Student Learning Outcomes

What are student learning outcomes (SLOs)?
SLOs identify what students should be able to demonstrate, represent or produce because of what and how they have learned in the program. They should focus on the expected knowledge, abilities, values and attitudes that are appropriate to the discipline and level.

What is the difference between program goals/objectives and SLOs?
Program goals are broad statements of what the program or curriculum hopes to achieve. They are less specific and may be long-range. SLOs are precise, specific, clear and measurable statements about the intended outcomes of a program. SLOs transform program goals into sets of particular actions that can be observed and assessed to provide evidence of specific student learning. There can be more than one SLO related to a program goal, and a particular SLO can support more than one goal.

Some benefits of SLOs for faculty:
- Fosters communication and collaboration among faculty on what is important for students to learn in their program.
- Leads to identification of areas in the curriculum where SLOs should be introduced, reinforced and assessed.
- Helps faculty identify opportunities for students to acquire the intended SLOs.
- Provides feedback for how the program can be improved.
- Helps faculty evaluate their teaching.
- Communicates expectations to students.
- Can be helpful to advertise the program to prospective students.
- Is a requirement for accreditation

In preparation for writing an SLO, ask yourself:
1. What are the important knowledge, skills, abilities, dispositions that a student graduating from our program should have? What would our ideal graduate “look” like?
2. How will students be able to demonstrate these capabilities? Which experiences would provide evidence of their achievements?
3. What assessments can we use to find out whether they’ve been achieved?

Strategies for developing SLOs
- Examine existing institutional, college or program-level mission statements.
- Adapt statements developed by disciplinary and professional organizations.
- Review samples of student work.
- Examine curriculum and syllabi for content coverage.
- Have frank discussions with program faculty.
A method for writing a student learning outcome:
Program + SWiBAT + Verb + What
1. At the completion of (your program) +
2. the student will be able to +
3. Descriptive and measurable verb (Blooms verbs)+
4. What the student will know, what skills, what affective change

Characteristics of effective SLOs

They describe what students should be able to demonstrate, represent or produce.
Poor Students will know how to conduct research in the discipline.
Better Students will be able to independently design and carry out experimental and correlational research that yields valid results

They are stated in clear and specific terms.
Poor Students will think critically about literary works.
Better Students will present original interpretations of literary works in the context of existing research on these works.
Poor Students will demonstrate the effective use of technology.
Better Students will prepare final research reports that demonstrate the effective use of word processing, spreadsheets, databases and presentation graphics.

They are neither too broad nor too specific.
Too broad Students will demonstrate information literacy skills
Too specific Students will be able to use the MARQCAT library catalog.
Just right Students will be able to locate information and critically evaluate it for validity and appropriateness.

They represent the level and type of competence expected at that point in the educational program.
Poor Manage a health-care organization.
Better Apply basic problem-solving skills and knowledge of health care financial management to develop recommendations related to the financial issues faced by a health care organization.

They focus on the learning result and not the learning process.
Poor Write a five-page essay reflecting on the work of an author of their choice.
Better Write a five-page essay reflecting on the work of an author of their choice that presents a clear and well-organized argument and uses examples from the author’s work to support the argument.
They can be reasonably observed and measured, preferably by more than one assessment method.

*Poor* Students will demonstrate ethical awareness.

*Better* Students are able to identify and analyze real-world ethical problems or dilemmas and identify those affected by the dilemma.

They don’t bundle outcomes requiring different types of assessment into a single statement.

*Bundled* Graduates will demonstrate knowledge of math, science and engineering fundamentals, and gain competency in writing reports, communicating research ideas and oral presentations.

*Simple* 1. Graduates will demonstrate knowledge of engineering fundamentals.
2. Graduates will demonstrate oral competency in communicating knowledge in the discipline.
3. Graduates will demonstrate written competency in communicating knowledge in the discipline.

**Other good practice characteristics for SLOs:**

- Are collaboratively authored and collectively accepted among the program faculty.
- Map to program curriculum that offers multiple opportunities for students to learn, practice, and master.
- Are aligned with discipline accreditation standards, where applicable.
- Are framed in terms of the program rather than individual courses.
- Are aggressive but attainable.
- Can identify areas for improvement.
- Taken together, produce an accurate picture of the knowledge, abilities, values and dispositions that are essential for a successful graduate of the program.