Establishing Signature Assessment For Graduate Programs: The use of the MS. and PhD. proposal as a tool for evaluating Graduate Program performance

Molecular Biosciences and Bioengineering (MBBE) – College of Tropical Agriculture and Human Resources

J-P. Bingham

Introducing and Driving Questions

It is often hard to gauge the performance of a graduate student in a timely manner. The commonly employed ‘end-point’ analysis – i.e. graduate student enrollments vs. graduation rates – fails to indicate how well the latest cohort of graduate student engagement; performance?

To address this, we focused on the use of a signature assessment to provide early evaluation of MS. and PhD. students, using the exit mechanism of the Thesis/Dissertation Proposal Form II.

This milestone is typically the first stage of critical evaluation by the committee and plays a pivotal role in helping the graduate student sharpen up the research plans. The questions are:

1. Do these proposals meet program expectations?
2. Do the graduate students receive feedback aligned with program expectations?

Strategies to Empower Learning Through Assessment

1. Conducted needs analysis of students
2. Examined program SLOs and professional standards
   - to set and communicate clear expectations
   - to set assessment criteria
3. Provide learning opportunities
   - Student Guidebook with detailed guidance as major initiative
   - Faculty feedback aligned with expectations
4. Drafted Rubrics aligned with SLOs

Assessment Process:

Initial Needs Assessment via Student Input

Supporting documentation

Finalized product

Program SLOs

MBBE MS/Ph.D. student researchers

1. Are able to understand, describe and explain fundamental core STEM science concepts and have proven the ability to comprehend and convert these concepts into experimental approaches and hypothesis-driven research in biological systems.
2. Write, contribute results and published articles, as primary author(s)/co-author(s), in peer-reviewed scientific journals of basic and applied molecular biosciences and bioengineering.
3. Present research at national and international conferences as evidenced by published abstracts and poster/oral presentations.
4. Can communicate orally and in writing in a clear, well-organized manner that effectively informs and clarifies scientific principles and laboratory techniques to others, as evidenced by provision of seminars, technical reports, dissertations or thesis, providing details of scientific and scholarly activities.
5. Are well prepared for employment in the critically important and dynamic biotechnology, chemical, and biosciences fields (government, academia, industry).

Student Efforts MBBE 691 (n=7)

Faculty Feedback

Awaiting Faculty approval

Proposal Handbook

Proposal Rubric

Acknowledgement: I’d like to thank the efforts of Dr. Yao Hill (UHM Office of Assessment) for comments, suggestions and assistance with this poster.