

# Embedded Assignments & Exams

An assessment technique that is least intrusive and less time consuming for students and instructor is the use of "embedded assignments and exams." When assignments, exams, papers, and student projects from regular key courses are closely aligned with a particular program-level learning outcome (or a few program-level learning outcomes), faculty can easily pull out student performance scores to understand whether students are meeting program expectations. It is recommended that a faculty committee collaboratively design key signature assignments and exam questions, so that the assessment tools embedded in a particular course yield information that is beyond the course.

## Steps

- (1) To identify appropriate course where key assignments can be integrated for a particular outcome, use a curricular map.
- (2) Once the course is identified, decide what kind of assessment tool is appropriate to unveil student achievement of the target program-level learning outcomes. See a sample from PH250 below.
- (3) Align assignment (test, etc.) items with the target learning outcomes. Ideally, you will have multiple items per outcome, so results become more reliable.
- (4) Besides the course instructor, gather a team of faculty to score student performance and judge whether students meet or exceeds program expectations.

## Example practice from PH250

21 items out of a 50-item final exam from an PH250 are aligned with 6 MPH program-level outcomes. To ensure alignment and item distribution, exam items were mapped against the outcomes (see Table 1 below). 15 randomly sampled student performances of the 21 items on the final exam were double-rated using a scoring rubric. Results were used to interpret whether students achieved the 6 targeted program-level outcomes.

Table 1. PH 250: Item-Outcome Map

Program-level	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6
Outcome statements	Understanding of basic epi methods (a) Understanding of random error and bias, including confounding, (b) selection bias.	Understanding of exposure assessment for epi studies.	Draw appropriate inferences from epi publications.	Integrate statistical concepts and epi concepts.	Interpret results of statistical analyses reported in public health studies (epi studies for 250).	Critically evaluate strength and limitations of published epidemiologic publications.
Question/item # from the final exam	4, 5, 8, 9, 13, 14, 15, 20, 22, 4, 5, 6, 8, 9, 10, 11, 18	7, 9, 10, 11, 12, 16, 7	1, 15, 18, 21, 11, 13, 14, 15, 17	13, 15, 17, 10, 11, 14, 15, 16, 17, 18, 19, 20, 21	14, 17, 14, 15, 16, 17, 18, 20, 21	18, 19, 6, 7, 8, 9
Total Possible Points	38	22	20	37	28	15