

# Assessment Guidance for Academic Programs

## Defining Learning Outcomes

Learning outcomes (LOs) are the specific knowledge, skills, and values students should acquire upon successful completion of a program of study. That is, they are the competencies required for a student to graduate and succeed in their chosen profession or continued studies.

A well-written Learning Outcome:

- Is student-centered
  - Written in the format “Students will be able to . . .”
- Includes an active verb
  - define, select, interpret, apply, solve, deduct, construct, plan, etc.
- Is measurable
  - Specific, observable, and quantifiable
- And is appropriate to the degree level

*How to begin developing learning outcomes*

Developing learning outcomes should begin with a discussion among program faculty about what a successful program graduate should know, think, or be able to do. Below are specific questions that can be used to guide this discussion.

- What should students be able to do upon graduating?
- What knowledge, skills, or abilities should the student demonstrate?
- How will students demonstrate what they have learned?

Additional Resources for Developing LOs
<ul style="list-style-type: none"><li>• Industry or disciplinary standards</li><li>• Professional association guidelines</li><li>• Licensure or certification criteria</li><li>• Accreditation standards</li><li>• Program mission</li><li>• Curriculum design</li><li>• Course syllabi</li></ul>

*How to structure Learning Outcomes*

There are a variety of guidelines for how to structure a learning outcome. Two of the more practical approaches are presented here.

*Fill-in the blank blueprint:* This simple formula pulls directly from the guiding questions for faculty discussions about what a graduating student should know, think, or be able to do.

1. What knowledge, skills, or abilities should the student demonstrate?
  - *Learning to be observed*
2. How will the students demonstrate what they have learned?
  - *Action verb*

The answers to these questions are used to “fill-in the blanks” of the blueprint.

Students will be able to [action verb] + [clear description of measurable learning to be observed].

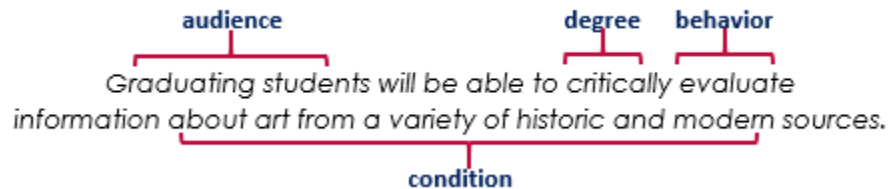
ABCD Model of Learning Outcomes: This method provides more specificity to learning outcomes while allowing more flexibility in the structure of the sentence.

Audience -Who does the outcome pertain to?

Behavior---What will students be able to think, know, or do? (action verb)

Condition -Under what conditions or circumstances with the learning be demonstrated?

Degree ----How well will the behavior need to be performed and to what level?



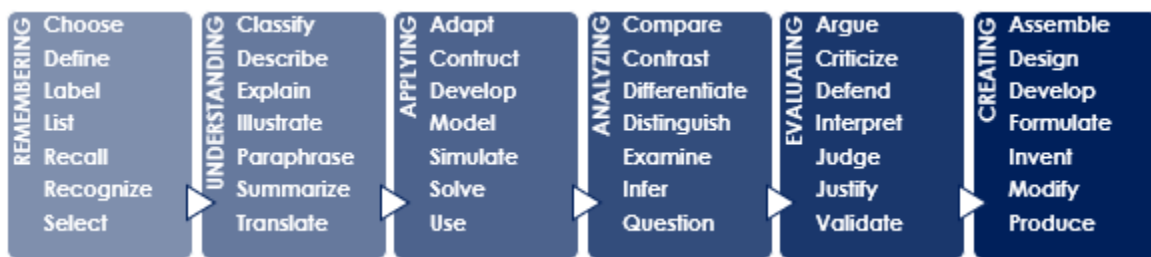
A selection of example learning outcomes can be found in Appendix A.

### Selecting the right action verb

As noted above, a key element to a well-crafted learning outcome is the inclusion of an *active verb* that expresses what students should be able to think, know, or do. Bloom’s Taxonomy provides a framework for selecting the appropriate action verb. There are multiple tables and charts available that list action verbs for each level of learning in Bloom’s Taxonomy, including the one below and in Appendix B. To use Bloom’s Taxonomy:

1. Define the level of learning to occur
2. Then select an action verb that conveys how students will demonstrate the knowledge, skills, or abilities they will have acquired.

**Figure 1: Bloom’s Revised Taxonomy Action Verbs**



*Verbs to avoid:* Be careful to avoid language that is not observable or measurable. Verbs such as the following can be too vague to meaningfully assess.

*Understand*                      *Appreciate*                      *Learn/Think about*  
*Become familiar with*                      *Gain an awareness of*

### Additional Assistance

Additional resources can be found on the Office of Institutional Effectiveness website at [https://www.southalabama.edu/departments/institutionaleffectiveness/academic\\_program\\_assessment\\_reporting\\_resources.html](https://www.southalabama.edu/departments/institutionaleffectiveness/academic_program_assessment_reporting_resources.html). You can also contact us at [assessment@southalabama.edu](mailto:assessment@southalabama.edu).

## **Appendix A: Example Learning Outcomes**

Unless otherwise noted all examples were selected from 2022-23 assessment plans for University of South Alabama programs. Examples may have been edited for clarity, consistency, and completeness.

### **Computer Science, BSCS**

- Students will analyze complex computing problems and apply principles of computing and other relevant disciplines to identify solutions.
- Students will demonstrate effective written and oral communication skills in a variety of professional contexts.

### **Visual Arts, BA**

- Students will be able to interpret works of art in terms of their function, meaning, and reception within their particular historical and cultural context.
- Students will incorporate conceptual aspects of personal creative work within their written artist statement.

### **Civil Engineering, BSCE**

- Students will demonstrate an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- Students will demonstrate an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

### **Emergency Medical Services, BBSEMS**

- Students will demonstrate the ability to comprehend, synthesize, and apply EMS management and leadership principles relevant to the field of Emergency Medical Services
- Students will demonstrate the ability to apply research methods in the area of healthcare.

### **Geography, BS**

- Students will be able to articulate the theories, philosophies, and concepts in the discipline of geography, including the processes and patterns of natural and human features on Earth and of human-environment interactions.
- Students will be able to apply geographic perspectives to problem-solving and statistically analyze geographic data.

### **Sport Management and Recreation Studies, BS**

- Students will display knowledge of how organizational systems operate, how programming is planned, and how managerial functions are performed relating to sport and recreation management.
- Students will demonstrate proficiency in the design, evaluation, and reflection of services in the sport and recreation management settings.

**Accounting MACC**

- Students will be able to perform professional financial accounting research using the FASB Codification to solve complex financial accounting cases.
- Students will conduct research into complex tax questions and write a justification for choosing a course of action.

**History, MA**

- Students will demonstrate a capacity to read critically and evaluate secondary sources concerning historical issues and problems.
- Students will interpret and critically evaluate primary sources, place them in proper historiographical context, and make an original contribution to the historical literature.

**Electrical Engineering, MSME**

- Students will be able to solve advanced electrical engineering problems requiring the practical application of specialized knowledge obtained through advanced coursework in the core areas of electrical engineering.
- Students will demonstrate comprehensive knowledge of professional ethics and research integrity by applying these principles effectively in their respective fields.

**Information Systems, MS**

- Students will design and develop structured query language (SQL) statements and entity-relationship diagrams (ERDs) for advanced modeling scenarios.
- Students will design and implement a web-based model-view-controller (MVC) application with database connectivity, full create/read/update/delete (CRUD) functionality, and a well-designed graphical user interface (GUI).

**School Counseling, MED**

- Students will identify and describe theories and models of multicultural counseling, cultural identity development, social justice, and advocacy.
- Students will identify and discuss factors that affect human growth, development, and behavior.

**Clinical and Counseling Psychology, PhD**

- Students will demonstrate comprehension and understanding of advanced concepts, theories, facts, information, research findings, principles, and best practices in clinical and counseling psychology.
- Students will demonstrate an understanding of and ability to apply advanced knowledge of research methods and statistics in clinical and counseling psychology.

**Nursing, DNP**

- Students will use theories, concepts, and analytic methodologies to design, implement, and evaluate practice by applying evidence to transform nursing systems.
- Students will develop practice standards based on the integration of ethics and evidence-based nursing care.

## Appendix B

Bloom's Revised Taxonomy of Learning Domains and Action Verbs			
<p>Bloom's Revised Taxonomy represents a continuum of increasing cognitive complexity from lower-order thinking skills to higher-order thinking skills. This cognitive development is represented through six domains of learning, from fundamental memorization to advanced critical thinking skills. Bloom's Taxonomy verbs are useful for writing observable and measurable learning outcomes.</p>			
<b>REMEMBERING:</b> Can the student recall or remember the information?			
Arrange	Identify	Memorize	Recognize
Define	Label	Name	Reproduce
Duplicate	List	Recall	Select
Enumerate	Match	Recite	State
<b>UNDERSTANDING:</b> Can the student explain ideas or concepts?			
Approximate	Explain	Infer	Restate
Classify	Extend	Interpret	Report
Describe	Generalize	Outline	Summarize
Discuss	Illustrate	Paraphrase	Translate
<b>APPLYING:</b> Can the student use the information in a new way?			
Adapt	Demonstrate	Illustrate	Prepare
Build	Derive	Interview	Simulate
Compute	Examine	Model	Solve
Construct	Identify	Organize	Use
<b>ANALYZING:</b> Can the student distinguish between the different parts?			
Analyze	Conclusion	Distinguish	Investigate
Categorize	Contrast	Examine	Simplify
Classify	Discover	Experiment	Question
Compare	Dissect	Infer	Test
<b>EVALUATING:</b> Can the student justify a stand or decision?			
Appraise	Defend	Judge	Prioritize
Argue	Determine	Justify	Rate
Conclude	Estimate	Measure	Recommend
Critique	Evaluate	Opinion	Support
<b>CREATING:</b> Can the student create a new product or point of view?			
Assemble	Construct	Formulate	Plan
Combine	Create	Improve	Propose
Compile	Design	Invent	Solution
Compose	Develop	Modify	Solve

Adapted from: Anderson, L. W., & Krathwohl, D. R. (2001). A taxonomy for learning, teaching, and assessing, Abridged Edition. Boston, MA: Allyn and Bacon.