Writing Student Learning Outcomes

**Outcomes** - Detailed, specific, measurable or identifiable, and personally meaningful statements that are derived from the goals and articulate what the end result of a unit, program, course, activity, or process is.

Outcomes should be:

- Measureable (not necessarily countable) or observable.
- Manageable
- Meaningful

**Learning Outcomes** An easily identified action that a student is expected to demonstrate in terms of knowledge, skills, and attitudes upon completion of a program/course.

When writing your learning outcomes, focus on the end result of your teaching. How will you know that the students have learned what you want from them? What does it look like? How will you identify it? Use simple, specific action verbs to describe what students are expected to demonstrate upon completion of a program. Examples include:

Students will be able to {action verbs to describe knowledge, skills, or attitude} 1

**Action verbs** - Concrete verbs such as "define," "apply," or "analyze" are more helpful for assessment than verbs such as "be exposed to," "understand," "know," or "be familiar with." 2

<table>
<thead>
<tr>
<th>Cognitive Learning</th>
<th>Articulate, define, indicate, name, order, recognize, relate, recall, reproduce, list, tell, describe, identify, show, label, tabulate, quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge - to recall or remember facts without necessarily understanding them</td>
<td>classify, describe, discuss, explain, express, interpret, contrast, associate, differentiate, extend, translate, review, suggest, restate</td>
</tr>
<tr>
<td>Comprehensive - to understand and interpret learned information</td>
<td>apply, compute, give examples, investigate, experiment, solve, choose, predict, translate, employ, operate, practice, schedule</td>
</tr>
<tr>
<td>Application - to put ideas and concepts to work in solving problems</td>
<td>analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, distinguish, examine, investigate, interpret</td>
</tr>
<tr>
<td>Analysis - to break information into its components to see interrelationships</td>
<td>arrange, assemble, collect, compose, construct, create, design, formulate, manage, organize, plan, prepare, propose, set up</td>
</tr>
<tr>
<td>Synthesis - to use creativity to compose and design something original</td>
<td>appraise, assess, defend, judge, predict, rate, support, evaluate, recommend, convince, conclude, compare, summarize</td>
</tr>
<tr>
<td>Evaluation - to judge the value of information based on established criteria</td>
<td>appreciate, accept, attempt, challenge, defend, dispute, join, judge, praise, question, share, support</td>
</tr>
</tbody>
</table>

**Learning Outcome Examples**

**Learning Outcome** - Graduates will be able to **collect** and **organize** appropriate clinical data, **apply** principles of evidence-based medicine to determine clinical diagnoses, and **formulate** and **implement** acceptable treatment modalities.

**Learning Outcome** - Graduates will be able to identify various aspects of architectural diversity in their design projects.

**Learning Outcome** - Graduates will be able to critically analyze and evaluate current research.