Outcomes and Quality Assessment notes – Biological Data Sciences

1. Observation: Overall, the six learning outcomes are well written and measurable. However, outcomes #3 and #5 could benefit from clarification or expansion.

   Recommendation: In outcome #3, the phrase “demonstrate familiarity” only requires that students use large datasets. The outcome could be strengthened by requiring students to “demonstrate proficiency.” Outcome #5 would become more measurable if professional and ethical were better defined.

   Thank you. In the Cat I proposal, we changed LO #3 to have the recommended phrase and provided a better definition for LO#5.

2. Observation: There is no clear alignment between the learning outcomes and specific coursework. This will make it difficult to both assess specific learning outcomes and identify specific areas for improvement.

   Recommendation: A curriculum map would help identify which courses address each outcome and where each outcome could be assessed. The curriculum map could also assist the program director when aligning course outcomes. It is also heavily advised that the program develop an assessment plan using the OSU reporting template. Once the program is approved, this plan must be submitted annually.

   We apologize but must have neglected to include the curriculum map. BPP administers the Botany major and has a curriculum map. This was used a template for the proposed BDS major.

3. Observation: The use of a cumulative exam in BDS 412 is a great way to gain a summative assessment of proficiency at the completion of the program. The planned portfolio can be a great assessment tool for identifying areas of concern as students progress through the curriculum. However, additional information is needed about the assessment process, including how areas of concern will be identified.

   Recommendation: A curriculum map can help identify specific courses that can be assessed by the portfolio. An assessment rubric will also need to be developed for the portfolio. The rubric will help the program measure student competence in the outcomes assessed through the portfolio assignments. This can help the program identify specific areas of the curriculum being assessed in BDS 412. For example, if the summative exam reveals that students are struggling with using the appropriate quantitative methods in scientific investigation, then the program will need to know the courses and assignments that already emphasize this skill. A curriculum map and a thorough portfolio rubric can help pinpoint existing target areas for improvement.

   Please see response to the previous recommendation.
4. Observation: The program will create a committee to advise the director on the needs of the program. There is no description of how assessment information will be used in this process.

Recommendation: Please include details on how the program will analyze and reflect on the data collected from the portfolio and the summative exam.

This section of the Cat I proposal has been substantially revised in response to the recommendation.