Program Review – Annual Program/Discipline Update

Administrative Response and Follow Up

Winter 2021-2022

Program/Discipline: **Biology**

SAC Chair(s): **Ben Simon**

SAC Administrative Liaison (Director or Program Dean): **Dr. Ken Friedrich** (outgoing interim 2021-2022) & **Dr. Linda Fergusson-Kolmes** (incoming from March 2022 forward)

Other Dean(s) or Director(s):

Department Chair(s): Sandy Neps, Aaron Payette, Liz Rodrigues, Jennifer Hill

Date: **19 March 2022**

This section is for Administration to provide feedback.
To be prepared by Program Dean(s) and reviewed by Pathway Dean and AVPs.

Because this response comes to you during a transitional period, this response is a collaboration between Dr. Kenneth Friedrich (outgoing Interim Temporary Program Dean for Sciences), Dr. Linda Fergusson-Kolmes (incoming Program Dean for Life Sciences and Biotechnology), and Dr. Alyson Lighthart (Pathway Dean for Sciences, Computing, and Engineering).

First and foremost your deans who support Biology would like to acknowledge the time and effort that went into preparing this Annual Discipline Update (ADU) for PCC, which occurred on top of your primary / priority work of supporting your students through year 2 of a global pandemic. We would also like to commend you for your use of data and appendices in your ADU, your very thoughtful consideration of the future for PCC biology, and your repeated return throughout the document to *realistic one-year goals*. You ask meaningful questions, some of which may even be answerable questions. Please work closely with your Program Dean in the coming year to plan together a new path forward, post-pandemic.

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

The opening table of your ADU, coupled with the first paragraph of explanation of that data, was beautiful. You took the data that you were given, sorted it into meaningful cells, and established without question that this shows us nothing. Why does this make me so happy? Because you examined the data anyway, even suspecting as I'm sure you did that it would not be able to give

you meaningful results. We all had to switch to remote teaching, not just at PCC but at nearly every educational institution across the globe. It changed nearly everything about the way we could teach, and about the way students come to us. Section 1 (Enrollment / Location / Modality) is kind of a moot point in this our second full year of dealing with a global pandemic. What matters now is how we come out of that. As such, your questions…

> Do students choose the modality that really works for their learning, or is convenience a bigger influence. Will this lead to higher or lower success rates in the long term? Are we serving populations of students who may not have had access previously? How has the experience of learning remotely changed student expectations of what classes will look like moving forward?

…are important, and we hope that you will explore answers to them as we do finally return to in-person classes.

Please take time in your April SAC meeting to discuss which modalities make the most sense both for your subject area and for your students. What will you do to build on the great things you have learned, and to leave behind what doesn't work? You *have* seen what you can do, and it was kind of amazing! You saw increasing enrollments in biology this last year even while overall PCC enrollments continued to fall. You also saw students pass through an entire sequence of courses without a face-to-face lab experience. It is time to critically reflect on the experience of these last two years. Will your increased facility with technology allow you to envision the possibilities for taking delivery of remote or online laboratory classes to the next level? If so, what resources would you need to make that happen? Now that there are options, what will you do to hold the balance between the high quality equitable education that our students need, and the flexibility that they clearly want?

The Biology SACs approach to supporting remote labs continues to be innovative. We believe that the SAC did move forward with another year of access to the online software that supports remote learning in A&P, with the thinking that this software can support our students whether they are remote or in person. We also know that you created opportunities for experiential learning by getting home lab kits into the hands of our students. Please work with your Program Dean to explore the possibilities and choose a path forward that is sustainable both for PCC and for our students. If your SAC approves additional online and hybrid offerings, please work with your Program Dean to support the development of those courses and the formal training of faculty to teach them. Finally, please also work with your dean and Magda D'Angelis to procure the demographic data that you seek to connect curriculum to labor & workforce needs.

Your appendices provide great examples of what works well in your classrooms. Consider highlighting those in your SAC meeting as well. You could literally have five breakout groups, one for each topic:

- Course-structures, proactively designed to support student success
- Relationship building, to facilitate socio-cognitive learning
- Assessments, reimagined to allow students a better chance to demonstrate knowledge

- Anti-racist, decolonizing, and culturally-responsive teaching, including actual representation in class discussions
- Closing opportunity gaps–opportunities for growth and support.

In these breakout groups you might further explore possibilities for excellence in teaching in each of these areas. We strongly encourage every biology faculty to pick one new idea from each section in the appendices, and try it out in future classes. Many of these examples provide concrete strategies for building a sense of belonging in your classes. Other examples support asset-based approaches that can make the difference for a student between thriving or failing. It's great when you are evaluating them on the material they have learned by the end of the class, rather than on their ability to meet deadlines, or to get it right the first time. We also understand that these examples represent strategies that are not adopted uniformly across your SAC.

We encourage each faculty member to appreciate the insight and creativity demonstrated in these examples and to continue to build thoughtfully on this good work. We encourage you to support each other in trying new things, and learn from each other as you do. We have heard stories of faculty, especially part-time faculty, feeling afraid to try things because of the reactions they get from their colleagues, and fear of hearing the same from their deans. We want all biology faculty to feel safe in trying new things to support student learning. To that end, consider bouncing your ideas off your new Program Dean, both for the extra good that can come of brainstorming together, but also for the sense of safety that your plans have been vetted.

We hope that your SAC will continue to explore culturally responsive course design. This is as much about having students be able to see themselves in the sciences (a mirror in your classroom) as about seeing the possibilities of science in their lives (more like a window to the world). We also acknowledge that part of this work is also offering flexibility to students in how they meet the CCOGs. Consider for example this article from the Chronicle of Higher Education about alternative approaches to high stakes testing (that coincidentally are plagiarism-proof!).

It is excellent to see that the four campuses are embracing the One College model in their scheduling of BI courses. We do recognize that your FDCs were open in their communication with each other even before the reorg. The college's move to a single dean to support the life sciences should provide additional support for the direction your SAC is already moving. Additionally, the adoption of the Ad Astra scheduling system and the additional data it should allow us to access will help determine the best times and locations for opening new sections. Please continue to work together to schedule mindfully to meet student needs and to identify patterns that might suggest unmet need (e.g. additional evening or weekend sections).

We acknowledge the many achievements you have made in the last year, both individually in your classrooms and collectively as a SAC. We are delighted, for example, that you are now using the same texts for major's biology across all of PCC *and* PSU and that a course alignment agreement was reached. Congratulations on the TIIP grant to further support this work.

Additionally, the work on the hybrid courses funded by the STORI project even with the acknowledged challenges to workload should be celebrated. Likewise, the number of biology faculty that stepped into the Professional Learning Community (PLC) work this year is to be commended as well.

2. Areas of challenge or concern, if any:

We acknowledge that you as the Biology SAC are uniquely qualified to request that PCC mandate vaccines and continued mask use. We note that PCC has continued to require masks through Spring term. The vaccine question lies with the PCC board, and the mask question currently lies with the college president. Your deans hear your concerns, and validate them. We also know that's not good enough, and will continue to work with you to support practices that promote workplace safety as we emerge from a global pandemic.

We are not very concerned about fluctuations in success rates in your low-enrolled courses (BI 141, BI 145, and BI 202). Descriptive statistics are not very informative when working with small sample sizes. That said, because they are low-enrolled, perhaps you have an opportunity to build belonging in these classrooms in such a way that may help create a community of care in the classroom. When students know each other they are more likely to pull each other up, and keep each other going.

We are not very surprised about the lower success rates in the first-in-sequence courses like BI 231, because by contrast the students in BI 232 & BI 233 are only students who have already passed BI 231. Likewise BI 101 is an entry-into-science level course, so the students in the class are not in any way "pre-screened" for success in biology. Though we're not surprised, we are still concerned about success rates in BI 231 & BI 112 especially, as these courses are the gateway to the health professions, and as you say elsewhere in the ADU, we are in very desperate need of health professionals.

Please consider reexamining the CCOGs for BI 112 and the A&P series, with the lens of maybe it's something we're doing, rather than something they (our students) are not? An evaluation of the existing CCOGs was addressed in the final paragraphs of your ADU as a nascent project for A&P. We note that you identified the need for including student feedback as well as insights from other areas (such as Future Connect and identity based resource centers) to better understand the observed student success patterns. Please continue to explore these data sources and let your deans know how they can support your efforts.

There are many gaps in the institutional effectiveness data and things that we do not know. Even so, you have observed a number of opportunity gaps in the disaggregated student data. In your own words:

> …the consistent pattern of lower success rates in historically underserved populations of students strongly suggests the need for more anti-racist and culturally responsive

practices inside the classroom, as well as more comprehensive support for students to meet the challenges they face outside the classroom.

We would encourage you to continue to focus your energy on expanding on successful strategies to support student success, particularly for students from historically underserved groups. The examples listed in the appendices suggest an opportunity to leverage individual instructor innovations for collective success. We commend the collaboration that has already happened between BI 112 and A&P instructors to navigate the move to remote learning and encourage you to leverage that cooperation for collaboration between campuses. Please work with your Program Dean to plan a focused intercampus conversation between BI 112 instructors to share best practices for supporting student success.

As for the courses with the higher success rates, a possible positive cause for these improvements is the notable, SAC-wide, trend towards flexibility in the wake of the restrictions around COVID. Your students are being assessed based on what they learned, rather than how they met protocol. This is wonderful. A less wonderful interpretation, however, is that the remote modality created an inability to proctor exams. We recognize that challenges to academic integrity are a serious, ongoing problem that may impact our students in many ways when they leave our institution. There is not a single, simple solution to this problem but we are committed to working with you to coordinate responses to homework sharing sites such as Chegg, CourseHero, and Quizlet and to exploring conversations around the need for exam proctoring. These conversations are going on college-wide and the voice of the Biology SAC will be important in creating good, student-centered, sustainable solutions.

The Biology SAC is encouraged to engage with faculty peers, with the TLC, and with Online Learning to continue exploring assessment options that are less vulnerable to academic integrity issues. These assessments may look very different from those traditionally used to assess student learning. Assessments that are contextualized, especially if local and current, are less susceptible to Chegg or similar platforms. More importantly, these types of assessments can be culturally responsive and engage students who may not easily identify with STEM. We acknowledge the amount of faculty labor that has gone into dealing with the academic integrity issues created by homework sharing sites and encourage you to be proactive to reduce the labor in being reactive. Our new Interim Dean for Physical Sciences has committed to making inquiries to PCC's legal team to see if there are larger efforts that we can leverage in discussions with these private sector entities. Similarly, he will reach out to other institutions that are battling this problem to determine if another course of action could be fruitful. Please as always email your concerns about specific students to conductandcare@pcc.edu.

We acknowledge the request for additional resources to carry out SAC duties. We will review available resources to support PT participation as budgets become available but anticipate limitations as current budget projections are concerning. We note that three new additional FT faculty are in the process of being hired. Additionally, we will soon post announcements for FT temporary faculty positions, related to recent job transitions, retirements, and sabbaticals.

We also acknowledge that there have been major challenges within your SAC, and hope that in the coming years we can continue to work together to find solutions. You have already put together a strong communications protocol for your SAC, which is a great start towards smoother and more supportive conversations around difficult topics. Another solution that we have come to together is the Spring professional development in equity and inclusion, which will carry a stipend for PT faculty to attend. The goal of that training is to build a foundation to enhance our collective understanding of racial equity, in order to better understand and respond to racially-charged situations. You will work with an excellent trainer to:

→build a glossary of shared terms, such that we can all know that we're referring to the same thing when we speak of certain concepts;
→understand implicit bias, structural racism, and microaggressions;
→understand our own power, privilege, and identity by looking at our place in the world through a variety of lenses; and
→understand oppression, and how it impacts us all.

We know that the inequities and biases in our system are faced by both students and colleagues. We are committed to working with you to help address those inequities and create a greater sense of belonging within the SAC.

3. Reflection on goals and resources:

We are excited for the return to campuses, and the concomitant return to the field that this will enable. As restrictions around COVID lift and as the pathway budgets are finally re-aligned, we will have a much better sense of what's possible. Your continued advocacy for field courses is appreciated. We are committed to structuring support for field experiences into the new budgets, once we have them. We recognize the equity issues related to access because some students can make it to field sites easily and others cannot. Budgeting for vans would be one way to address this inequity. As budgets and COVID compliance rules change, we will keep field trips part of the discussion going forward. The incoming interim dean for physical sciences, which includes the field-dominant subjects of geology and general sciences, is exploring ideas around intergovernmental agreements with other entities that manage fleets to see if an agreement can be made to share those resources at a cost that is much less than purchasing and operating our own.

We are committed to the goal of getting the campuses to resource parity as well. To that end, we would like to share with you this spreadsheet to collect your ideas to better support BI across all 4 campuses, and help get us to truly be One College for equitable student success. Please use this spreadsheet to document physical or human resources needed to support a robust BI program.

Please as you have that conversation consider also that we have centers at Newberg and Hillsboro that would love to offer additional science classes. Are there BI lab classes that are *not* materials intensive that might work there? Or could there be a portable set of lab supplies

that could be moved from place to place? As you have seen throughout this administrative response, we encourage you to think outside the box and bring ideas that support belonging, access, justice, equity, diversity, and inclusion in all your courses.

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 to strategize how to turn your recommendations into reality. These conversations should include the Program Dean for Life Sciences & Biotechnology and the Pathway Dean for Sciences, Computing, and Engineering. Continue to make progress on the realistic one-year goals identified.

5. Additional comments/questions:

We want to thank the authors of this document for a very thoughtful self-assessment of your program. We would also like to thank you for using the red font, which made reading so much easier. Sometimes it's the little things that make the biggest difference!

Most especially though, we want to thank the Biology SAC for your continued hard work in support of PCC students. We know these past two years have not been easy, and you have done great work in supporting your students and each other. We also commend you for being willing to engage with your challenges and to have hard conversations around such things as rigor and the need to continue to close opportunity gaps for historically underserved students. Your list of achievements is considerable and should be celebrated. Please always feel free to reach out to your Pathway or Program Dean for assistance as needed, as we begin our long-awaited transition back to campuses.