Writing Pedagogically Sound
Course Outcomes and Learning Objectives

Course outcomes offer a description of what a student should be able to do at the end of a course and **learning objectives** explain what students should know or be able to perform/accomplish by the end of a class session. Pedagogically sound course outcomes and learning objectives are carefully crafted descriptions that help students understand what they are doing and why. In other words, they are used to help guide students and allow instructors to share their intent and direction to the course and its content. Ideally, your outcomes/objectives should reflect various levels of learning according to Bloom's Taxonomy during the semester and class lesson respectively.

Each course outcome and/or learning objective should include the following three components:
1. **Conditions:** how, when, where, with what
2. **Performance statement:** stated with an action verb (refer to Bloom's Taxonomy)
3. **Criterion measure:** defines the level of performance and product, process or outcome.

Remember: **At the end of our class session, you will be able to describe what a pedagogically sound learning objective is in your own words.**

Understand: **At the end of the lesson, you will be able to express the differences between quantitative and qualitative research methods.**

Apply: **By the end of the semester, each person will be able to calculate formulas and sketch a graph utilizing the practices introduced in class and in the textbook.**

Analyze: **During the lesson, you will dissect learning objectives by color-coding the 3 main elements of conditions, performance, and criterion.**

Evaluate: **You will critique a classmate's public speaking skills in a whole-class workshop by considering whether they conform to specifications outlined in our course textbook.**

Create: **By the end of our teacher training, we will be able to formulate a pedagogically sound learning objective.**

Reference:
Orlich, D. C., Harder, R. J., Callahan, R. C., Trevisan, M. S., Brown, A. H., Miller, D. E. (2013). Teaching strategies: A guide to effective instruction (10th ed.). Belmont, CA: Wadsworth.

BLOOM'S REVISED TAXONOMY

Level	Verbs & Sample Objectives	Discussion Questions
Remember Be able to recall information such as dates, events, places, ideas, definitions, formulas, and theories.	Arrange, Define, Describe, Detail, Draw, Duplicate, Identify, Indicate, Inventory, Label, List, Locate, Match, Name, Outline, Pick, Point, Pronounce, Quote, Recall, Recite, Recognize, Record, Relate, Repeat, Reproduce, Restate, State, Underline • Label the parts of the heart. • Outline the steps in the writing process. • Recite the Gettysburg Address.	• Who was…? • What is…? • When was…?
Understand Be able to grasp the meaning of the information, express it in own words, and/or cite examples.	Classify, Confirm, Contrast, Convert, Decipher, Defend, Designate, Differentiate, Equate, Estimate, Examine, Express, Extend, Extrapolate, Generalize, Give Examples, Group, Infer, Interpret, Order, Paraphrase, Predict, Rephrase, Rewrite, Sort, Specify, Substitute, Tell, Translate • Defend your position about flat taxes. • Give an example of an adjective. • Specify the role of project management in an organization.	• Can you name…? • What is an example of…? • Where does…differ from…?
Apply Be able to apply knowledge or skills to new situations. Use information and knowledge to solve a problem, answer a question, or perform another task.	Add, Allocate, Alter, Apply, Calculate, Change, Choose, Complete, Compute, Conduct, Coordinate, Demonstrate, Determine, Direct, Discover, Divide, Dramatize, Draw, Employ, Formulate, Gather, Graph, Make, Manipulate, Model, Multiply, Operate, Perform, Present, Provide, Recount, Report, Schedule, Show, Sketch, Subtract, Use, Utilize • Choose criteria to assess change readiness. • Demonstrate the proper technique for drawing blood. • Graph the results of the market analysis.	• How does…explain…? • Examine the graph and tell me…? • Which events led to…?
Analyze Be able to break down knowledge into parts and show and explain the relationships among the parts.	Analyze, Appraise, Associate, Break Down, Criticize, Discern, Diagram, Discriminate, Dissect, Distinguish, Elect, Establish, Explain, Expound, Illustrate, Inspect, Profile, Question, Refute, Separate, Simplify, Subdivide, Summarize, Test • Explain the ramifications of sexual harassment in the workplace. • Appraise potential suppliers according to organizational needs. • Distinguish between ethical & unethical behavior.	• What is the relationship between…and…? • What caused…? • How does…apply to…? • Why does…work? • How does…relate to…? • What distinctions can be made about…and…?
Evaluate Be able to judge or assess the value of material and methods for a given purpose.	Argue, Assess, Attack, Compare and Contrast, Conclude, Critique, Debate, Decide, Deduce, Diagnose, Evaluate, Forecast, Improve, Judge, Justify, Measure, Prioritize, Prove, Rank, Rate, Recommend, Resolve, Revise, Select, Solve, Support, Value, Verify, Weigh • Support the value of diversity in a project team. • Recommend course of action for comprehensive organizational change. • Resolve ethical issues that plague researchers conducting experiments on animals.	• How does…meet criteria for…? • What judgments can you make about…? • Can you compare and contrast…criteria for…? • Is there a better solution to…?
Create Be able to pull together parts of knowledge to form a new whole and build relationships for new situations.	Assemble, Assimilate, Categorize, Collect, Combine, Compile, Compose, Condense, Construct, Create, Design, Derive, Develop, Devise, Elaborate, Expand, Generate, Guide, Hypothesize, Integrate, Invent, Manage, Modify, Organize, Plan, Prepare, Prescribe, Produce, Propose, Rearrange, Reconstruct, Reorganize, Rework, Set Up, Synthesize, Theorize, Transform, Write • Devise a plan to deal with violence in your community. • Design an instructional unit to meet the needs of online students. • Modify the training process for a business or organization.	• What would happen if…? • Can you compile the data to…? • How can we solve…? • How many ways can you…? • What hypotheses can you make? • Why?

Reference:
Table adapted from: Anderson, L.W., & Krathwohl, D.R. (2001). *A taxonomy for learning, teaching, and assessing, abridged edition.* Boston: Allyn & Bacon.