DEVELOPING MEASURABLE, MANAGEABLE, AND MEANINGFUL STUDENT LEARNING OUTCOMES

Student learning outcomes (SLOs) serve as the foundation of an assessment process. As the <u>Assessment Wheel</u> illustrates, refer to those SLOs regularly when developing assessment measures and evaluating the data on student learning, and revise the SLOs as needed.

- Develop 4-6 student-centered, measurable, manageable, and meaningful SLOs for each program and each class
- Align course outcomes to program outcomes, the college mission, and the university mission.
- For each course, begin your list of SLOs with the statement: Upon completion of this course, successful students will be able to:

- Start each SLO with a measurable verb that states the level of learning successful students will be able to achieve in the cognitive (thinking), affective (feeling), and/or psychomotor (kinesthetic) domains when they complete the course/program
- To create more holistic lessons for learning, consider using more than one of the three domains – cognitive, affective, and/or psychomotor
- Avoid verbs that describe an internal mindset, such as know, learn, understand, or appreciate, as they do not engender observable and measurable actions

- Consider developing SLOs with measurable verbs and goals that represent the hierarchy of lower-order and higher-order thinking skills
- In the revised Bloom's taxonomy (Anderson & Krathwohl, 2001), the cognitive domain hierarchy moves from lower-order thinking skills, remember, understand, and apply, to higher-order thinking skills, analyze, evaluate, and create
- Consider sequencing the list of SLOs from lower- to higher-order skills (or basic to intermediate to advanced)

- Follow the measurable verb in each SLO with the:
    1) knowledge, skills, attitudes, and/or values students will learn
    2) context, conditions, and/or setting in which students will learn
    3) criterion or level the outcome should be achieved

See the following table for examples of vague and specific student learning outcomes.

Successful students will be able to:

VAGUE	SPECIFIC
Understand principles of effective communication	Communicate effectively in a professional environment through technical reports and presentations
Think in an interdisciplinary manner	Draw from theories, principles, and knowledge from other disciplines to help solve a problem
Function as a team member	Reflect upon your contributions to a team effort, your ability to accept other team members as resources, and your willingness to accept compromises, if required, to achieve a team goal in written form
Understand how to use technology effectively	Use word processing, spreadsheets, databases, and presentation graphics effectively and appropriately in preparing the final research project and report

Adopted from:
https://www.tru.ca/__shared/assets/examples_of_learning_outcomes_good_and_bad32629.pdf
and http://www.sunyorange.edu/assessmentapa/docs/StudentLearningOutcomes.pdf

Next steps…
- To show alignment among course and program outcomes, and the college and institutional missions, create a curriculum map.
- Then, develop or revise direct and/or indirect measures to assess student learning of those outcomes.