

Program Review – Annual Program/Discipline Update

Administrative Response and Follow Up

2020-2021

Program/Discipline:

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This section is for Administration to provide feedback.

To be prepared by Division Dean(s) and reviewed by DOI(s).

Thank you to the BI SAC for all of your work to complete this annual discipline update. The deans know completing an ADU was a heavy lift after many terms of working remotely. We want you to know we see you, and we appreciate the work and passion you have for your subject area and for PCC students.

1. Strengths and successes of the program as evidenced by the data, analysis, and reflection:

- The deans appreciated this statement: "Recognize the need to use practices that enable students to realize their potential instead of rewarding privilege with which they arrive", which demonstrates a movement toward student-ready thinking.
- What the BI SAC wrote about the differences in student success rates between hybrid and on-campus sections of BI 101 makes a lot of sense. Previously hybrid courses were not given any institutional support. Now because of the STORI initiative, instructors have had access to professional development to feel more confident about teaching hybrid courses, and because of the pandemic, students are more aware and may feel more confident about taking a course in the hybrid modality. Because of this, there could be less of a difference in student success rates between hybrid and on-campus courses moving forward. And yes, we deans agree with "We are poised to combine the best portions of the labors from

the past year into a thoughtful, coherent hybrid experience for instructors and students” (p. 15).

- This SAC is so creative. These were wonderful ideas, and we encourage the BI SAC in their endeavors to implement best practices to help students realize their academic potential in BI (p. 6) through such techniques as inquiry-based learning, competency evaluation, and utilizing student feedback to promote student-centered change. The comment on p. 7 also really resonated: “Making the content more directly relatable in the prerequisite or general courses might help with retention. If we can help the students more clearly see the relevance of the material to their lives and interests, then their engagement and investment might improve success rates.”
- Thank you for recognizing that there is more than one way to assess on page 9 (“Explore alternate student assessments (not just exams) in courses”). Doing so may also help alleviate academic integrity issues.
- Looking at how students do when they’ve been given a prerequisite override is a wonderful idea (p. 10). It can be as easy as each instructor flagging those students in their grading spreadsheet, filling out a Google form at the end of the term, and then having a discussion at location-based department meetings or BI SAC meetings.
- There is much to be proud of: 1) the district-wide BI 231-233 group is currently working on a project to standardize our laboratory manual for this course sequence. The goal is for every campus to use the same lab manual that is affordable and accessible for the students. Thank you for this work. In a time of falling enrollment, it is likely that students may have to switch instructors and campuses in the midst of a BI series. Also, standardizing labs is a good one-College model practice. 2) BI was recently selected for funding through the STORI initiative, for hybrid development for five BI courses: 101, 112, 120, 121, and 122. 3) A group of faculty are working to revise the BI 101 lab exercises using universal design. This work is being funded through a TIIP grant. The deans realize the BI SAC could have written much more about their achievements on p. 13 if there hadn’t been a word count limit.
- The deans were happy to see the BI SAC’s interest in building more inclusive language and history into their curricula. This should help to make Bi courses more culturally relevant to institutionally marginalized students.

2. Areas of challenge or concern, if any:

- Are students supposed to be college-ready (p.6) or are we supposed to be ready for the students? [The YESS work](#) tells us that we need to spend more time talking about whether we are ready for students.

The BI SAC is doing some incredible work in pockets across the College to make courses more equitable using best practices around the relevance and amount of

content. Some reading on serving underrepresented students (see the references section at the end), discussion, and brainstorming may be in order. The question “Is there a correlation between grades and pedagogies used by different instructors?” (p. 10) is a fascinating one that might be included as part of the discussion. Perhaps your current SAC liaison and your current division deans (or the Program Dean of Life Sciences & Bioscience in the future) could fund a series of planning meetings to support the broadening of this work.

- After reviewing the differences of student success by race, asking whether students were Biology ready seems a bit deficit-focused. Another idea, making prerequisites harder, could pre-penalize students.
- Courses with consistently lower success rates such as BI 112 should not be seen as a weed-out class (p. 10) for CTE programs. What would it feel like to just teach the content without worrying about where the students will find themselves next? Would that make the coursework more equitable to groups of institutionally marginalized students?

Yet the deans do understand that the students in courses like BI 112 need to have all the information to have a fighting chance at the next level. There’s a real tension between meeting students where they are and making sure they meet the course goals at the end of each BI course.

- Would implementing placement exams (or using standardized tests such as AP bio exam) present yet another barrier for students who are not great test takers, who didn’t have access to, or who weren’t encouraged to take IB or AP offerings in high school? Please consider studying how students who get overrides in BI do as a first step.

3. Reflection on goals and resources:

- Some of the data you would like (p. 10) can be obtained right now via a get-to-know-you survey. This survey could be part of the Week 1 course activities and embedded in every BI D2L shell. In the survey, you could ask students whether they are FT or PT, whether they have a job and how many hours they work, whether they are food or housing insecure, whether they are responsible for child or elder care... Using Google Forms, all of the data could be dumped into a spreadsheet for location-based BI departments or the BI SAC to examine.
- Having enough FT and PT instructors is vital to offering the kinds of classes students need. FDCs, please work together to interview and hire PT faculty so that you have enough instructors to teach the courses you want to offer, particularly any specialty courses such as BI 112 and BI 231, 232, 233. We deans have been asked to list our needs for block hire for 21-22. By way of supporting your request, please help your current dean provide detailed

justification to ask for new hires (or retirement replacements). What argument can we deans use for 1 new hire? Or 12?

- The BI would like to have 12 new FT faculty and \$95,000 in release time for 19 FT faculty. The deans would like to encourage you to examine if every FT faculty is contributing 7 hours a week toward College Service. College Service may become easier to track once there is one Program Dean for all FT faculty.
- Re-examining the curriculum in partnership with representatives from Allied Health SACs about whether the math being applied in BI 112 and BI 101 is actually "doable" with the prereqs BI requires would definitely inform your efforts to address student readiness. Please let your SAC liaison and current division deans know how they can support this effort, and continue this conversation with the new Program Dean of Life Sciences & Bioscience.
- It would be important that any kind of prerequisite course is taught from a community wealth (Yosso, 2005) or asset-based perspective. This means valuing the lived experiences that students bring into the BI classroom with them and not just focusing on what they lack. It could be an interesting interdisciplinary partnership to work with other STEM SACs, such as G/GS, to develop and teach this course. Could it be taught as part of a first-year experience course in the STEM pathway?
- It makes sense to ask for professional development stipends to pay PT faculty to get all of the work you have listed in your annual discipline update done. The deans would like to encourage the support of the BI SAC's request for stipends for professional development and projects for PT instructors. We can certainly ask for this amount; it will depend on enrollment, the budget, and the vision of the new Program Dean of Life Sciences & Bioscience and the new ACP dean over Sciences, Computing, and Engineering.
- College-wide financial support for online/remote proctoring of assessments (exams, quizzes, etc.) and realistic tools that would educate students on academic integrity could be useful for the BI SAC and many other SACs; however, there are issues with [student privacy and digital safety](#). Josh Peters McBride, the Dean of Student Life and Engagement, who is in charge of Care and Conduct coordinators, is working with the deans on issues around proctoring and academic integrity. Could we also suggest that some of the professional development the BI SAC engages in involves different, and perhaps more culturally responsive, ways to assess students? Alternate student assessments would help with the integrity issue as assessments that are current, local, and contextualized are harder for students to Chegg or Course Hero their way through. This, along with focusing on upgrading the BI course content course by course to be more culturally responsive, could be a great idea for a NSF grant - one that completely funds faculty professional development.

4. Recommended next steps:

☐ Proceed as planned on program review schedule

☒ Follow up conversation needed with SAC, Dept Chair(s) and Dean

- Follow-up conversations are needed in order to bring some of your recommendations into reality. These conversations should include the new Program Dean of Life Sciences & Bioscience and the new ACP dean over Sciences, Computing, and Engineering, in consultation with the current science deans and FDCs.

5. Additional comments/questions:

The following comments are suggestions the science deans have heard about or have seen work. These are meant for the BI SAC to discuss and consider.

- A specific idea that might be particularly useful is for BI SAC representatives to participate as observers/learners in the Nursing and Allied Health Program and Advisory board meetings. This could inform what is the most important for instructors to focus on in BI 112 (as one example) and provide the opportunity to formulate a deliberate plan for mapping the curriculum and pedagogy to what students need to succeed in their CTE programs. This recommendation aligns with the comment on page 6 (“I think we need to seriously evaluate our 112 and 231-233 curriculum. The amount of detail covered is astounding, and ultimately I believe it is doing our students a real disservice, not to mention it is inequitable. Cut out whatever we don't actually need to be covering to reach our CCOGs.”) The BI faculty are an important part of developing a diverse health workforce, so it'd be great to see BI faculty at the table with the Allied Health and Nursing faculty. Yes, we would need to find funds to pay PT faculty. FT faculty could attend as part of their College Service, so there is no need to wait if there are spring advisory group meetings coming up.
- Another idea might be for the BI SAC and or BI departments at each location to look at the approaches individual instructors are using in BI courses with lower success rates. This can be a delicate endeavor as such conversations must be approached with a gentle mentoring mindset with the goal of life-long learning and improvement for instructors rather than assigning blame. And perhaps these topics may feel safer as 1:1 mentoring discussions. Questions that could be explored are: Do instructors in courses with lower success rates have a growth mindset? Do they view their students with an asset-based or deficit-based lens? What kinds of assessments do they rely upon: summative or formative or a mix of both? Are there opportunities for students to demonstrate what they know in multiple ways rather than only by testing?

- One idea that could be folded into a NSF grant to improve student success and retention is to have peer mentors (students who have successfully completed BI courses) embedded in courses with lower success rates, such as BI 112 and BI 231, to serve as guides for students who need support in learning how to study for the class and how to understand STEM and academia in general. These peer mentors could be work-study students or paid at the casual rate. They could hold virtual student support times. Peer support could provide our students who are first-generation college students with the cultural capital needed for them to be retained and succeed in BI courses and in STEM. This may also help rectify the differences the SAC noticed in success rates between students who are Pell-eligible and those who are not (p.8).
- Another idea is to have a panel of students who have successfully completed BI 112 and BI 231 come speak to the students enrolled in these courses. Such an event could be done virtually and recorded (and posted in your D2L course shells). Student panelists could be given gift cards as a thank you.
- One BI SAC member uses the first 40 minutes of class every term to do a module on “how to be a student.” Perhaps this is a best practice that could be adopted by all. Doing something like this in every BI course could also help address lower success rates in hybrid offerings. Faculty are in the best position to communicate to students about what a hybrid course requires and that while it may be more convenient, it is certainly not a way to have a lighter school workload.
- Another idea is to include the study skills that are needed to be successful in each module. It could be as simple as listing the study skills needed in the overview section of D2L for a particular module with links to specific handouts or videos. This would make the link between study skills and the content more evident to students throughout a particular BI course.
- Has the BI SAC ever thought about creating a “Racism in STEM” course? This could be an interdisciplinary course co-taught with someone from the social sciences and by a variety of STEM faculty.

The deans want to thank the BI SAC for all your hard work in support of PCC students. We know this past year has not been easy. Watching how you have all pivoted to remote instruction has filled us with awe. This quick transition exemplified your dedication to your students as well as your brilliance.

References (Laura has these & will share with the SAC):

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