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# ASSESSMENT HANDBOOK

Summer 2019

Guiding Documentation of the Assessment Process at University of Hawai'i-West O'ahu

Many thanks to Stitt-Bergh, M., & Swarat, S. (2018, May 17). *Assessment 101: Meaningful assessment for student learning*. Honolulu, HI: WASC Senior College and University Commission.



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## Best Practices in Assessment

“Best practices in assessment could be viewed as demanding a higher standard than what is otherwise required either legally or ethically (Hawthorn, 2012).”

### **American Association of Higher Education Principles of Good Practice for Assessing Student Learning (1992)**

1. **The assessment of student learning begins with educational values.** Assessment is not an end in itself but a vehicle for educational improvement. Its effective practice, then, begins with and enacts a vision of the kinds of learning we most value for students and strive to help them achieve. Educational values should drive not only what we choose to assess but also how we do so. Where questions about educational mission and values are skipped over, assessment threatens to be an exercise in measuring what's easy, rather than a process of improving what we really care about.
2. **Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.** Learning is a complex process. It entails not only what students know but what they can do with what they know; it involves not only knowledge and abilities but values, attitudes, and habits of mind that affect both academic success and performance beyond the classroom. Assessment should reflect these understandings by employing a diverse array of methods including those that call for actual performance, using them over time so as to reveal change, growth, and increasing degrees of integration. Such an approach aims for a more complete and accurate picture of learning, and therefore firmer bases for improving our students' educational experience.
3. **Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.** Assessment is a goal-oriented process. It entails comparing educational performance with educational purposes and expectations—these derived from the institution's mission, from faculty intentions in program and course design, and from knowledge of students' own goals. Where program purposes lack specificity or agreement, assessment as a process pushes a campus toward clarity about where to aim and what standards to apply; assessment also prompts attention to where and how program goals will be taught and learned. Clear, shared, implementable goals are the cornerstone for assessment that is focused and useful.
4. **Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.** Information about outcomes is of high importance; where students "end up" matters greatly. But to improve outcomes, we need to know about student experience along the way—about the curricula, teaching, and kind of student effort that lead to particular outcomes. Assessment can help understand which students learn best under what conditions; with such knowledge comes the capacity to improve the whole of their learning.
5. **Assessment works best when it is ongoing, not episodic.** Assessment is a process whose power is cumulative. Though isolated, "one-shot" assessment can be better than none, improvement is best fostered when assessment entails a linked series of activities undertaken over time. This may mean tracking the progress of individual students, or of cohorts of students; it may mean collecting the same examples of student performance or using the same instrument semester after semester. The point is to monitor progress toward intended goals in a spirit of



continuous improvement. Along the way, the assessment process itself should be evaluated and refined in light of emerging insights.

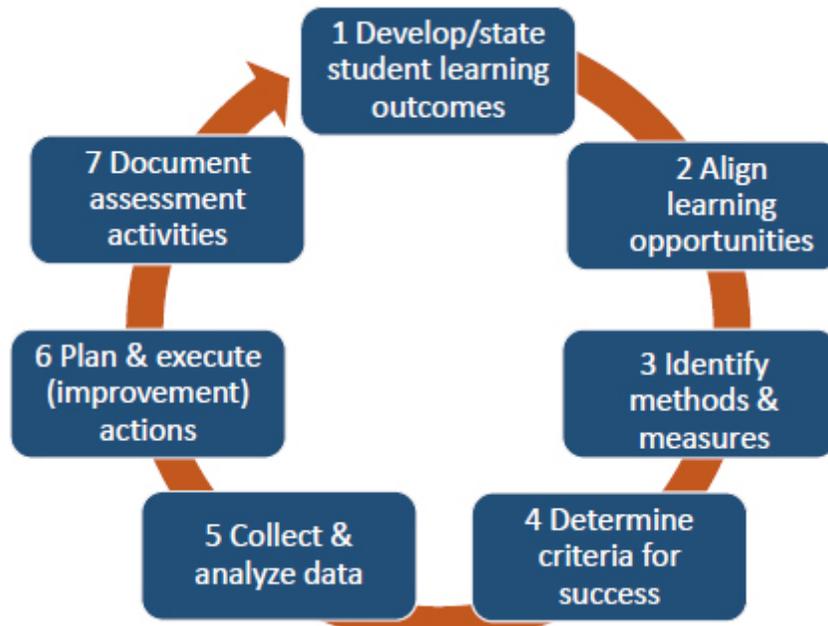
6. **Assessment fosters wider improvement when representatives from across the educational community are involved.** Student learning is a campus-wide responsibility, and assessment is a way of enacting that responsibility. Thus, while assessment efforts may start small, the aim over time is to involve people from across the educational community. Faculty play an especially important role, but assessment's questions can't be fully addressed without participation by student-affairs educators, librarians, administrators, and students. Assessment may also involve individuals from beyond the campus (alumni/ae, trustees, employers) whose experience can enrich the sense of appropriate aims and standards for learning. Thus, understood, assessment is not a task for small groups of experts but a collaborative activity; its aim is wider, better-informed attention to student learning by all parties with a stake in its improvement.
7. **Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.** Assessment recognizes the value of information in the process of improvement. But to be useful, information must be connected to issues or questions that people really care about. This implies assessment approaches that produce evidence that relevant parties will find credible, suggestive, and applicable to decisions that need to be made. It means thinking in advance about how the information will be used, and by whom. The point of assessment is not to gather data and return "results"; it is a process that starts with the questions of decision-makers, that involves them in the gathering and interpreting of data, and that informs and helps guide continuous improvement.
8. **Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change.** Assessment alone changes little. Its greatest contribution comes on campuses where the quality of teaching and learning is visibly valued and worked at. On such campuses, the push to improve educational performance is a visible and primary goal of leadership; improving the quality of undergraduate education is central to the institution's planning, budgeting, and personnel decisions. On such campuses, information about learning outcomes is seen as an integral part of decision making, and avidly sought.
9. **Through assessment, educators meet responsibilities to students and to the public.** There is compelling public stake in education. As educators, we have a responsibility to the publics that support or depend on us to provide information about the ways in which our students meet goals and expectations. But that responsibility goes beyond the reporting of such information; our deeper obligation-to ourselves, our students, and society-is to improve. Those to whom educators are accountable have a corresponding obligation to support such attempts at improvement.

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## Typical Assessment Process



### 1. **Develop/state/review/revise student learning outcomes**

What knowledge, skills, values, and attitudes should students possess when they graduate with a degree from UH West O’ahu? What are the key learning outcomes for each degree? What level of proficiency is expected?

### 2. **Align learning opportunities**

A graphical illustration of the relationship between the degree requirements and the corresponding student learning outcomes (slos). The curriculum map documents what is taught and when, which in turn improves learning expectations, curriculum coherence, and increases the probability that students achieve the slos at the level designated as successful.

### 3. **Identify methods and measures**

What are the processes used at the institution to ensure the quality and rigor of the degrees offered? How are these degrees evaluated to assure that the degrees awarded meet institutional standards of quality and consistency?

### 4. **Determine criteria for success**



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Level of performance on the outcome which designates success. Also referred to as “Setting Performance Expectations” or “Establishing a Cutscore” on the rubric

**5. Collect and analyze data**

What was identified in the process of considering the meaning, quality, and integrity of the degrees that may require deeper reflection, changes, restructuring, etc.? What will be done as a result? What resources will be required?

**6. Plan and execute (improvement) actions**

Interpret the findings. Create an action plan to improve student learning.

**7. Document assessment activities**

Reflect to see if the assessment activities had the desired outcome. If they did, why and how can we extend? If they did not, why not and what can be done differently?



# 1. Develop/State/Review/Revise Student Learning Outcomes (SLOs)

What knowledge, skills, values, and attitudes should students possess when they graduate with a degree from UH West O'ahu? What are the key learning outcomes for each degree? What level of proficiency is expected?

Slos are specific, discrete statements that indicate the knowledge, skill, or attitude students are expected to have/do at the end of a course/degree. There are three essential components of an slo:

- a) The observable, measurable action or behavior – the Action Verb (Appendix B).



LEVELS of SLOs (Bloom et al., 1956)	BLOOM'S TAXONOMY EXAMPLE ACTION VERBS for Knowledge & Skill SLOs
<b>Evaluating</b>	Assess, Conclude, Criticize, Justify, Value
<b>Creating</b>	Assemble, Create, Design, Produce, Reconstruct
<b>Analyzing</b>	Analyze, Compare, Differentiate, Experiment, Solve
<b>Applying</b>	Apply, Demonstrate, Modify, Practice, Use
<b>Understanding</b>	Convert, Explain, Interpret, Paraphrase, Report
<b>Remembering</b>	Define, Describe, List, Name, Outline



LEVELS of SLOs (Bloom et al., 1964)	BLOOM'S TAXONOMY EXAMPLE ACTION VERBS for Attitude SLOs
<b>Internalizing Values</b>	Act, Display, Influence, Modify, Practice
<b>Organizing/ Conceptualizing Values</b>	Formulate, Generalize, Integrate, Reconcile, Relate
<b>Valuing</b>	Argue, Criticize, Debate, Justify, Persuade
<b>Responding</b>	Clarify, Interpret, Present, Question, React
<b>Receiving</b>	Acknowledge, Aware, Be open to, Be willing to listen, Participate

- b) The learning context, content, or product – the Evidence



c) The measure of success – the Quality or Quantity

Observable action or behavior	
Learning context, content, or product	
Measure of success	

Examples:

Students will **develop** business materials such as **purchase orders, contracts, and pricing lists** that are consistent with **industry standards**.

Students will **identify and describe** the distinguishing **characteristics and features** of editorial illustrations from a **variety of contexts and markets**.

- d) Use the rubric, Assessing the Quality of Academic Program Learning Outcomes, found in Appendix C, to review slos.
- e) Make corresponding recommendations



## 2. Align Learning Opportunities

Curriculum maps: A graphical illustration of the relationship between a program’s requirements/ learning opportunities and student learning outcomes; i.e., an at-a-glance interpretation of curriculum coherence

- Improved communication about teaching and learning expectations
- Improved curriculum coherence – degree, concentration
- Increased likelihood that students achieve outcomes

Overall, curriculum maps help us build and deliver a curriculum that is cohesive, developmental, intentional, and based on a shared set of institutional/program learning expectations.

Degree Requirements	1. Written Communication	2. Information Literacy	3. Assess research, producing industry-quality report	4. Critical thinking	5. Professionalism
150	I, A	I	I		I
250		I, A	I, A	I, A	
315	I			I	I, A
320		R	R		
380	R, A			R	R
415		R, A	R, A		
425	R	R	R		R, A
455	R			R, A	
470	M	M	M	M, A	
490	M, A	M, A	M, A	M	M, A

Key: I = Introduced; R = Reinforced and opportunity to practice; M = Mastery at the senior or exit level; A = Assessment evidence collected A can also indicate the given signature assessment

I = Introduced: First acquaintance with the given student learning outcome’s knowledge, skill, or attitude.

R = Reinforced: Students possess the introductory level of knowledge, skill, or attitude. They now utilize it in the specific course.

M = Mastery: Students can utilize the given learning context at the criterion level designated as success.

Curriculum maps need to be created **FIRST**, as they provide the **what** and the **why** for a concentration’s curriculum and course sequencing **over the degree**.

Advising maps come **SECOND** and are used to help guide students through the **how** of registering and sequencing courses for degree completion.

- 2.1. Does each course contribute to the student learning outcomes?
  - 2.1.1. If not, what’s the recommendation?
  - 2.1.2. If a given course does too much, what’s the recommendation?

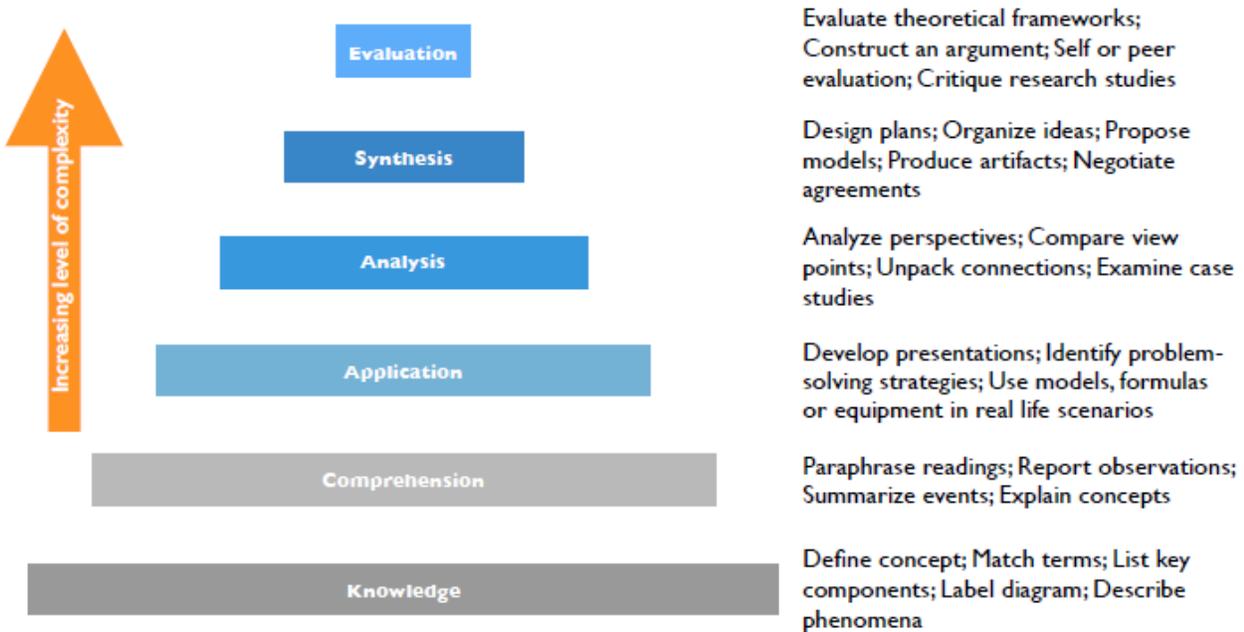


2.2. Overall, do students have sufficient exposure to meet exit-level expectations

### 3. Identify Methods and Measures

What are the action verbs in the SLO?

## Align measures with outcomes





## Choosing the right measure

- **Valid:** Are you measuring the outcome?
- **Reliable:** Are the results consistent?
- **Actionable:** Do the results clearly tell you what students can or cannot do?
- **Triangulation:** Are there multiple lines of evidence for the same SLO?
- **Meaningful and engaging:** Are faculty engaged? Do students care?
- **Sustainable:** Can the process be managed effectively within the program context?

## Direct vs. Indirect

**Direct**  
Student behaviors or products that demonstrate their mastery of SLO

Exam/Quiz  
Paper/Presentation  
Project/Portfolio  
Recital/Exhibition  
Peer evaluation  
...

**Indirect**  
Reported perceptions about student mastery of SLO

Self-reflection essay  
Self-report survey  
Interview  
Focus group  
Report by alumni, employer, etc.  
...

Use as supplemental evidence

**Direct evidence helps tell us “what”, and indirect evidence helps tell us “why”.**



## A note about indirect measures

	Why use it	What to watch out for
Survey	<ul style="list-style-type: none"><li>- Flexible question focus and format</li><li>- Quick and easy to administer</li><li>- Cost effective</li></ul>	<ul style="list-style-type: none"><li>- Quality of questions?</li><li>- Appropriate sampling and response rate?</li><li>- Survey fatigue</li><li>- Social desirability bias</li></ul>
Focus Group*	<ul style="list-style-type: none"><li>- "Richer", in-depth information</li><li>- Tailored, immediate follow-up for further elaboration</li><li>- Participants react to each other's ideas</li></ul>	<ul style="list-style-type: none"><li>- Quality of protocol?</li><li>- Facilitator's skills?</li><li>- Appropriate sampling?</li><li>- Time and resources for data collection and analysis?</li></ul>
Interview	<ul style="list-style-type: none"><li>- "Richer", in-depth information</li><li>- Tailored, immediate follow-up for further elaboration</li><li>- Privacy and personal attention</li></ul>	<p><b>*Small Group Analysis:</b> An alternative focus group model</p>



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“The UH West O’ahu Assessment Committee will no longer stipulate the methods by which assessments of student learning are conducted...concentration faculty and/or divisions will now decide how assessments are to be conducted” (UH West O’ahu Assessment Committee, 2013-14).  
Collect meaningful evidence in a feasible way:

- Prioritize embedded measures. Embedded measures are already integrated into the regular curricular process.
- Sampling: Relevant, representative of the population
  - Population: the total number of students enrolled in courses at the given curriculum map level
  - Sample size is derived using the [Qualtrics calculator](#):
    - Margin of error = 5%
    - Confidence level = 95%
    - Standard Deviation = 0.5
  - To be representative, the sample has to be random.
    - Start with a list of all students enrolled in courses at the given curriculum map level
    - Choose a number,  $x$ , between 1 and 10.
    - Start with  $x$ th student on your list.
    - Choose the next  $x$ th student, and so on until you have the desired sample size.
    - For example, faculty member A chooses the number 5. He/she chooses the fifth student on the roster, then the tenth, and so on.

### Evaluating Student Evidence: Rubrics

- A four-point scale is highly recommended. This will drive the respondent to choose between positive or negative.
- Use an existing rubric (Appendix C: AAC&U Value Rubrics) as base, then tweak to fit the needs of the given program.
- Each cell of a rubric assumes mastery of the previous cell, as the cells describe higher and higher levels of performance.
- Zero is an option if the work sample does not meet level one performance on the given line of the rubric.
- Calibration
  - Collect a diverse sample of student work
  - Explain the SLO, assignment, rubric
  - Conduct pilot scoring
    - Calculate [Cohen's kappa](#). If  $k = .41 - 0.60$ , there is moderate interrater agreement. If  $k < .41$ ,
      - Discuss discrepancies to reach consensus
      - Revise rubric as needed



## 4. Determine Criteria for Success

- a. Standard/Criteria for Success: Level of performance on the outcome which designates success. Also referred to as “Setting Performance Expectations” or “Establishing a Cutscore” on the rubric.
- b. Benchmark: A reference point by which a program or campus can measure themselves for the purpose of comparison.

e.g. 76% of seniors met expectations by scoring “3” or higher, which falls short of our 80% target. Standard is 3; benchmark is 80%.

- c. Standards have performance expectations. It’s helpful to students, faculty, support staff to share a common understanding of the performance expectations in concrete examples or terms.
- d. Standards will not be used for individual student graduation decisions, nor to evaluate individual faculty. Standards are used only for clarification of performance expectations and to motivate greater levels of achievement among students.
- e. Faculty are in the best position to help assessment reach its goal of program improvement. Therefore, the setting and use of standards can increase faculty engagement in assessment.
- f. Setting Standards - Informed Judgment: Subject-area experts as well as other stakeholders are in the best position to determine what’s good enough and set the standard. In order to make informed judgments, the participants must be clear on:
  - 1. The purpose of setting standards
  - 2. The process they will undertake to set the standard
  - 3. Content knowledge
  - 4. Consequences: how will the standards be used
  - 5. Knowledge of the students, their characteristics and their typical educational experiences

## 5. Collect and Analyze Data

- a. Two or more readers, ideally with high interrater reliability
- b. Each cell of a rubric assumes mastery of the previous cell, as the cells describe higher and higher levels of performance.
- c. Zero is an option if the work sample does not meet level one performance on the given line of the rubric.
  - 1. Calculate [Cohen’s kappa](#). If  $k = .41 - 0.60$ , there is moderate interrater agreement.
  - 2. If  $k < .41$ , discuss discrepancies to reach consensus



d. Create a frequency distribution of scores, including count and total. Example:

	Exemplary 4	Acceptable 3	Needs some improvement 2	Needs substantial improvement 1	0
SLO 1	n = 20, 20%	n = 60, 60%	n = 10, 10%	n = 7, 7%	n = 3, 3%

e. Analyze using predetermined standard. Example:

80% of seniors met expectations by scoring “3” or higher.

f. Include benchmark comparison if one has been established. Example:

We fell short of our benchmark of 85%.

g. Questions to discuss when analyzing the results

- Does the assignment used to evaluate student learning explicitly align with the rubric?
- Were classroom activities/pedagogy helpful in preparing students for the assessment task?
- Were students given sufficient opportunities to learn? (Check the curriculum map)
- Were the pedagogical methods suited to the students and the outcome?
- Were students motivated to do their best on the assessment task?
- Was the sample representative?
- Are different student groups performing at the same levels?
- Examples of groups to investigate:
  - males/females
  - full-time/part-time
  - online/in person
  - high grade/low grade in pre-requisite
  - transfer/non-transfer

## 6. Plan and Execute (Improvement) Actions – Address Three Basic Questions

a. Did the program meet its target benchmark?

Yes, no, unsure

b. What are at least two possible reasons why the target was/was not met?

c. What action(s) might the program consider given these results?

Communications with internal and external stakeholders

Publicize/celebrate successes! Suggest ways to extend the success.

Standards of performance (e.g., class & exit standards; the predetermined rubric standard to meet campus expectations)

Number and type of learning opportunities

Pedagogy/andragogy

Academic policies and procedures (e.g., prerequisites, course requirements)



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Students' out-of-class experiences (e.g., advising, tutoring, online materials)  
Program/department policies (e.g., committee descriptions, job descriptions)

## 7. Document Assessment Activities

### a. Template for PLANNING Assessment Projects (UH Manoa Assessment Office)

1. State the student learning outcome being assessed
  - Note the observable, measurable action or behavior, The learning context, content, or product, and the measure of success
  - Given the outcome(s) being assessed, what does the program want to find out? Create a question(s) that is meaningful to faculty members or intended users.
2. Align learning opportunities.
  - Include the respective curriculum map in an appendix.
  - Note those courses that correspond to I = Introduced; R = Reinforced and opportunity to practice; M = Mastery at the senior or exit level.
  - Create a matrix of the curriculum map corresponding to the current semester's course offerings, noting different sections
3. Identify methods and measures
  - Note the level of Bloom's taxonomy (pyramid on page 8) of the action verb in the slo. Does it correspond to the curriculum map level?
  - What are the direct and/or indirect measures being used?
  - State the total number of students enrolled in courses at the given curriculum map level
  - Describe the sampling technique to be used
  - Include the rubric used
  - Use the rubric template to note the assessment data from each evaluator
  - Create a frequency distribution for each rubric item for each evaluator and overall
4. Criteria for success
  - List and describe the standard/criteria for success
  - State the benchmark needed to indicate program success on this outcome or assessment question
5. Intended Uses for the Assessment Results & Primary Users of the Assessment Results
  - Provide an interpretation of the assessment results found in terms of student learning strengths and weaknesses.
  - Suggest a corresponding plan of action
  - List the intended uses for the assessment results, such as the specific actions that might be taken if the criteria for success (standard and benchmark) are not met.
  - List the primary users of the assessment results.
6. Distribution and Discussion of Results
  - List who is responsible for distributing results, and who will receive results.
  - State how the distribution will take place.
  - State how and when discussion of results will take place.
7. Logistics



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- Timeline and status: List the dates when the evidence will be collected, analyzed, and an action plan developed
- Team members: List the names of who will be responsible for each aspect of the given assessment project.

## b. Assessment Report Template

[Link to template](#)



## Appendix A: Action Verbs

### Attitude Student Learning Outcomes (SLOs)

Receive	Respond	Value	Organization/ Conceptualization of Values	Internalization of Values
Ask Attend Aware Be alert Be conscious Be sensitive Choose Contribute Cooperate Describe Discriminate Follow Give Hold Identify Listen Locate Name Observe Point to Prefer Realize Select Sit erect Use Willingness to hear	Accept Aid Answer Assist Comply Conform Consider Cooperate Contribute Discuss Display Engage Enrich Exhibit Explore Extend Greet Help Label Obey Participate Perform Present Report Respond Willingness to act	Assume responsibility Complete Continue to desire Demonstrate Differentiate Devote Enable Examine Explain Feel Follow Form Grow Initiate Invite Is loyal to Join Justify Participate Prefer Propose Share Study Work	Adhere Alter Arrange Combine Compare Complete Crystallize Defend Explain Formulate Generalize Identify Integrate Is realistic Judge Modify Order Organize Prepare Regulate Relate Synthesize Weigh	Act Approach Arrive Change Discriminate Display Examine Influence Is consistent Judge Listen Modify Perform Plan Practice Propose Qualify Question Ready Relay Revise Serve Solve Verify View



**Knowledge/Skills Student Learning Outcomes (SLOs)**

Remember	Understand	Apply	Analyze	Create	Evaluate
Cite	Arrange	Apply	Analyze	Arrange	Appraise
Define	Classify	Carry out	Breakdown	Assemble	Assess
Duplicate	Convert	Change	Calculate	Collect	Check
Find	Defend	Compute	Categorize	Combine	Choose
Identify	Describe	Construct	Compare	Compile	Compare
Indicate	Diagram	Demonstrate	Contrast	Compose	Conclude
Know	Discuss	Discover	Criticize	Construct	Contrast
Label	Distinguish	Dramatize	Debate	Create	Criticize
List	Estimate	Employ	Deconstruct	Design	Critique
Match	Explain	Execute	Determine	Devise	Decide
Memorize	Extend	Illustrate	Diagram	Formulate	Discriminate
Name	Generalize	Implement	Differentiate	Generate	Evaluate
Outline	Give	Interpret	Discriminate	Invent	Experiment
Recall	examples	Investigate	Distinguish	Manage	Grade
Recognize	Infer	Manipulate	Examine	Modify	Hypothesize
Record	Locate	Operate	Illustrate	Perform	Interpret
Repeat	Outline	Practice	Infer	Plan	Judge
Reproduce	Paraphrase	Predict	Inspect	Prepare	Justify
Retrieve	Report	Prepare	Interrogate	Produce	Measure
State	Restate	Produce	Inventory	Propose	Rate
Underline	Review	Schedule	Organize	Rearrange	Score
	Suggest	Shop	Outline	Reconstruct	Select
	Summarize	Sketch	Question	Reorganize	Support
	Translate	Solve	Relate	Revise	Test
		Translate			Value
		Use			

Adapted from: Bloom, B.A., et.al. (1956). *Taxonomy of educational objective: The classification of educational goals: Handbook I: Cognitive domain*. Anderson, L.W. & Krathwohl, D.R. (eds.) (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. Krathwohl, D.R., et.al. (1964). *Taxonomy of educational objectives: Handbook II: Affective domain*. Gronlund, N.E. (1991). *How to write and use instructional objectives* (4<sup>th</sup> Ed). Allen, M. (2008, May). *Assessment workshop*. Honolulu, HI: University of Hawai'i Manoa.



## Appendix B: Glossary

TERM	DEFINITION/EXPLANATION
Academic Map	<p>Academic maps are created <b>AFTER</b> curriculum maps to help guide students through the how of registering and sequencing of courses for completion of the degree.</p> <p>N.B. Curriculum maps are created <b>FIRST</b> as they provide the <b>what</b> and the <b>why</b> for a program's curricula and course sequence.</p>
Alignment	<p>A curriculum that is designed to develop increasing sophistication with respect to each outcome.</p> <p>Example: Curriculum mapping is an alignment activity: the curriculum is analyzed to determine when, where, and how students are introduced to expected outcomes, then given the opportunity to reinforce the introductory knowledge gained in the previous course, and finally, utilizing the given learning context at the criterion level designated as success. The "map" visually displays where outcomes are emphasized in the curriculum.</p>
Assessment	<p><b>"Assessment of student learning</b> is a reflective, ongoing, formative process for the purpose of improving student learning success. It involves: (1) Developing/stating/reviewing/revising student learning outcomes; (2) Aligning learning opportunities; (3) Identifying methods and measures; (4) Determining criteria for success; (5) Collecting and analyzing data; (6) Planning and executing actions; and (7) Documenting assessment activities." (Cal State Channel Islands, 2018)</p>
Assessment Plan	<p>An assessment plan contains the details of how you will work through the steps of the <b>assessment cycle</b>. At its most basic level an assessment plan answers these three questions:</p> <ol style="list-style-type: none"> <li>1. Which student learning outcomes will you focus on?             <ol style="list-style-type: none"> <li>a. If your program does not have learning outcomes, then plan to develop these as a first step.</li> <li>b. If your program has learning outcomes, then plan to consider if these reflect your current program or if they need revision.</li> <li>c. When you are satisfied with your program's learning outcomes, then plan to select one or two learning outcomes per academic year to focus your assessment plan on.</li> </ol> </li> <li>2. What evidence will you use to determine how well students are achieving the selected outcomes?             <ol style="list-style-type: none"> <li>a. If you need to determine what evidence is available to you, then plan time to determine the practices within your program that help students to achieve the selected outcomes. The best way to approach this is with a <b>curriculum map</b>.</li> </ol> </li> </ol>



TERM	DEFINITION/EXPLANATION
	<ul style="list-style-type: none"> <li>b. If you have determined the practices in your program that help students achieve the outcomes, then plan to select the evidence of student learning you will use (e.g., an existing exam, survey, presentation, paper, performance).</li> <li>c. If you have selected the evidence you will use, then plan when, where, and who will collect this evidence.</li> <li>d. If you have collected the evidence you will use, then plan to determine what method you will use to know from it if students are accomplishing the learning outcomes (e.g., you could use components of a rubric that address the learning outcome, exam items or exam sections that address the learning outcome).</li> <li>e. If you have determined how you will know if students are accomplishing the learning outcome, then plan to apply your method (e.g., apply your rubric, score your items).</li> <li>f. If you have applied your method (i.e., applied your rubric, scored your items), then plan to analyze this data. This does not necessarily mean that you have to compute statistics. It means that the collected data are summarized in a meaningful way—that is the data tells you whether the outcomes are being achieved.</li> <li>g. If you have analyzed your data, then plan to prepare a user-friendly report of the findings to share with all of the members of your program.</li> </ul> <p>3. How will you use the information to improve your program?</p> <ul style="list-style-type: none"> <li>a. If you have prepared a report of your findings, then plan to interpret the findings as a program. Decide together what the findings mean.</li> <li>b. If all aspects of the learning outcomes were satisfactorily achieved, then plan to reassess the outcomes at a later time to determine if they are still being satisfactorily achieved.</li> <li>c. If all aspects of the learning outcomes were not satisfactorily achieved, then plan to make changes designed to improve student learning in your program (e.g., to the curriculum, pedagogy, assignments).</li> <li>d. You will also want to plan to reassess the outcomes at a later time to determine if improvement in student learning occurred.</li> </ul> <p>Office of Assessment, Loyola Marymount University. (2018). <i>Creating an assessment plan</i>. Los Angeles: Author.</p>
Authentic Assessment	Determining the level of student knowledge/skill in a particular area by evaluating his/her ability to perform a "real world" task in the way professionals in the field would perform it. Authentic assessment asks for a demonstration of the behavior the learning is intended to produce.



TERM	DEFINITION/EXPLANATION
	Example: Asking students to create a marketing campaign and evaluating that campaign instead of asking students to answer test questions about characteristics of a good marketing campaign.
Benchmark	<p>A reference point by which a program can measure themselves for the purpose of comparison; used for comparison or goal setting.</p> <p>Example: 76% of seniors met expectations by scoring “3” or higher, which falls short of our 80% benchmark.</p> <p>Stitt-Bergh, M. (2014). What’s good enough? Setting standards. <i>Association for the Assessment of Learning in Higher Education (AALHE)</i>. Albuquerque, NM: Author.</p>
Course Assessment	Assessment to determine the extent to which a specific course is achieving its learning outcomes.
Criteria for Success	Criteria for Success or Standard: Level of performance on an outcome which designates success. Also referred to as setting performance expectations or establishing a cutscore.
Curriculum Map	<p>A matrix illustrating the relationship between a program’s requirements/learning opportunities and student learning outcomes; i.e., an at-a-glance interpretation of curriculum coherence over a degree. A curriculum map identifies where an outcome is Introduced (I), Reinforced ( R), and Mastered (M).</p> <p>N.B. Curriculum maps are created <b>FIRST</b> as they provide the <b>what</b> and the <b>why</b> for a program’s curricula and sequence of courses. Advising maps come <b>SECOND</b> and are used to help guide students through the <b>how</b> of registering and sequencing of courses for completion of a degree.</p>
Direct Assessment	<p>Tangible, visible, and measurable artifacts, tends to be more compelling evidence of exactly what students have and have not learned. Students have completed some work or product that demonstrates they have achieved the learning outcomes.</p> <p>Examples: exams, course work, essays, oral performance.</p> <p>Center for Teaching and Learning, DePaul University. (2018) <i>Direct versus indirect assessment of student learning</i>. Chicago: Author.</p>
Embedded Assessment	Collecting data/evidence by extracting course assignments. It is a means of gathering information about student learning that is built into and a natural part of the teaching-learning process. The instructor evaluates the assignment for individual student grading purposes; the program evaluates the assignment for program assessment. When used for program assessment, typically someone other than the course instructor uses a rubric to evaluate the assignment. (Leskes, A., 2002)



TERM	DEFINITION/EXPLANATION
Formative Assessment	<p>The goal of formative assessment is to monitor student learning to provide ongoing feedback that can be used to improve students' acquisition of the sloas as well as improving instruction.</p> <p>Eberly Center, Carnegie Mellon University. (2016). <i>What is the difference between formative and summative assessment?</i> Pittsburgh, PA: Author.</p>
Indirect Assessment	<p>Composed of proxy signs such as surveys that students are probably learning. Reported perceptions about student mastery of a given SLO.</p> <p>Examples: surveys, interviews, focus groups.</p> <p>Center for Teaching and Learning, DePaul University. (2018) <i>Direct versus indirect assessment of student learning</i>. Chicago: Author.</p>
Portfolio	<p>A portfolio is a systematic collection of student work that represents student activities, accomplishments, and achievements over a specific period of time in one or more areas of the curriculum. There are two main types of portfolios:</p> <p><b>Showcase Portfolios:</b> Students select and submit their best work. The showcase portfolio emphasizes the products of learning.</p> <p><b>Developmental Portfolios:</b> Students select and submit pieces of work that can show evidence of growth or change over time. The growth portfolio emphasizes the process of learning.</p> <p>University of Hawai'i-Manoa. (2017). <i>Using portfolios in program assessment</i>. Honolulu: Author.</p>
Program Assessment	<p>"The systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development" (Palomba &amp; Banta, 1999)</p> <p>University of Hawai'i-Manoa. (2010). <i>Program assessment</i>. Honolulu: Author.</p>
Reliability	<p>"Refers to the extent to which data from students fairly and consistently assesses the expected traits or dimensions of student learning within the construct of that method. In addition, it measures how consistently reviewers rate student responses. A related concept is interrater reliability, the degree to which different individual observers agree in their scoring."</p> <p>Maki, P. L. (2004). <i>Assessing for learning: Building a sustainable commitment across the institution</i>. American Association for Higher Education. Sterling, VA: Stylus Publishing, LLC.</p>
Rubric	<p>Rubrics describe the characteristics of different levels of performance, often from exemplary to unacceptable. The criteria are ideally explicit, objective, and consistent with expectations for student performance.</p>



TERM	DEFINITION/EXPLANATION
	<p>Rubrics may be used by an individual or multiple raters to judge student work. When used by multiple raters, norming takes place before scoring begins.</p> <p>Rubrics are meaningful and useful when shared with students before their work is judged so they better understand the expectations for their performance. Rubrics are most effective when coupled with benchmark student work or anchors to illustrate how the rubric is applied.</p>
Standard	<p>Defines the level of performance on the outcome so decisions or classifications can be made. Also referred to as setting performance expectations or establishing a cutscore on the rubric.</p> <p>Example: 76% of seniors met expectations by scoring “3” or higher, which falls short of our 80% benchmark. In this example, the standard is 3.</p> <p>Stitt-Bergh, M. (2014). What’s good enough? Setting standards. <i>Association for the Assessment of Learning in Higher Education (AALHE)</i>. Albuquerque, NM: Author.</p>
Student Learning Outcome (SLO)	<p>SLOs are specific, discrete statements that indicate the knowledge, skill, or attitude students are expected to have/do at the end of a course/degree. There are three essential components of an slo: (1) the observable, measurable action or behavior; (2) the learning context, content, or product; and (3) the measure of success.</p>
Summative Assessment	<p>The goal of summative assessment is to evaluate student learning at the end of an instructional unit by comparing it against a given standard.</p> <p>Eberly Center, Carnegie Mellon University. (2016). <i>What is the difference between formative and summative assessment?</i> Pittsburgh, PA: Author.</p>
Triangulation	<p>The use of a combination of methods in a study. The collection of data from multiple sources to support a central finding or theme or to overcome the weaknesses associated with a single method.</p>
Validity	<p>Refers to whether the interpretation and intended use of assessment results are logical and supported by theory and evidence. In addition, it refers to whether the anticipated and unanticipated consequences of the interpretation and intended use of assessment results have been taken into consideration. (<i>Standards for Educational and Psychological Testing</i>, 1999)</p>

## Appendix C: Rubric for Assessing the Quality of Academic Program Learning Outcomes

Criterion	Initial	Emerging	Developed	Highly Developed
Comprehensive List	The list of outcomes is problematic: e.g., very incomplete, overly detailed, inappropriate, and disorganized. It may include only discipline-specific learning, ignoring relevant institution-wide learning. The list may confuse learning processes (e.g., doing an internship) with learning outcomes (e.g., application of theory to real-world problems).	The list includes reasonable outcomes but does not specify expectations for the program as a whole. Relevant institution-wide learning outcomes and/or national disciplinary standards may be ignored. Distinctions between expectations for undergraduate and graduate programs may be unclear.	The list is a well-organized set of reasonable outcomes that focus on the key knowledge, skills, and values students learn in the program. It includes relevant institution-wide outcomes (e.g., communication or critical thinking skills). Outcomes are appropriate for the level (undergraduate vs. graduate); national disciplinary standards have been considered.	The list is reasonable, appropriate, and comprehensive, with clear distinctions between undergraduate and graduate expectations, if applicable. National disciplinary standards have been considered. Faculty has agreed on explicit criteria for assessing students' level of mastery of each outcome.
Assessable Outcomes	Outcome statements do not identify what students can do to demonstrate learning. Statements such as "Students understand scientific method" do not specify how understanding can be demonstrated and assessed.	Most of the outcomes indicate how students can demonstrate their learning.	Each outcome describes how students can demonstrate learning, e.g., "Graduates can write reports in APA style" or "Graduates can make original contributions to biological knowledge."	Outcomes describe how students can demonstrate their learning. Faculty has agreed on explicit criteria statements, such as rubrics, and has identified examples of student performance at varying levels for each outcome.
Alignment	There is no clear relationship between the outcomes and the curriculum that students experience.	Students appear to be given reasonable opportunities to develop the outcomes in the required curriculum.	The curriculum is designed to provide opportunities for students to learn and to develop increasing sophistication with respect to each outcome. This design may be summarized in a curriculum map.	Pedagogy, grading, the curriculum, relevant student support services and co-curriculum are explicitly and intentionally aligned with each outcome. Curriculum map indicates increasing levels of proficiency.
Assessment Planning	There is no formal plan for assessing each outcome.	The program relies on short-term planning, such as selecting which outcome(s) to assess in the current year.	The program has a reasonable, multi-year assessment plan that identifies when each outcome will be assessed. The plan may explicitly include analysis and implementation of improvements.	The program has a fully-articulated, sustainable, multi-year assessment plan that describes when and how each outcome will be assessed and how improvements based on findings will be implemented. The plan is routinely examined and revised, as needed.
The Student Experience	Students know little or nothing about the overall outcomes of the program. Communication of outcomes to students, e.g. in syllabi or catalog, is spotty or nonexistent.	Students have some knowledge of program outcomes. Communication is occasional and informal, left to individual faculty or advisors.	Students have a good grasp of program outcomes. They may use them to guide their own learning. Outcomes are included in most syllabi and are readily available in the catalog, on the web page, and elsewhere.	Students are well-acquainted with program outcomes and may participate in the creation and use of rubrics. They are skilled at self-assessing in relation to the outcomes and levels of performance. Program policy calls for inclusion of outcomes in all course syllabi, and they are readily available in other program documents.

## Guidelines on Using the Learning Outcomes Rubric

This rubric is intended to help teams assess the extent to which an institution has developed and assessed program learning outcomes and made improvements based on assessment results. For the fullest picture of an institution's accomplishments, reviews of written materials should be augmented with interviews at the time of the visit.

### ***Dimensions of the Rubric:***

- 1. Comprehensive List.** The set of program learning outcomes should be a short but comprehensive list of the most important knowledge, skills, and values students learn in the program. Higher levels of sophistication are expected for graduate program outcomes than for undergraduate program outcomes. There is no strict rule concerning the optimum number of outcomes, but quality is more important than quantity. Learning processes (e.g., completing an internship) should not be confused with learning outcomes (what is learned in the internship, such as application of theory to real-world practice).  
Questions. Is the list reasonable, appropriate and well organized? Are relevant institution-wide outcomes, such as information literacy, included? Are distinctions between undergraduate and graduate outcomes clear? Have national disciplinary standards been considered when developing and refining the outcomes? Are explicit criteria – as defined in a rubric, for example – available for each outcome?
- 2. Assessable Outcomes.** Outcome statements specify what students can do to demonstrate their learning. For example, an outcome might state, “Graduates of our program can collaborate effectively to reach a common goal” or “Graduates of our program can design research studies to test theories.” These outcomes are assessable because the quality of collaboration in teams and the quality of student-created research designs can be observed. Criteria for assessing student products or behaviors usually are specified in rubrics that indicate varying levels of student performance (i.e., work that does not meet expectations, meets expectations, and exceeds expectations).  
Questions. Do the outcomes clarify how students can demonstrate learning? Are there agreed upon, explicit criteria, such as rubrics, for assessing each outcome? Are there examples of student work representing different levels of mastery for each outcome?
- 3. Alignment.** Students cannot be held responsible for mastering learning outcomes without a curriculum that is designed to develop increasing sophistication with respect to each outcome. This design is often summarized in a curriculum map—a matrix that shows the relationship between courses in the required curriculum and the program's learning outcomes. Pedagogy and grading aligned with outcomes help encourage student growth and provide students feedback on their development.  
Questions. Is the curriculum explicitly aligned with the program outcomes? Do faculty select effective pedagogy and use grading to promote learning? Are student support services and the co-curriculum explicitly aligned to reinforce and promote the development of student learning outcomes?
- 4. Assessment Planning.** Programs need not assess every outcome every year, but faculty are expected to have a plan to cycle through the outcomes over a reasonable period of time, such as the timeframe for program review.  
Questions. Does the plan clarify when, how, and how often each outcome will be assessed? Will all outcomes be assessed over a reasonable period of time? Is the plan sustainable, in terms of human, fiscal, and other resources? Are assessment plans revised, as needed?
- 5. The Student Experience.** At a minimum, students need to be aware of the learning outcomes of the program(s) in which they are enrolled. Ideally, they could be included as partners in defining and applying the outcomes and the criteria for varying levels of accomplishment.  
Questions: Are the outcomes communicated to students consistently and meaningfully? Do students understand what the outcomes mean and how they can further their own learning? Do students use the outcomes and criteria to self-assess? Do they participate in reviews of outcomes, criteria, curriculum design, or related activities?

## Appendix D: AAC&U VALUE Rubrics

For a complete set of the AAC&U VALUE Rubrics, please visit [VALUE Rubrics](#).