

Definition of a Learning Outcome

Learning outcomes state those **skills/abilities that are measurable** and which the instructor expects **each student to have mastered at the end of the course**.

What is the difference between course objectives and expected learning outcomes?

Course objectives describe the topics and activities provided in the course curriculum.

- While Instructors may choose to include course objectives in their syllabus, objectives are NOT required by the WVU Faculty Senate.

Rationale for Review of Assessable Learning Outcomes at the Faculty Senate Level

Basically, accreditation bodies for higher education have mandated that learning outcomes be assessable. WVU has a policy of bringing courses and curricula in line with this requirement. Although individual faculty, programs, and departments should play a primary role in developing assessment methods for their courses and curricula, other WVU administrative bodies are charged with examining course-level student learning outcomes. The Faculty Senate Curriculum Committee examines course-level learning outcomes to ensure, to the best of our ability, that they accord with national standards. **Therefore, we ask that learning outcomes be measurable and reflective of the course level (e.g., higher order for graduate courses).**

Format for Learning Outcomes at WVU

The current standard for writing measurable outcomes adheres to the following format:

- Each set of learning outcome begins with the phrase:
“The student will be able to” OR
“By the end of this course, the student will be able to:...” OR something similar.
- Each learning outcome then follows (preferably numbered), starting with an action verb that is measurable.
 - The level of the verbs used should reflect the level of the course (e.g., UG lower, 600 higher and 700 more advanced).
 - Refer to Bloom’s Taxonomy for assistance with selecting verbs (see below).

Examples Current Course Learning Outcomes

Women’s Studies 250: Women in Science

After completing this course, the student will be able to:

1. Discuss women’s experiences with science, including personal and social dimensions, and use this knowledge to explain the origins and persistence of current issues facing women in science in the U.S.
2. Analyze how gender affects the representation of scientists in popular culture.
3. Apply techniques from feminist science studies to a scientific field.
4. Present ideas in written formats.
5. Find and evaluate information appropriate to research topics.

Marketing 440: Export Management

After completing this course, students will be able to:

1. Work in a team of business professionals

West Virginia University
Faculty Senate Curriculum Committee (approved 5/7/2015)
Developing Course Learning Outcomes

2. Work directly with a company interested in venturing into the exporting business or expanding their existing exporting business.
3. Develop an Export Business Plan.
4. Identify existing local, state, and federal exporting resources.
5. Demonstrate an understanding of cultural diversity in the Export Business Plan.
6. Describe the role that governments play in international business transactions.
7. Demonstrate, using the Export Business Plan, how domestic marketing strategies are impacted and may have to change, when doing business on an international scale.

Forensic Identification Program 401: Professional Forensic Communications

Upon successful completion of the course, students will be able to:

1. Define and produce legally defensible documentation.
2. Demonstrate the proper methods of documenting crime scenes and evidence through notes and logs.
3. Demonstrate the proper procedures for creating and maintaining chain-of custody of evidence.
4. Demonstrate the proper procedures for documenting laboratory work using logs and notes.
5. Demonstrate preparation of a standard operating procedure.
6. Create a professional quality poster presentation.
7. Write a report summarizing forensic laboratory results for a non-scientist such as a police officer or attorney.

HPML680– Performance and Economic Evaluation for Public Health

By the end of this course, students should be able to:

1. Synthesize the skills and knowledge required in conducting performance and economic evaluation.
2. Compare and contrast the most prevalent forms of economic evaluation: 'cost effectiveness analysis (CEA), cost utility analysis (CUA), and cost benefit analysis (CBA) used in public health.
3. Derive the value of public health programs and policies to justify investment by business organizations.

EPID 712 : Quantitative Methods-Epidemiology

Upon completion of this course, students will be able to:

- 1) Link appropriate analytic models with public health research questions and epidemiologic study designs.
- 2) Interpret epidemiologic analyses from a range of multivariable models (including linear, logistic, Poisson, and Cox regression models)
- 3) Implement both stratified approaches and multivariable regression to account for the presence of confounding bias
- 4) Critically evaluate different approaches to modeling complex exposures including dose-response relationships & time-varying exposures.

West Virginia University
Faculty Senate Curriculum Committee (approved 5/7/2015)
Developing Course Learning Outcomes

Bloom's Taxonomy—A More Detailed Theory of Learning Outcomes:

Student Learning Outcomes should describe what students should know, be able to do and/or be like (dispositions) by the end of the defined course. These types of Student Learning Outcomes are typically linked to domains. The common domains of learning include cognitive, affective and psychomotor. Benjamin Bloom is credited with identifying the Taxonomy of the Cognitive Domain.

Resources for Identifying and Selecting Appropriate Verbs Based on Bloom's Taxonomy
(there are many more not listed here)

http://www.utar.edu.my/fegt/file/Revised_Blooms_Info.pdf

<http://www.celt.iastate.edu/teaching-resources/effective-practice/revised-blooms-taxonomy/>

<http://teaching.uncc.edu/learning-resources/articles-books/best-practice/goals-objectives/writing-objectives>

Many higher education and professional degree-granting bodies have developed their own guidelines for formulating measurable learning outcomes.

For example, the **American Association of Law Libraries** has a helpful on-line document clarifying the rationale for learning outcomes and providing suggestions for how to formulate them: <http://www.aallnet.org/prodev/outcomes.asp> .

Perhaps your discipline has its own established guidelines. Please feel free to use those guidelines, while keeping in mind the WVU FS CC requirements that learning outcomes be measurable.