## Contents

**Best Practices in Assessment**  3  
**Typical Assessment Process**  5  
1. Develop/State/Review/Revise Student Learning Outcomes (SLOs)  7  
2. Align Learning Opportunities  9  
3. Identify Methods and Measures  10  
4. Determine Criteria for Success  14  
5. Collect and Analyze Data  14  
6. Plan and Execute (Improvement) Actions – Address Three Basic Questions  15  
7. Document Assessment Activities  
   a. Template for Planning Assessment Projects  16  
   b. Assessment Report Template  16  

**Appendix A: Learning Outcomes**  
Institutional Learning Outcomes (ILOs)  17  
General Education Learning Outcomes (GELOs)  18  
WASC Senior College and University Commission Core Competencies  19  
BA in Business Administration  20  
BEd with Concentrations in Elementary, Middle-level, and Secondary Education  22  
BA in Humanities  23  
BA in Public Administration  25  
BA in Social Sciences  27  
Bachelor of Applied Science  29  

**Appendix B: Action Verbs for Student Learning Outcome Statements**  30  
**Appendix C: Glossary**  32  
**Appendix D: Assessing the Quality of Academic Program Learning Outcomes**  37  
**Appendix E: AAC&U VALUE Rubrics**  39
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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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**

   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).

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

<table>
<thead>
<tr>
<th>LEVELS of SLOs (Bloom et al., 1964)</th>
<th>BLOOM’S TAXONOMY EXAMPLE ACTION VERBS for Attitude SLOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internalizing Values</td>
<td>Act, Display, Influence, Modify, Practice</td>
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<tr>
<td>Organizing/Conceptualizing Values</td>
<td>Formulate, Generalize, Integrate, Reconcile, Relate</td>
</tr>
<tr>
<td>Valuing</td>
<td>Argue, Criticize, Debate, Justify, Persuade</td>
</tr>
<tr>
<td>Responding</td>
<td>Clarify, Interpret, Present, Question, React</td>
</tr>
<tr>
<td>Receiving</td>
<td>Acknowledge, Aware, Be open to, Be willing to listen, Participate</td>
</tr>
</tbody>
</table>
b. The learning context, content, or product – the Evidence

c. The measure of success – the Quality or Quantity

<table>
<thead>
<tr>
<th>Observable action or behavior</th>
<th>Learning context, content, or product</th>
<th>Measure of success</th>
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<tbody>
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</table>

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**.

For existing slos:

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.

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<tr>
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<tr>
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<td>I, A</td>
<td>I, A</td>
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<td>M</td>
<td>A</td>
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<tr>
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<td>M, A</td>
<td>M, A</td>
<td>M, A</td>
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</tbody>
</table>

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**

- Evaluation
  - Evaluate theoretical frameworks;
  - Construct an argument; Self or peer evaluation; Critique research studies
  - Design plans; Organize ideas; Propose models; Produce artifacts; Negotiate agreements
  - Analyze perspectives; Compare viewpoints; Unpack connections; Examine case studies
  - Develop presentations; Identify problem-solving strategies; Use models, formulas or equipment in real life scenarios
  - Paraphrase readings; Report observations; Summarize events; Explain concepts
  - Define concept; Match terms; List key components; Label diagram; Describe phenomena
- Synthesis
- Analysis
- Application
- Comprehension
- Knowledge

**Increasing level of complexity**
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.
- ...

*Direct evidence helps tell us “what”, and indirect evidence helps tell us “why”.*
# A note about indirect measures

<table>
<thead>
<tr>
<th></th>
<th>Why use it</th>
<th>What to watch out for</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Survey</strong></td>
<td>- Flexible question focus and format</td>
<td>- Quality of questions?</td>
</tr>
<tr>
<td></td>
<td>- Quick and easy to administer</td>
<td>- Appropriate sampling and response rate?</td>
</tr>
<tr>
<td></td>
<td>- Cost effective</td>
<td>- Survey fatigue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Social desirability bias</td>
</tr>
<tr>
<td><strong>Focus Group</strong></td>
<td>- “Richer”, in-depth information</td>
<td>- Quality of protocol?</td>
</tr>
<tr>
<td></td>
<td>- Tailored, immediate follow-up for further elaboration</td>
<td>- Facilitator’s skills?</td>
</tr>
<tr>
<td></td>
<td>- Participants react to each other’s ideas</td>
<td>- Appropriate sampling?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Time and resources for data collection and analysis?</td>
</tr>
<tr>
<td><strong>Interview</strong></td>
<td>- “Richer”, in-depth information</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Tailored, immediate follow-up for further elaboration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Privacy and personal attention</td>
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</tbody>
</table>

*Small Group Analysis:
An alternative focus group model
“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 xth student on your list.
    - Choose the next xth 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 $k = 0.41 – 0.60$, there is moderate interrater agreement.
2. If $k < 0.41$, discuss discrepancies to reach consensus
d. Create a frequency distribution of scores, including count and total. Example:

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exemplary</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>Acceptable</td>
<td>3</td>
<td>60%</td>
</tr>
<tr>
<td>Needs some improvement</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Needs substantial improvement</td>
<td>1</td>
<td>7%</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>50%</td>
</tr>
</tbody>
</table>

SLO 1: n = 20, 20%

SLO 2: n = 60, 60%

SLO 3: n = 10, 10%

SLO 4: n = 7, 7%

SLO 5: 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)
      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**
   - 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](#)
Appendix A: Learning Outcomes
Institutional Learning Outcomes (ILOs)

ILO 1: Effective Communication (*WSCUC Core Competency)
Use relevant information to communicate clearly and effectively to an intended audience through written and spoken language.

*Effective written and oral communication typically requires information literacy to access valid source material. Written communications may include (but are not limited to) narrative, descriptive, expository, and persuasive prose; developed in the context of essays, research papers, position papers, technical writing, reflections, creative writing, lesson plans or letters. Oral communications may include (but are not limited to) narrative, descriptive, expository, and persuasive discourse; in the context of preparing and delivering a speech, giving a class presentation, engaging in a small group discussion, lecturing on or explaining a topic, or debating an issue.*

ILO 2: Cultural Awareness (*WSCUC, Diversity)
Demonstrate knowledge of different cultures, sub-cultures or cultural phenomena through the study of art, music, history, literature, ideas, language or cross-cultural research.

*Cultural awareness includes demonstrated knowledge of different human activities, groups or artifacts in contemporary, historical, indigenous, artistic, musical, geographic, economic, political, legal, literary, business related or research contexts.*

ILO 3: Critical Thinking (*WSCUC Core Competency)
Demonstrate critical thinking skills by applying information to make well-reasoned arguments or solve a problem.

*Critical thinking includes using research, knowledge, math, data, ideas, concepts, theories, or other information to reason or solve a problem logically.*

ILO 4: Disciplinary Knowledge
Demonstrate knowledge of the purview, processes, and contributions associated with an academic discipline.

*Disciplinary knowledge includes knowledge of methods, history, major works, applications, technologies, and/or ethical standards associated with an academic discipline or a student’s declared concentration of study.*

ILO 5: Community Engagement (*WSCUC Core Competency)
Demonstrate engagement with campus life, the broader community or service to others through the use of co-curricular resources, participation in extra-curricular activities or service learning.

*Community engagement is demonstrated by (but is not limited to) use of the James & Abigail Campbell Library or the No’eau Center; participation in student government, academic clubs or volunteer service; attendance at campus sponsored events or enrollment in service learning courses.*
General Education Learning Outcomes (GELOs)

GELO 1: Written Communication (*WSCUC Core Competencies: Writing, Information Literacy)
Demonstrate clear and effective writing about relevant information for an intended audience.

Writing typically requires information literacy to access valid source material that is relevant to a discipline. Examples of written communications may include (but are not limited to) narrative, descriptive, expository, and persuasive prose; developed in the context of essays, research papers, position papers, technical writing, reflections, creative writing, lesson plans or letters.

GELO 2: Oral Communication (*WSCUC Core Competency)
Demonstrate clear and effective speaking skills about relevant information when communicating with an intended audience.

Speaking well typically requires information literacy to access valid source material relevant to a discipline or audience. Examples of oral communications may include (but are not limited to) narrative, descriptive, expository, and persuasive discourse; in the context of preparing and delivering a speech, giving a class presentation, engaging in a small group discussion, lecturing on or explaining a topic, or debating an issue.

GELO 3: Quantitative Reasoning (*WSCUC Core Competency)
Provide students with theoretical justifications for and limitation of mathematical or statistical methods, and the formulas, tools, or approaches used in the course.

The quantitative reasoning outcome includes application of abstract or theoretical ideas and information to the solution of practical quantitative reasoning problems arising in pure and applied research in specific disciplines, professional settings, and/or daily and civic life.

GELO 4: Hawaiian-Asian-Pacific Issues (*WSCUC, Diversity)
Demonstrate knowledge of the intersection of Native Hawaiian issues with Asian and/or Pacific Islands issues.

This knowledge should be based upon the cultural perspectives, values, and world view of the indigenous peoples of Hawai‘i, the Pacific, and/or Asia. Students will demonstrate knowledge of at least one crucial topic, such as the histories, cultures, beliefs, arts, social, political, economic or technological processes of these regions. along with critical analysis of the topic.

GELO 5: Global & Multicultural Perspectives (*WSCUC, Diversity)
Demonstrate knowledge of different cultures, civilizations, and global events associated with human history.

The global and multicultural perspectives outcome includes demonstrated knowledge of different human groups, activities or artifacts in contemporary, historical, indigenous, artistic, musical, geographic, economic, political, or literary contexts.
GELO 6: Art, Humanities, and Literature (*WSCUC, Creativity)
Demonstrate knowledge of artistic and philosophical endeavor through study of works or primary sources drawn from diverse media, genres and historical periods.

The art, humanities, and literature outcome may include (but is not limited to) demonstrated knowledge of visual arts, philosophy, religion, literature, music, or dance.

GELO 7: Social and Natural Science Literacy
Demonstrate knowledge of the purview, processes and contributions associated with different social and natural scientific disciplines.

Social and natural science literacy includes knowledge of research methods, laboratory techniques, disciplinary history or major findings of more than one social and natural science discipline. This outcome reflects what students will learn by graduation and not what a single social or natural science course will cover.

GELO 8: Contemporary Ethical Issues
Analyze a dilemma, issue or topic to develop an ethical judgment, argument or position.

Contemporary ethical issues include (but are not limited to) ethical reasoning about events, governmental policies, human rights, business practices and the conduct of research.

WASC Senior College and University Commission (WSCUC)
Core Competencies

In the 2013 Handbook of Accreditation, Criteria for Review 2.2a states: Baccalaureate programs engage students in an integrated course of study of sufficient breadth and depth to prepare them for work, citizenship, and life-long learning. These programs ensure the development of core competencies including, but not limited to, written and oral communication, quantitative reasoning, information literacy, and critical thinking.

Now, at a time when there is widespread concern about the quality of graduates’ learning, and when assessment practices have emerged that are able to address these outcomes in nuanced ways, the Commission is asking for documentation of actual achievement. While CFR 2.2a mentions additional outcomes beyond the five core competencies – e.g., creativity, appreciation for diversity, and civic engagement – the five that are the focus of component 4 were deemed generic, fundamental to students’ future success, and assessable.
BA in Business Administration
Degree Learning Outcomes (DLOs)

DLO 1: Demonstrate critical thinking, research and communication skills as applied to organizations.

DLO 2: Explain the cultural context of organizations operating in a global environment.

DLO 3: Demonstrate the knowledge and skills necessary for responsible professionals with growing responsibilities in business roles.

DLO 4: Demonstrate the ethical and behavioral skills for effective job performance.

Concentration Learning Outcomes (CLOs)

General Business Administration (GBUS):

CLO 1: Demonstrate written and oral communication skills in the field of business administration.

CLO 2: Demonstrate quantitative, technological, and analytical skills necessary for problem solving in the field of business administration.

CLO 3: Identify international, global and local issues affecting the business environment.

CLO 4: Identify ethical and legal issues of organizations and society.

Accounting:

CLO 1: Apply the necessary accounting skills to prepare and analyze financial statements and other financial information for internal or external users or regulatory agencies.

CLO 2: Demonstrate written communication utilizing information literacy skills in the field of Accounting.

CLO 3: Demonstrate an understanding of the accounting information system and the ability to use the double-entry recording system to properly identify, measure and record enterprise transactions.

CLO 4: Demonstrate an understanding of the accounting principles, concepts and standards to properly value asset, liability, equity, revenue and expense accounts.

CLO 5: Understand how to utilize financial data for management decision-making.

Facilities Management (FMGT):

CLO 1: Demonstrate basic skills to effectively manage the project management function within the context of sustainable buildings & infrastructures.

CLO 2: Demonstrate basic skills to effectively manage the operation & maintenance function within the context of sustainable buildings and infrastructures.

CLO 3: Demonstrate basic skills to effectively manage the environmental, health, and safety function within the context of sustainable buildings and infrastructures.
CLO 4: Demonstrate basic skills to effectively manage the corporate real estate portfolio within the context of sustainable buildings and infrastructures.

Finance (FIN):

CLO 1: Use quantitative tools to evaluate and manage risk and calculate company value.
CLO 2: Use time value of money concepts to solve financial problems.
CLO 3: Use valuation methods to price securities.
CLO 4: Use the capital structure of a company to calculate the firm’s cost of capital.

Hospitality & Tourism (HOST):

CLO 1: Demonstrate interpersonal and leadership skills through the usage of oral or written communication.
CLO 2: Understand central concepts, current trends, and issues in the hospitality and tourism industry within a local and global framework.
CLO 3: Demonstrate an awareness and understanding of the importance of ethical and cultural considerations within the hospitality and tourism industry.

Management (MGT):

CLO 1: Demonstrate proficiency in understanding the central concepts of management.
CLO 2: Analyze and provide solutions to management problems, policy and ethical dilemmas through written communication skills.
CLO 3: Demonstrate proficiency in using critical thinking skills necessary to discuss effective managerial decision making opportunities within a dynamic and diverse work environment.

Marketing (MKT):

CLO 1: Demonstrate proficiency in understanding the central concepts of marketing.
CLO 2: Analyze and provide solutions to marketing problems, policy and ethical dilemmas through written communication skills.
CLO 3: Demonstrate proficiency in using critical thinking skills necessary for discussing responsible managerial and leadership position in marketing organizations.
BEd with Concentrations in Elementary, Middle-level, and Secondary Education
Degree Learning Outcomes (DLOs)

DLO 1: Understand how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.

DLO 2: Use understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.

DLO 3: Work with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self-motivation.

DLO 4: Understand the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and create meaningful learning experiences that assure mastery of content.

DLO 5: Understand how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

DLO 6: Understand and use multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher’s and learner’s decision making.

DLO 7: Plan instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

DLO 8: Understand and use a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.

DLO 9: Engage in ongoing professional learning and use evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapt practice to meet the needs of each learner.

DLO 10: Seek appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.
BA in Humanities
Degree Learning Outcomes (DLOs)

DLO 1: Demonstrate knowledge of the history, philosophy, arts, and/or literature of different cultures from different global regions and indigenous traditions including Native Hawaiian.

DLO 2: Analyze contemporary issues from multiple cultural perspectives of global regions and indigenous traditions including Native Hawaiian.

DLO 3: Demonstrate an understanding of different Humanities disciplines’ concepts, methods, primary sources, and knowledge.

DLO 4: Demonstrate well-organized and competent writing using relevant information in Humanities subjects, particularly in their discipline of study in Humanities.

DLO 5: Deliver well-organized, competent oral presentations on Humanities subjects to relevant audiences.

DLO 6: Analyze research questions, problems, and issues in Humanities subjects.

Concentration Learning Outcomes (CLOs)

Creative Media (CM):

CLO 1: Demonstrate advanced technical skills in a creative medium such as digital media/design or animation.

CLO 2: Collaborate toward the end of a narrative in a creative medium such as digital film or animation.

CLO 3: Discuss and write about creative media within the context of Humanities disciplines such as literary studies and Hawaiian-Pacific studies.

CLO 4: Demonstrate knowledge of creative media production operations and protocols.

English (ENG):

CLO 1: Perform analytical, interpretive, and critical close readings of course texts and similar texts.

CLO 2: Understand the historical, sociopolitical, ideological, and cultural contexts and effects of literature, writing, and/or methodological approaches.

CLO 3: Develop sophisticated written and oral skills to construct interpretations, analyses and arguments in a variety of genres.

CLO 4: Develop metacognitive practices that facilitate critical, ethical, and meaningful engagement with course content and beyond.
Hawaiian-Pacific Studies (HPST):

CLO 1: Demonstrate knowledge of specific aspects of Native Hawaiian and/or Pacific Islander peoples (such as history, geography, politics, arts, literature, contemporary issues, and cultural practices).

CLO 2: Conduct research on specific Hawaiian-Pacific Studies topics, using primary and secondary sources, and critically analyze findings.

CLO 3: Present well-organized and competent research findings or creative work on specific Hawaiian-Pacific Studies topics in writing, orally, performances or other acceptable media.

CLO 4: Speak, read and write in Hawaiian or another Pacific language.

CLO 5: Demonstrate knowledge of indigenous Hawaiian and Pacific worldviews and perspectives.

History (HIST):

CLO 1: Write well-organized and competent expository prose about the causes of significant events in history to a set specification (e.g., Chicago Manual of Style, Turabian) or the discursive equivalent in other media as determined by faculty.

CLO 2: Give well-organized and competent oral presentations that involve the use of history (either historical topics, or the use of history in the classroom).

CLO 3: Analyze historical developments in Europe, the Americas, Asia, and the Pacific.

CLO 4: Make clear historical arguments and develop them using recognized historical methods.

CLO 5: Use sources such as novels, film, music, art, history texts, or newspapers to analyze historical issues.

Mathematics (MATH):

CLO 1: A general understanding of the different areas of mathematics and its applications, and how they interrelate, and the importance of mathematics in a scientifically oriented society.

CLO 2: Classical theorem-proving skills, which include the ability to reason quantitatively and to apply the rigor necessary to construct proofs, proofs by contradiction, and proofs by induction.

CLO 3: A refined understanding of the problem-solving process, formulate definitions, give examples and counterexamples, and make inferences and generalizations.

CLO 4: Experience conducting research and reading, writing, and articulating mathematically-related material without supervision.

CLO 5: A working knowledge of technology appropriate to the field.

CLO 6: The skills necessary to solve problems using a variety of techniques, including algebraic, numerical, and spatial reasoning through visualization.
BA in Public Administration
Degree Learning Outcomes (DLOs)

DLO 1: Demonstrate critical thinking, research, and communication skills as applied to the public and private sectors.

DLO 2: Explain the cross-cultural context of public and private institutions operating in a global environment.

DLO 3: Manage diversity issues within an organizational framework.

DLO 4: Identify major issues in today’s public and private institutions.

DLO 5: Demonstrate the integrative knowledge, skills, and ethics necessary for responsible administrative, management and leadership positions.

DLO 6: Demonstrate the management, legal, ethical, and behavioral skills for effective job performance and career mobility.

Concentration Learning Outcomes (CLOs)

Community Health (CH):

CLO 1: Demonstrate effective communication skills in community health.

CLO 2: Demonstrate quantitative, technological analytical skills necessary for solving community health issues.

CLO 3: Apply the principles of community health to issues affecting international/global/local community health organizations.

CLO 4: Demonstrate proficiency in the central concepts of community health behavior, epidemiological investigation, and policy.

CLO 5: Synthesize and provide solutions to community health problems, policy and ethical/legal dilemmas.

General Public Administration (PUBG):

CLO 1: Demonstrate effective communications skills.

CLO 2: Demonstrate quantitative, technological and analytical skills necessary for problem solving.

CLO 3: Identify International/global/local issues affecting public administration organizations.

CLO 4: Apply the principles of effective public sector management.

CLO 5: Demonstrate knowledge of ethical/legal responsibilities of organization and society.
Disaster Preparedness & Emergency Management (DPEM):

CLO 1: Demonstrate effective communications skills.

CLO 2: Demonstrate quantitative, technological and analytical skills necessary for problem solving.

CLO 3: Identify international/global/local issues affecting the disaster preparedness organizations.

CLO 4: Demonstrate proficiency in understanding the central concepts of disaster preparedness and emergency management and policy.

CLO 5: Exhibit knowledge of ethical/legal responsibilities of organizations in disaster preparedness and emergency management administration.

Health Care Administration (HCAD):

CLO 1: Demonstrate effective communications skills.

CLO 2: Demonstrate quantitative, technological and analytical skills necessary for problem solving in health care organizations.

CLO 3: Identify international/global/local issues affecting health care organizations.

CLO 4: Demonstrate proficiency in understanding the central concepts of healthcare systems, management and policy.

CLO 5: Analyze and provide solutions to health care problems, policy and ethical dilemmas.

Justice Administration (JAD):

CLO 1: Demonstrate effective communication skills.

CLO 2: Demonstrate quantitative, technological and analytical skills necessary for problem solving specific justice administration issues.

CLO 3: Apply the principles of justice administration to local, state, and federal criminal justice systems.

CLO 4: Identify and evaluate problems, policy dilemmas, and solutions in justice administration.

CLO 5: Exhibit knowledge of ethical/legal responsibilities of organizations in justice administration.
BA in Social Sciences  
Degree Learning Outcomes (DLOs)

DLO 1: Clear and effective writing using the conventions of a particular Social Sciences discipline.
DLO 2: Knowledge of philosophical or cultural issues associated with different Social Sciences.
DLO 3: Knowledge of how quantitative or qualitative data are used in the Social Sciences.
DLO 4: Knowledge of the methods associated with a Social Sciences discipline.
DLO 5: Critical thinking about the knowledge, theories, literature or methods of a Social Sciences discipline.

Concentration Learning Outcomes (CLOs)

Anthropology (ANTH):
CLO 1: Write clearly and effectively for an anthropology audience.
CLO 2: Speak clearly and effectively about anthropology topics.
CLO 3: Demonstrate knowledge of empirical anthropology research methods and analyses.
CLO 4: Apply anthropology knowledge to the analysis of cultural and global issues and perspectives.
CLO 5: Demonstrate critical thinking by applying anthropology theories and/or methods to analyze problems in responsible and ethical ways.

Early Childhood Education (ECED):
CLO 1: Plan, implement and evaluate early childhood curriculum and identify the theories and program models that inform curricular choices.
CLO 2: Apply formal and informal observation methods to diverse groups and individual children and communicate effectively with families and other professionals about student progress.
CLO 3: Demonstrate respectful and reciprocal relationships with families, appropriate communication and guidance practices with young children, and positive parent-school relations.
CLO 4: Demonstrate knowledge of fiscal, educational, physical, and human resources for effective early childhood program development.
CLO 5: Advocate for children and families based upon knowledge of ethical and professional standards, critical thinking, socio-political analysis of programs, self-reflection, and commitment to social justice.
Economics (ECON):

CLO 1: Use marginal analysis (including supply and demand) to explain regulated and unregulated markets.

CLO 2: Use models of market structures to analyze perfect competition and monopoly

CLO 3: Use theory to explain how trade enhances growth.

CLO 4: Use aggregate demand and supply analysis to explain inflation, unemployment and growth.

CLO 5: Develop quantitative skills for models and real world issues.

Political Science (POLS):

CLO 1: Demonstrate effective writing skills about political systems and processes using a consistent citation style.

CLO 2: Demonstrate effective oral communication skills connecting personal experiences with an understanding of various political practices and civic engagement.

CLO 3: Demonstrate critical and integrative thinking skills in understanding the role of the individual from local to global politics.

Psychology (PSY):

CLO 1: Demonstrate clear and effective writing about Psychology in APA style.

CLO 2: Demonstrate knowledge of the history, systems and philosophical foundations of Psychology.

CLO 3: Demonstrate knowledge of how statistics are applied in Psychology.

CLO 4: Demonstrate knowledge of Psychological research methods and ethics.

CLO 5: Demonstrate psychological knowledge about human development, social/cultural phenomena, clinical applications or experimental research.

CLO 6: Think critically about psychological literature, theory, methods or applications.

Sociology:

CLO 1: Write clearly and effectively in ASA style.

CLO 2: Speak clearly and effectively about sociological topics.

CLO 3: Demonstrate knowledge of empirical research design and statistical analysis.

CLO 4: Apply sociological knowledge to the analysis of cultural and global issues and perspectives.

CLO 5: Demonstrate critical thinking by applying sociological theories to analyze social issues or problems.
Bachelor of Applied Science
Degree Learning Outcomes (DLOs)

DLO 1: Write clearly and effectively using generally accepted scientific style, such as for research papers and lab reports.

DLO 2: Report orally on scientific subjects, using clear and objective style and well-reasoned sequences of information.

DLO 3: Analyze scientific results, using quantitative and qualitative techniques.

DLO 4: Demonstrate understanding of the ethical issues relevant to managers and practitioners in applied sciences and administrative fields.
# Appendix B: Action Verbs

## Attitude Student Learning Outcomes (SLOs)

<table>
<thead>
<tr>
<th>Receive</th>
<th>Respond</th>
<th>Value</th>
<th>Organization/Conceptualization of Values</th>
<th>Internalization of Values</th>
</tr>
</thead>
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<tr>
<td>Ask</td>
<td>Accept</td>
<td>Assume responsibility</td>
<td>Adhere</td>
<td>Act</td>
</tr>
<tr>
<td>Attend</td>
<td>Aid</td>
<td>Complete</td>
<td>Alter</td>
<td>Approach</td>
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<td>Aware</td>
<td>Answer</td>
<td>Continue to desire</td>
<td>Arrange</td>
<td>Arrive</td>
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<td>Be alert</td>
<td>Assist</td>
<td>Demonstrate</td>
<td>Combine</td>
<td>Change</td>
</tr>
<tr>
<td>Be conscious</td>
<td>Comply</td>
<td>Differentiate</td>
<td>Compare</td>
<td>Discriminate</td>
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<td>Be sensitive</td>
<td>Conform</td>
<td>Devote</td>
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<td>Display</td>
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<td>Choose</td>
<td>Consider</td>
<td>Enable</td>
<td>Crystallize</td>
<td>Examine</td>
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<td>Cooperate</td>
<td>Examine</td>
<td>Defend</td>
<td>Influence</td>
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<td>Discuss</td>
<td>Feel</td>
<td>Generalize</td>
<td>Judge</td>
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<td>Listen</td>
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<td>Display</td>
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<td>Willingness to hear</td>
<td>Respond</td>
<td>Work</td>
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### Knowledge/Skills Student Learning Outcomes (SLOs)

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<thead>
<tr>
<th>Remember</th>
<th>Understand</th>
<th>Apply</th>
<th>Analyze</th>
<th>Create</th>
<th>Evaluate</th>
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## Appendix C: Glossary

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<tr>
<th>TERM</th>
<th>DEFINITION/EXPLANATION</th>
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</table>
| **Academic Map**| Academic maps are created *AFTER* curriculum maps to help guide students through the how of registering and sequencing of courses for completion of the degree.  
N.B. Curriculum maps are created *FIRST* as they provide the *what* and the *why* for a program’s curricula and course sequence.                                                                                                        |
| **Alignment**   | A curriculum that is designed to develop increasing sophistication with respect to each outcome.  
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. |
| **Assessment**  | "Assessment of student learning 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) |
| **Assessment Plan** | An assessment plan contains the details of how you will work through the steps of the *assessment cycle*. At its most basic level an assessment plan answers these three questions:  
1. Which student learning outcomes will you focus on?  
   a. If your program does not have learning outcomes, then plan to develop these as a first step.  
   b. If your program has learning outcomes, then plan to consider if these reflect your current program or if they need revision.  
   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.  
2. What evidence will you use to determine how well students are achieving the selected outcomes?  
   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 *curriculum map*.  
   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. |
learning you will use (e.g., an existing exam, survey, presentation, paper, performance).

c. If you have selected the evidence you will use, then plan when, where, and who will collect this evidence.

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).

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).

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.

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.

3. How will you use the information to improve your program?

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.

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.

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).

d. You will also want to plan to reassess the outcomes at a later time to determine if improvement in student learning occurred.


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<th>TERM</th>
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<tr>
<td>Authentic Assessment</td>
<td>Determining the level of student knowledge/skill in a particular area by evaluating his/her ability to perform a &quot;real world&quot; 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.</td>
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<td>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.</td>
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<tr>
<td>Benchmark</td>
<td>A reference point by which a program can measure themselves for the purpose of comparison; used for comparison or goal setting.</td>
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<td>Example: 76% of seniors met expectations by scoring “3” or higher, which falls short of our 80% benchmark.</td>
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<tr>
<td>Course Assessment</td>
<td>Assessment to determine the extent to which a specific course is achieving its learning outcomes.</td>
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<tr>
<td>Criteria for Success</td>
<td>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.</td>
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<tr>
<td>Curriculum Map</td>
<td>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).</td>
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<td>N.B. Curriculum maps are created <strong>FIRST</strong> as they provide the <strong>what</strong> and the <strong>why</strong> for a program’s curricula and sequence of courses. Advising maps come <strong>SECOND</strong> and are used to help guide students through the <strong>how</strong> of registering and sequencing of courses for completion of a degree.</td>
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<td>Direct Assessment</td>
<td>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.</td>
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<td>Examples: exams, course work, essays, oral performance.</td>
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<tr>
<td>Embedded Assessment</td>
<td>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)</td>
</tr>
<tr>
<td>TERM</td>
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| Formative Assessment | The goal of formative assessment is to monitor student learning to provide ongoing feedback that can be used to improve students’ acquisition of the slos as well as improving instruction.  
| Indirect Assessment | Composed of proxy signs such as surveys that students are probably learning. Reported perceptions about student mastery of a given SLO.  
Examples: surveys, interviews, focus groups.  
| Portfolio          | 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:  
**Showcase Portfolios:** Students select and submit their best work. The showcase portfolio emphasizes the products of learning.  
**Developmental Portfolios:** 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.  
| Program Assessment  | “The systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development” (Palomba & Banta, 1999)  
| Reliability        | “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.”  
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| Rubric               | 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.  
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.  
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. |
| Standard             | 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.  
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.                                                                                                                                                                                                                                                                                     |
| Student Learning     | 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.                                                                                                           |
| Summative Assessment | The goal of summative assessment is to evaluate student learning at the end of an instructional unit by comparing it against a given standard.                                                                                                                                                                                                                                                                                                       |
| Triangulation        | 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.                                                                                                                                                                                                                                                             |
| Validity             | 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. (Standards for Educational and Psychological Testing, 1999)                                                                                                                 |
# Appendix D

## Rubric for Assessing the Quality of Academic Program Learning Outcomes

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<tr>
<th>Criterion</th>
<th>Initial</th>
<th>Emerging</th>
<th>Developed</th>
<th>Highly Developed</th>
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<tr>
<td><strong>Comprehensive List</strong></td>
<td>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).</td>
<td>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.</td>
<td>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.</td>
<td>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.</td>
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<tr>
<td><strong>Assessable Outcomes</strong></td>
<td>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.</td>
<td>Most of the outcomes indicate how students can demonstrate their learning.</td>
<td>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.”</td>
<td>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.</td>
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<tr>
<td><strong>Alignment</strong></td>
<td>There is no clear relationship between the outcomes and the curriculum that students experience.</td>
<td>Students appear to be given reasonable opportunities to develop the outcomes in the required curriculum.</td>
<td>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.</td>
<td>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.</td>
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<tr>
<td><strong>Assessment Planning</strong></td>
<td>There is no formal plan for assessing each outcome.</td>
<td>The program relies on short-term planning, such as selecting which outcome(s) to assess in the current year.</td>
<td>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.</td>
<td>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.</td>
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<tr>
<td><strong>The Student Experience</strong></td>
<td>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.</td>
<td>Students have some knowledge of program outcomes. Communication is occasional and informal, left to individual faculty or advisors.</td>
<td>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.</td>
<td>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.</td>
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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 E: AAC&U VALUE Rubrics

For a complete set of the AAC&U VALUE Rubrics, please visit https://www.aacu.org/value-rubrics.