

Overview

All academic degree programs at William Paterson are engaged in systematic program-level student learning outcomes assessment. Programs with disciplinary accreditation have the option to follow their accreditor's guidelines for assessment documentation. All other programs follow WP's internal process.

As part of the WP's process, programs establish assessment plans which have the following components:

- Program-level student learning outcomes
- Curriculum map
- Assessment measures
- A three-year plan for assessment

Program-Level Student Learning Outcomes (SLOs)

Program-level student learning outcomes (SLOs) describe the knowledge, skills, and abilities students are expected to master upon successful completion of their academic program. All degree and certificate programs at WP have SLOs.

Characteristics of effective program-level SLOs include:

- Student-focused – SLOs describe what students will know or be able to do, rather than what the program covers or teaches.
- Observable and measurable – SLOs should be built around an action verb (e.g., analyze, design, evaluate) rather than a vague verb such as understand, know, or appreciate that cannot be directly observed.
- Focus on end-of-program mastery – SLOs begin (implicitly or explicitly) with the framing "Upon successful completion of the program, students will be able to...."
- Address meaningful, end-of-program competencies – SLOs emphasize higher-order thinking (such as analyze, evaluate, or create) rather than lower-order skills such as recall or memorization.
- Are singularly in focus – SLOs describe one competency rather than bundling several skills together (e.g., avoid an SLO that asks students to both "summarize and critique," since each verb may call for a different measure).
- Manageable in number – Ideally, programs have between 4 and 6 program-level SLOs (although programs with external accreditation may be required to have more).
- Aligned – Program SLOs should show some alignment with the University Core Curriculum (UCC) SLOs.
- Transparent – SLOs should be shared with students, typically on program pages or in course catalogs.

SLOs in Practice: Before-and-After Examples

The examples below show how outcomes can fall short of the characteristics above, and how rewriting strengthens them.

Example 1

Original SLO: Students will understand the ethical principles relevant to the field.

The issue: "Understand" is vague and not observable. The term understand can have multiple interpretations – to some it may mean memorizing a definition and to others it may mean applying information to new situations. Without additional information, it is not possible to determine how students can demonstrate attainment.

Revised SLO: Upon successful completion of the program, students will apply professional ethical principles to resolve case-based dilemmas in the field.

Example 2

Original SLO: Students will be exposed to statistical software and quantitative reasoning techniques.

The issue: This describes what the program does, not what students will be able to do. It is written more from the program perspective rather than the student perspective.

Revised SLO: Upon successful completion of the program, students will use statistical software to conduct quantitative analyses of data sets.

Example 3

Original SLO: Students will understand the major theories in the discipline and be exposed to current research methods.

The issues:

- "Understand" and "be exposed to" are not observable.
- The outcome bundles two distinct skills (theory and research methods) into a single statement, which are difficult to assess with one measure.
- The outcome does not indicate the level of competency expected (e.g., recall vs. application vs. evaluation).

Revised SLOs (splitting the original SLO into two individually measurable competencies):

- Upon successful completion of the program, students will apply major theoretical frameworks in [discipline] to analyze real-world case studies.
- Upon successful completion of the program, students will design a research study using a methodology appropriate to the discipline.

Curriculum Map

A curriculum map is a table showing where in a program's curriculum each SLO is developed. It gives faculty a holistic picture of how a program's required courses work together to build toward each SLO. Curriculum maps are required parts of program assessment plans.

Curriculum maps need only to include required courses; electives do not need to be included. However, if there is a set of electives that is critical to development of SLO competencies (e.g., 'select one' in a list of research methods courses), that set of courses can be included in the curriculum map.

In each cell of the map, mark whether that course is related to Introducing, Reinforcing, or Mastering the outcome:

- *I – Introduced:* students encounter the knowledge or skill for the first time, typically at a basic level with substantial instructor guidance.
- *R – Reinforced:* students continue to practice and apply the knowledge or skill with growing independence, usually across more than one course.

- *M – Mastered*: students demonstrate the outcome at the level expected of a graduate, typically working independently, often in an upper-level or capstone course.

Sample Map

Below is a sample map for a fictional (and short) program. In this example, MATH 1000 is an introductory course, MATH 2110 and MATH 3040 build on it at increasingly advanced levels, and MATH 4900 is the program's capstone course.

	SLO #1	SLO #2	SLO #3	SLO #4	SLO #5	SLO #6
MATH 1000	I	I			I	
MATH 2110	R	R	I	I	R	I
MATH 2050		R	R	R		R
MATH 3040	R	M	R	R	R	R
MATH 4900	M		M	M	M	M

What the Map can say about a Program's Curriculum Design

Once the map is filled in, reviewing patterns can provide information on the design of the curriculum, and things that may warrant further investigation. For instance:

- *Every required course should connect to at least one SLO.* If a required course has no I,R,Ms at all, it may be a question why the course is required. Either the course may need to be revised to support the SLOs, or the SLOs may need to be refined to reflect what that course actually teaches.
- *Every SLO should reach "M" somewhere in the curriculum.* An SLO that is Introduced or Reinforced, but never Mastered, could mean students can graduate without ever having to fully demonstrate competency.
- *Mastery should generally be in upper-level or capstone courses.* If "M" shows up mostly at the 1000- or 2000-level courses, the SLOs may be emphasizing competencies below what is expected of a graduating student.
- *The I-R-M progression should make sense in sequence.* An SLO that jumps straight to "M" without an "I" or "R" earlier in the curriculum suggests students may not have enough guided practice before being expected to master it.

Assessment Measures

Assessment measures are the tools, assignments, tests, or other methods used to gather evidence that students master SLOs. Measures fall into two categories:

- *Direct measures* require students to demonstrate the learning itself, providing direct evidence of what they know or can do. Examples include capstone projects, licensure or certification exam results, rubric-scored papers or presentations, portfolios, and embedded exam questions tied to a specific SLO.
- *Indirect measures* capture perceptions or proxies of learning. Examples include student self-assessment or exit surveys, employer surveys, placement data, and graduation rates.

Best practice is to use more than one measure for an SLO, since no single measure fully captures student learning. At least one measure for each SLO must be direct because indirect measures alone are not sufficient evidence of what students actually know or can actually do.

Course Grades

Course grades are generally not acceptable assessment measures because they are rarely tied uniquely to an SLO. Course grades tend to combine many factors beyond performance on one SLO. Not only do final course grades typically reflect scores on multiple assignments, but they may also include factors such as attendance, participation, and timeliness of assignment submission. As such, it is generally not possible to assert that course grades are tied only to a competency in a specific SLO.

Furthermore, course grades do not provide diagnosable information regarding continuous improvement on a specific SLO. That is, knowing that 82% of students earned a B or better in a course does not reveal which specific aspect of an SLO students struggled with, or what could be changed to improve student learning.

Instead of the overall course grade, it is generally preferable to identify a specific assignment, exam question, or artifact within a course – an "embedded assessment" or "signature assignment" – aligned directly to the SLO.

Three-Year Plan for Assessing All SLOs

Programs are not expected to assess every SLO every year. Instead, each program builds a three-year period that ensures every SLO is assessed at least once within that period.

This staggered approach exists because assessing every outcome every year is difficult to sustain and difficult to act on – it produces too many action plans to implement at once, and it becomes hard to tell which change affected which outcome. Spacing outcomes across three years lets a program focus its attention, implement changes, and see whether they worked before taking on the next outcome.

In practice, this means dividing SLOs across the three-year time period. For example, a program with five SLOs might assess SLO 1 in year one, SLOs 2 and 3 in year two, and SLOs 4 and 5 in year three. The specific groupings are up to the program. Assessment plans identify the year(s) in which each program-level SLO is to be assessed.