## Writing program learning objectives

***Program learning objectives*** *are broad statements of skills, values and attitudes that describe what graduates of the curriculum know and are able to do. They are typically written in future tense, “graduates will be able to…”*

*The three domains of learning include*

* *Cognitive: what students know and can do*
* *Affective: what graduates think or care about; attitudes and values*
* *Psychomotor: what physical or kinesthetic skills graduates have*

Well-written program learning objectives are observable, measurable, and specific. Including verbs from Bloom’s taxonomy (see below) helps to make them measurable and to designate the level of intended learning.

A basic template for program learning objectives is the following:

*“Graduates will be able to”*

***+*** *action verb chosen from Bloom’s Taxonomy of Learning Objectives indicating level of intended learning*

***+*** *phrase providing disciplinary context for the action*

**Bloom’s Taxonomy of Learning Objectives:**

**Cognitive domain**

**Lower order thinking**

**Higher order thinking**

## REVISED Bloom’s Taxonomy Action Verbs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Definitions** | **I. Remembering** | **II. Understanding** | **III. Applying** | **IV. Analyzing** | **V. Evaluating** | **VI. Creating** |
| **Bloom’s Definition** | Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers. | Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas. | Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way. | Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations. | Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria. | Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions. |
| **Verbs** | * Choose
* Define
* Find
* How
* Label
* List
* Match
* Name
* Omit
* Recall
* Relate
* Select
* Show
* Spell
* Tell
* What
* When
* Where
* Which
* Who
* Why
 | * Classify
* Compare
* Contrast
* Demonstrate
* Explain
* Extend
* Illustrate
* Infer
* Interpret
* Outline
* Relate
* Rephrase
* Show
* Summarize
* Translate
 | * Apply
* Build
* Choose
* Construct
* Develop
* Experiment with
* Identify
* Interview
* Make use of
* Model
* Organize
* Plan
* Select
* Solve
* Utilize
 | * Analyze
* Assume
* Categorize
* Classify
* Compare
* Conclusion
* Contrast
* Discover
* Dissect
* Distinguish
* Divide
* Examine
* Function
* Inference
* Inspect
* List
* Motive
* Relationships
* Simplify
* Survey
* Take part in
* Test for
* Theme
 | * Agree
* Appraise
* Assess
* Award
* Choose
* Compare
* Conclude
* Criteria
* Criticize
* Decide
* Deduct
* Defend
* Determine
* Disprove
* Estimate
* Evaluate
* Explain
* Importance
* Influence
* Interpret
* Judge
* Justify
* Mark
* Measure
* Opinion
* Perceive
* Prioritize
* Prove
* Rate
* Recommend
* Rule on
* Select
* Support
* Value
 | * Adapt
* Build
* Change
* Choose
* Combine
* Compile
* Compose
* Construct
* Create
* Delete
* Design
* Develop
* Discuss
* Elaborate
* Estimate
* Formulate
* Happen
* Imagine
* Improve
* Invent
* Make up
* Maximize
* Minimize
* Modify
* Original
* Originate
* Plan
* Predict
* Propose
* Solution
* Solve
* Suppose
* Test
* Theory
 |

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

## Establishing learning objectives for your program

## The following list suggests multiple methods for developing program learning objectives.

## Check your disciplinary organizations to see if they publish a list of program learning objectives.

## Examine learning outcomes in a capstone or major 400 level course. List the knowledge and skills needed for major course projects.

## Look at programs that are similar to yours, or the same as yours but taught at a different campus, for good examples.

## Conduct an alumni survey to gather information about what is expected of graduates of your program.

## Learning Objective Examples

### Biology

Graduates will be able to

1. apply information from core subjects in the biological sciences, including cell biology, genetics, and evolution.
2. effectively communicate scientific ideas in both written and oral formats.
3. demonstrate the scientific method through the use of hypothesis testing in the design and implementation of an experiment, analysis of experimental data, and presentation of results and conclusions.
4. demonstrate informational literacy by having the ability and skills to effectively and legitimately use various sources of information required for functioning in a global, information society.
5. critically analyze primary scientific literature.
6. demonstrate that they can perform a set of basic laboratory skills.
* (American University)

### English

Graduates will be able to

1. read a variety of texts critically and proficiently to demonstrate in writing or speech the comprehension, analysis, and interpretation of those texts;
2. write a literary or expository text using the conventions of standard English as stylistically appropriate, while showing a nuanced use of language (producing such a text may include invention, workshopping, research, compiling bibliographies, drafting, peer responses, revising, and/or editing);
3. demonstrate knowledge and comprehension of major texts and traditions of language and literature written in English as well as their social, cultural, theoretical, and historical contexts;
4. analyze and interpret texts written in English, evaluating and assessing the results in written or oral arguments using appropriate support;
5. design and create texts for a variety of purposes and audiences, evaluating and assessing the effectiveness and meaning of such texts.
* (Cal State Long Beach)

### Business

Graduates will be able to

1. use critical thinking and analytical skills to synthesize information from multiple sources and be able to make informed business decisions.
2. discuss and apply a set of ethical and legal standards when making decisions, handling employees, and disseminating information to the business organization and/or to the public.
3. utilize technology to create reports and demonstrate presentation skills to communicate relevant information to stakeholders.
4. define managerial problems, determine the alternatives, make decisions, and implement solutions as a member of a team.

(Bay State College)

### Psychology

**Content Knowledge**

Students will be able to

1. explain major psychological concepts, theories, and empirical findings.

2. apply psychological concepts and theories to research and real life

situations.

3. summarize the history, values, and scientific foundations of the field of

psychology. \*

**Thinking Skills**

Students will be able to

1. use critical and creative thinking, skeptical inquiry, and the scientific approach to solve problems

related to behavior and mental processes.

2. analyze, evaluate, and interpret information in the scientific literature to distinguish the scientific literature from other sources.

3. formulate and defend one’s own scholarly opinion based on reading,

interpreting, and synthesizing psychological literature.

**Communication Skills**

Students will be able to

1. communicate effectively (in writing and/or orally) the results of a project or internship.

2. effectively extract central points and summarize psychological research literature and to write in the format of psychological research.

3. translate psychological knowledge into everyday language.

**Research Skills**

Students will be able to

1. differentiate among the research methods used in psychology and apply the designs in evaluation

or development of a research study.

2. analyze and interpret quantitative psychological data using statistics, graphs, and data tables.

**Diversity and Ethical Considerations**

Students will be able to

1. integrate knowledge of cultural diversity and relativity in human

experience into professional interactions.

2. apply basic principles of scientific and professional ethics to real-life situations.

3. apply ethical concerns and professionalism (including cultural

considerations) in settings where applications of psychology and/or psychological research occur.

**Career-related Skills**

Students will be able to

1. describe professional options and required training for careers in the major subfields of psychology.

2. identify personally relevant career options to implement their psychological knowledge, skills, and values in occupational pursuits in a variety of settings.

(adapted from Penn State University)

## Examples of Poor Program Learning Objectives

1. **Students will be able to understand psychological theories**

Words such as *understand, know, learn*, and *appreciate* are fine for goals but are too vague to be measurable. How do you know students understand? Because they can solve equations? Because they can compare and contrast theories? Because they can describe a process? Because they can interpret an article? Specifying the verb helps clarify the knowledge and skills expected of students who graduate from your program, and makes assessment easier.

1. **Students will be able to communicate orally and in writing.**

Good learning objectives have a disciplinary context. Types of communication differ by discipline. A biologist needs to be able to describe a laboratory experiment clearly. An English major may need to be able to use language creatively to communicate an idea or emotion.

1. **Students will be provided with research opportunities.**

Good program learning objectives focus on what the graduates of the program will know or be able to do, rather than what a program provides. Another way to phrase this objective could be:

Students will be able to analyze and interpret quantitative psychological data using statistics,

graphs, and data tables.