

(by Mike Carter 9/13/2012)