## Learning Outcome Assessment Matrix

### Example of Chemistry Course

<table>
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<tr>
<th>Overarching Goal</th>
<th>Desired Learning Outcome</th>
<th>Teaching Methods</th>
<th>Pre-/Post-Assessment</th>
<th>Direct Assessment</th>
<th>Indirect Assessment</th>
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| The overall goal is to provide quality lecture content in easily identified topic modules that students can access based on their topic needs – be it initial exposure to a topic or review of a topic for a more in depth analysis. Some video topics will also include step by step procedures on how to solve a problem. | Have a conceptual understanding of what a balanced chemical equation represents. | Discussion of how chemical equations represent a symbolic short hand representation of a chemical reaction along with visual examples. | Q. What do chemical equations represent?  
A. They are a symbolic short hand representation of a chemical reaction. | X | |
| | | | Q. I have a clear understanding of what a balanced chemical equation represents.  
A. Strongly Disagree; Somewhat Disagree; Neutral; Somewhat Agree; Strongly Agree | X | |
| | Have a conceptual understanding of why it needs to be balanced. | Discussion of conservation of each atom type, and conservation of mass, in chemical reactions. | Q. Why do we balance chemical equations?  
A. In a chemical reaction the number and identity of each atom does not change and therefore the total number of each atom type on the left of the chemical equation, the reactants, must equal (balance) the total number of each atom type on the right of the chemical equation, the products. ………. | X | |