

Department of Agricultural and Biological Engineering
University of Florida
Academic Learning Compacts

Purpose of Academic Learning Compacts

In addition to the requirements imposed by ABET accreditation, all students in the State of Florida University System must be given an opportunity to achieve the program's self identified Academic Learning Compact. Academic Learning Compacts identify the skills students should acquire if they follow their major's prescribed course of study. These skills, known collectively as Student Learning Outcomes, describe the core learning expectations that UF is required to assess for each baccalaureate degree program.

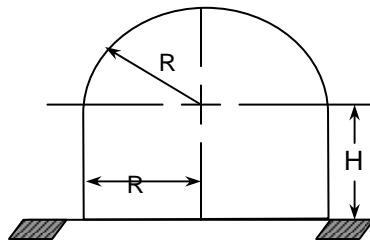
Examples of Assessment Results for Academic Learning Compacts

Student Learning Outcome #1

Apply knowledge of mathematics, science, and engineering.

Description of Direct Assessment (Evaluated in ABE 2012C):

Students used an engineering problem solving approach to acquire the answer to a complex engineering problem. The problem was to specify the dimensions H and R of the water tank shown below, that will result in the minimum cost. The tank is to be constructed to hold 5.00×10^5 L when filled. The shape is cylindrical, with a hemispherical top. The cost is a function of surface area. It will cost $\$300/\text{m}^2$ to construct the cylindrical portion and $\$400/\text{m}^2$ for the hemispherical portion. Ignore the cost to construct the bottom circular area (base) of the cylindrical section.



Student Performance Results:

Complete Mastery: 48%

Acceptable Performance: 45%

Below Expectations: 7%

(Note: Complete Mastery corresponds to a grade of 90-100%; Acceptable Performance corresponds to a grade of 70-89% ; Below Expectations corresponds to a grade below 70%)

Student Learning Outcome #2

Design and conduct agricultural and/or biological engineering experiments and analyze and interpret data.

Description of Direct Assessment (Evaluated in ABE 3612C):

The students were evaluated on the ability to conduct experiments, work in a team, analyze and interpret data and to suggest improvements or modifications to the design of the experiments. Fifteen percent of the grade for each individual was determined on the basis of three criteria: 1) participations in the experimental work, 2) participation in the report for the experiment and 3) contribution to team discussions.

Student Performance Results:

Complete Mastery: 30%

Acceptable Performance: 45%

Below Expectations: 25%

Student Learning Outcome #3

Design an agricultural and/or biological system, component or process to meet desired needs within realistic economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability constraints.

Description of Direct Assessment (Evaluated in ABE 4043C):

The students' final designs were evaluated by ABE Faculty. With the consideration of the design constraints listed above.

Student Performance Results:

Complete Mastery: 10%

Acceptable Performance: 90%

Below Expectations: 0%

Student Learning Outcome #4

Communicate technical data and design information effectively in writing and in speech to other engineers.

Description of Direct Assessment (Evaluated in ABE 4043C):

Design teams presented their final designs in a poster session. Each team was visited by ABE Faculty and practicing engineers who completed evaluations on the design teams. The final written report and poster were available for review, and design team students provided oral presentations to the evaluators.

Student Performance Results:

Complete Mastery: 0%

Acceptable Performance: 100%

Below Expectations: 0%