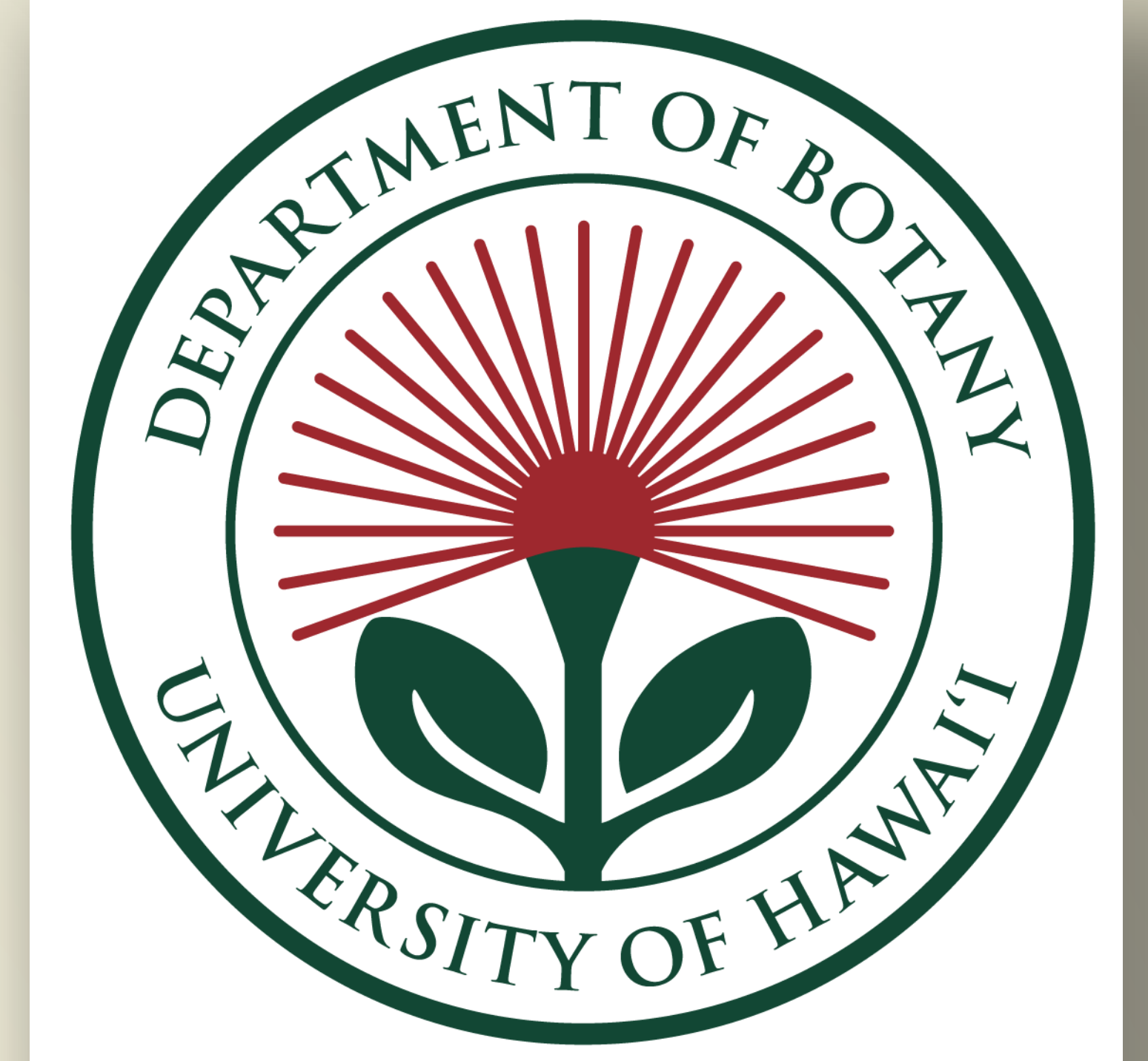


Advancing Program Assessment Beyond the Curriculum Map: Recent Progress in the Department of Botany



Tom A. Ranker, Professor & Chair

Summary

After devising programmatic Student Learning Outcomes (SLOs) and linking them to courses via a Curriculum Map, **what's next?**

Botany faculty made progress in Fall 2014 and Spring 2015 beyond building our Curriculum Map by:

1. **Devoting several entire faculty meetings to assessment**
2. Devising a pre- and post-test for evaluating how effective our programs are at achieving SLOs 1 & 2 that reflect *specific core discipline knowledge* (the pre-test was administered for the first time in Fall 2014 in our freshman seminar)
3. Identifying individual course assignments that will be used to assess how well our students achieve SLOs 3 & 4 that reflect *communication skills* and *problem solving and research skills*
4. Devising rubrics for evaluating student work for all of our SLOs.

BA & BS Degrees Student Learning Outcomes

Specific core discipline knowledge

1. Students can recall details and information about the evolution, anatomy, morphology, systematics, genetics, physiology, ecology, and conservation of plants, algae, and fungi.
2. Students can recall details of the unique ecological and evolutionary features of the Hawaiian flora.

Communication skills

3. Students can communicate effectively using oral and written communication skills.

Problem solving and research skills

4. Students can generate and test hypotheses, make observations, collect data, analyze and interpret results, derive conclusions, and evaluate their significance within a broad scientific context.

Department Facts

Number of Faculty: 16

Number of Undergraduates: 40-50

Example exam question: SLO 2

46. Which of the following statements best explains the high degree of endemism in the Hawaiian Islands biota?

- a. high rainfall, non-equable climate, and abundance of native seabirds
- b. very remote location, ecological diversity, and small size of the various types of ecosystems
- c. high rainfall, low isolation, and lack of mutations
- d. tropical location, many predators, and abundance of native endemic seabirds
- e. endemism exists in Hawai'i, but is relatively low compared to other Pacific Islands
- f. I do not know

Example rubric: SLO 3 (in part)

Outcome - Oral Communication	Quality Level			
	1 - Beginning - Does not meet expectations	2 - Developing - Does not meet expectations	3 - Competent- Meets expectations	4 - Accomplished- Exceeds expectations
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and makes the content of the presentation cohesive.
Language	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are imaginative, memorable and compelling and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.

Example of course-embedded assignment for SLO 3

Oral presentation of Hawai'i or Pacific Island related papers: Each student will be responsible for giving one, 15 minute PowerPoint presentation on three recent Hawaii or Pacific island based scientific papers that relate to the topic of the week. Selected papers must be approved by the instructor the week prior to the presentation. The presentation should consist of: 1) a review of the findings of the papers and how they relate to the issues discussed assigned text chapter for that week; 2) a short discussion of strengths and limitations of the papers; and 3) at least three questions for class discussion.

Tips for Engaging Faculty

1. Make it clear that program assessment is mandatory
2. Devote entire faculty meetings to developing assessment plan
3. Try developing action plans for only one SLO at a time
4. Chair and/or assessment coordinator engage with faculty one-on-one to gather ideas and assessment tools, if needed

Next Steps for Botany

1. Identify additional course-embedded assignments for SLO 3 and SLO 4
2. Develop action plan for assessing student work for each SLO and for analyzing results