

Major Learning Outcomes (Section IV)

Please review the discussion on Integration on page 18 before composing learning outcomes.

Major Learning Outcomes describe the goals and objectives of a course. Learning outcomes are a list of descriptions of behavioral attributes that a student will acquire as a result of completing a class with a passing grade. There are three basic forms of learning outcomes

1. **Topical Outcomes.** Learning outcomes that relate to major topics of a course. These are the most common form of learning outcomes.
2. **Global learning outcomes.** Learning outcomes that link together major topics of a course.
3. **Specific learning outcomes.** Learning outcomes that highlight a particularly important component of a course.

Header. The form of the Major Learning Outcomes section is:

Figure 1 Format of the Major Learning Outcomes Section (IV)

IV. MAJOR LEARNING OUTCOMES Upon completion of this course a student will be able to: A. Analyze ... B. Define ... C.
--

Major Learning Outcomes. List the desired outcomes in behavioral or performance terms, (i.e., what a successful learner is able to do upon completion of the course). While instructors may vary in their approach to course material, the department as a whole should specify abilities or competencies expected of all students in the course. Include the theories, principles, and concepts of the subject matter. Use skills and applications to reinforce and develop concepts.

Format. Begin each outcome with an action verb from the tables below. Describe what the learner will do when demonstrating achievement of that outcome upon completion of the course. Enumerate (letter) each outcome. The following are sample course outcomes taken from a variety of disciplines:

Figure 2 Example Course Major Learning Outcomes (IV)

A. <i>Identify</i> and <i>correct</i> errors in punctuation, grammar, and spelling.
D. <i>Write</i> argumentative essays responding to criticism or opposing arguments.
J. <i>Describe</i> the role of culture in political institutions.
A. <i>Compare</i> and <i>contrast</i> capitalism and other economic systems.
B. <i>Describe</i> the structure and function of prokaryotes and organelles in an eukaryotic cell.
M. <i>Convert</i> decimal integer and real numbers into binary notation.
C. <i>Summarize</i> the basic principles of the Constitution and the Bill of Rights.
D. <i>Describe</i> fundamental American political values that flow from the Constitution.

Note that the learning outcomes are short declarative sentences.

When creating learning outcomes:

1. Have at least one learning outcomes for each major topic in the Contents outline.
2. Do not have learning outcomes for sub-major or detail level topics of the course (see next).
3. Include learning outcomes for sub-major topics and detail topics only if they are unusually important components of the course.

Critical thinking. Degree-applicable courses require demonstrable critical thinking. The incorporation of critical thinking must be evident throughout the course outline, but particularly in the Major Learning Outcomes, Methods of Instruction, and Methods of Evaluation. Table 1 below contains the verbs associated with critical thinking.

It must be clear that students are expected to think critically, are instructed in how to do so, and are held accountable for their performance. Use verbs showing analysis, rather than “understand,” “identify,” or “describe.” Say “explain...” or “compare and contrast... .” The manner in which the Major Learning Outcomes section reflects critical thinking is in the higher cognitive expectations. A useful way to evaluate the cognitive level of a learning outcome is to use Bloom’s taxonomy (Bloom, Benjamin S., TAXONOMY OF EDUCATIONAL OBJECTIVES, HANDBOOK 1: COGNITIVE DOMAIN, New York, David McKay Co. Inc) and other verb tables.

Rigor. Credit degree applicable courses must use verbs from Table 1 and may selectively use verbs from Table 2. *Verbs from Tables 3 and 4 Error! Reference source not found. cannot be used for credit courses.*

The following tables contain verbs that are to be used to construct course learning outcomes. The first and second tables are based on Bloom’s Taxonomy. Some verbs may appear in more than one section of a table or in different tables. Verbs in italics appear in more than one category of the Bloom’s Taxonomy.

Complexity. In each table the verbs in the higher rows are considered to be of higher complexity and in the lower rows verbs of lesser complexity. **Table 1 Cognitive Verbs (critical thinking)**

Cognitive Verbs (Degree applicable, credit courses, critical thinking)			
Evaluation – The ability to make decisions, judge, or make selections based on criteria and rationale. Evaluation requires synthesis.			
<i>appraise</i> assess choose <i>compare</i> conclude	consider <i>criticize</i> estimate evaluate judge	measure rate revise score	select value weigh
Synthesis – The ability to combine elements to form an original entity. Synthesis requires analysis.			
arrange assemble collect compose construct	create design formulate integrate manage	<i>organize</i> plan predict prepare produce	propose set up <i>solve</i> <i>summarize</i> synthesize

Analysis – The ability to separate a whole into its parts until the relationships between elements are clear. The ability to perform analysis requires the ability to apply information.			
analyze <i>appraise</i> <i>calculate</i> categorize <i>classify</i> <i>compare</i> contrast	<i>criticize</i> debate deduce <i>describe</i> diagram differentiate	discriminate <i>distinguish</i> examine experiment inspect <i>interpret</i>	inventory question relate <i>solve</i> test <i>translate</i>

Verbs in the following tables may not, and in some instances, do not require critical thinking.

Table 2 Cognitive Verbs

Cognitive Verbs (Nondegree applicable, credit courses, critical thinking)			
Application The ability to use information in a situation different than the original learning context. Comprehension is required.			
apply <i>calculate</i> <i>choose</i> <i>classify</i> <i>demonstrate</i> dramatize	employ <i>generalize</i> illustrate <i>interpret</i> operate	<i>organize</i> practice reconstruct schedule shop	sketch <i>solve</i> transfer translate use
Comprehension – The ability to interpret, translate, summarize or paraphrase given information. Knowledge is required.			
change comment <i>demonstrate</i> <i>describe</i> discuss explain	express <i>generalize</i> give example identify illustrate infer	<i>interpret</i> locate rearrange recognize report restate	review <i>summarize</i> tell transform <i>translate</i>
Knowledge – The ability to recognize and recall facts and specifics.			
define <i>distinguish</i> identify inquire label	list match memorize name	recall recognize record	relate repeat select underline