**Guidelines for Curriculum Assessment**

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**Workshop Topics**

- Why assessment of learning outcomes is important  
- How to write measurable student learning outcomes  
- Differences between student learning outcomes for undergraduate and graduate courses  
- Construct and interpret a curriculum map  
- 5-year assessment plans to examine program-level SLOs  
- Locate ALCs, ALPs, program SLOs, and curriculum maps on the UWF web site  
- Describe how to document assessment work and department’s use of findings to improve programs

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**Why do assessment?**

If you don’t measure what you value, it won’t improve.  
Alan Merten, President, George Mason University  
A pig won’t get heavier just because you weighed it

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**Don’t forget to feed the pig!**

Small changes, each implemented over time, can produce significant improvements in student learning and program quality.

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**Characteristics of a solid assessment plan**

**Program-level SLOs are measurable**

- Documented on ALC, ALP, for certificates  
- SLOs describe the expertise expected for the degree awarded

**Curriculum is a coherent program**

- Documented in a curriculum map

**Systematic approach to assessing all SLOs**

- Documented in a 5-year assessment plan  
- Annual report of assessment work  
- Participation in Peer Review of Assessment

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uwf.edu/cutla/
What are Student Learning Outcomes?

Statements that describe what students will be able to know, do, or value as a result of their educational experience.

Written in language that clearly implies a measurable student behavior or quality of student work produced.

SMART Student Learning Outcomes

S  Specific
M  Measurable
A  Attainable / Appropriate for the course or program level (undergrad/grad)
R  Relevant / Realistic
T  Timely for the location of the course in the curriculum

Write SLOs for the level they serve:
Course-level SLOs are more specific and more numerous than program-level SLOs

Program-Level SLOs
- Broad descriptions of global knowledge, skills, & abilities
- Course-Level SLOs
  - More specific; more numerous
- Module or Assignment SLOs
  - May be as specific as the elements of the rubric used to evaluate student work

Course-level SLOs describe knowledge, skills, abilities and attitudes in more specific terms

Analyze and evaluate literary texts in formal and informal work. Defend the analysis and explain why the approach selected was particularly effective. Literature

Apply accepted methodology (e.g., the questions one asks and the sources one uses to answer them) to the practice and study of history. History

Correctly use basic concepts, theories, and experimental findings in four core areas of psychology (cognitive, developmental, social, and psychobiological). Psychology

Predict products from common reactions that illustrate the principles of chemical processes and chemical reactivity. Chemistry

Compare and contrast the histories of various maritime cultures. Explain the role that exploration, commerce, and warfare played in maritime history. Maritime History

Review and apply basic concepts, theories, and experimental findings in memory and cognition. Cognitive Psychology

Apply basic principles of organic reaction mechanisms to simple organic molecules. Organic Chemistry
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**Bloom’s Taxonomy (Revised)**

http://www.pbs.org/wgbh/nova/brain/read

Based on an AIP adaptation of Anderson, L.W. & Krathwohl, D.R. (Eds.) (2001)

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**Action Words for Bloom’s Taxonomy**

Sample of 178 unique words identified in a level of Bloom's taxonomy in a sample of 20 published lists (n = 5,267 words that are not a level of Bloom’s Taxonomy). VivaTerra and the following categorization for the degree of difficulty: "Easy" (level 1), "Medium" (level 2), "Hard" (level 3). The table was published in the journal Learning and Instruction (2004) by J. A. M. S. B. T. D. L. (United Kingdom) Science, 20, 139-151. SLOs for a better understanding of the taxonomy for easy, medium, and hard levels.

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<th>Analyze</th>
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**Cautionary Note:**

Many verbs appear in multiple categories of Bloom. “Level of skill” depends on the context of the SLO as much as it does on the verb used.

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**Problematic language in SLOs**

Words that do not produce measurable SLOs:

- Know
- Understand
- Appreciate
- Demonstrate knowledge

These are laudable learning goals, but how would a student demonstrate that these have occurred?

**Solution:**

Identify behaviors and activities that could be observed or measured. Describe the quality of products that will provide evidence of learning on these outcomes.

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**Context moderates the meaning of a verb**

**Arrange**

- Arrange a list of authors from A to Z.
- Arrange evidence for an argument.
- Arrange the locations of people in a portrait painting.

**Choose**

- Choose the correct definition of a concept.
- Choose an example that illustrates the operation of a concept.
- Choose the appropriate statistical test for a data set.
- Choose instruments to be included in an arrangement of a musical composition.

**Describe**

- Describe the properties of noble gases.
- Describe the effects of reinforcement and punishment.
- Describe the economic consequences of the Brexit vote.

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**Edit to describe measurable student behavior**

**Original SLO:**

Complete an in-depth exploration of the literature on a problem or topic in Discipline X.

**Evaluation of the SLO:**

*Exploration* is not a measurable activity; but the quality of the *product of exploration* is measurable.

**Edited SLO describes learning in measurable language (describes a concrete product we can evaluate):**

*Write a paper* based on an *in-depth exploration* of the literature.
Program-level SLOs reflect the development of increasing expertise from General Education through Undergraduate and Graduate degrees

- General Education
  - Foundation skills in communication, critical thinking, and integrity/ethics

- Undergraduate Programs
  - Programmatic skills expected for graduates of undergraduate programs in four domains: content, communication, critical thinking, and integrity/ethics

- Graduate Programs
  - Programmatic skills for advanced students in their work and study
  - Programmatic skills include knowledge of the disciplinary literature and skills in research and/or professional practice

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SLOs describe learning that is appropriate for the level of expertise expected of students

Lower Level Courses (1000 & 2000):
SLOs describe knowledge, comprehension, and application; might include a few higher-order skills

Upper Level Courses (3000 & 4000):
Greater emphasis on SLOs that describe analysis, synthesis, and evaluation skills

Handout: Writing Measurable Learning Outcomes

Graduate SLOs reflect the progressively more complex and rigorous expectations associated with graduate study

Graduate SLOs describe the knowledge and skills required to engage in independent research and professional practice.

- Advanced content knowledge of the literature of the discipline
- Cognitive skills required for ongoing student engagement in research and/or appropriate professional practice and training experience

Questions a reviewer should ask when evaluating SLOs

Are the outcomes measurable?
Do the collection of outcomes represent learning that is appropriate for the course level?

- Even graduate level courses will require some SLOs written at Bloom’s levels of knowledge and understand when students encounter new but complex disciplinary content
- Consider the difficulty and challenge posed by content as well as the level of Bloom represented by the verbs when you evaluate the appropriateness of an SLO for undergraduate or graduate work

Dual-Listed courses:
Graduate SLOs should describe appropriate expectations for learning for graduate students

- Identify progressively more complex and rigorous student learning outcomes for the award of graduate credit
- Identify additional content and assignments for students earning graduate credit that are distinct from those used for students earning undergraduate credit
  - Required readings
  - Content topics
  - Assignments or experiential activities
- Describe evaluation methods for student work that reflect higher expectations for cognitive mastery expected of graduate students (do not just assign a longer paper)

ALCs, and ALPs must include SLOs aligned with each of the following domains

- Content
  - Discipline knowledge and skills
- Critical thinking
  - Analysis, synthesis, and creation of arguments
  - Use of evidence
  - Problem solving
- Communication
  - Speaking; writing
- Integrity/values
  - Academic integrity
  - Discipline-specific ethical issues
Certificate programs and stand-alone minors require program-level SLOs and a curriculum map

- No more than 3-5 SLOs for certificates and stand-alone minors
- Stand-alone minors are offered in departments that do not award a major and must identify program SLOs
- Minors embedded in existing degree programs share SLOs with the degree program
- Certificate programs must identify the SLOs that make the certificate different from simply earning a major or minor
- SLOs are not required for every domain for certificates and stand-alone minors
- Curriculum map that shows the alignment of courses with program SLOs

Curriculum maps describe the structure and coherence of an academic program

A curriculum map describes the contribution of each course to program-level learning outcomes in the curriculum.

- **Columns**: Courses required to complete the program (Course number and name)
- **Rows**: Program-level learning outcomes as they appear on an ALC or ALP
- **Cells**: Critical learning activity, embedded assessment, or expected level of learning in a course that aligns with and supports program SLOs
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Curriculum map should show how courses contribute to the SLOs

A coherent curriculum is more than a collection of courses

A curriculum map shows how courses support one another to promote student learning on each outcome

Curriculum maps as assessment tools

Does the curriculum map describe a coherent curriculum?
- How does each proposed new course contribute to curriculum goals (program SLOs)?
- Does every required course contribute to learning for at least one program SLO?
- Do students get enough practice with a skill before they are expected to demonstrate mastery?
- Are there gaps? An SLO that no course supports?
- Are outcomes addressed in a logical order?
- Do some SLOs get covered more than others?

Five-year assessment plans

Plan to assess every SLO assessed at least once with a full cycle of assessment at least once during a 5-year period:
1. Gather initial data (direct measure)
2. Reflect on findings and implement actions as needed
3. Gather follow-up data (direct measure)

Assessment is a continuous process of evaluation and improvement

Make decisions informed by evidence.
Implement changes to improve student learning.
Analyze and reflect on the evidence collected.
What does this mean?
Did it work?
Assess the impact of the changes you made.

Expectations for assessment:
Complete a full cycle of assessment annually

For each academic program:
- Collect assessment evidence on at least one SLO, using a direct measure
- Engage faculty in a reflection on the meaning of the findings
- Compare learning in different locations or modalities when relevant
- Make decisions about changes and implement (as needed); changes are informed by evidence
- Document your activities
Assessment reports should “tell your story”: Explain what you did, what you learned, and what you plan to do next as a result of your analysis

Write to your audience
- Remember that your readers may not know your discipline (and may be external to UWF)

Write a brief but compelling narrative
- Summarize the steps of your assessment work with enough detail to explain the work in a credible way but short enough to quote verbatim in a larger report

Supporting documents provide evidence for assertions in your summary
- Examples of rubrics, exam questions, assignments
- Analysis and interpretation of findings
- Detailed narratives that supply substance to the executive summary