De Anza College

Program Review – Annual Update Form

1. **Briefly describe how your area has used the feedback from the Comprehensive Program Review provided by RAPP members (if unsure, request the feedback form from your dean/manager).**

   From last year's Comprehensive Program Review, RAPP committee members provided largely positive feedback, with only one area they suggested improvement. Their feedback suggested we pay more explicit attention to how enrollment trends intersect with the program mission. The mission statement for Astronomy reflects an emphasis on the fundamentals of astronomy and science concepts, with an eye towards making the Astronomy courses vivid and memorable, and maintaining a supportive environment for students. We believe the best way to make these classes memorable and supportive for all students is to offer our courses in a variety of modalities that best fit the students' learning preferences.

   To address the enrollment trends, our department has put specific effort toward reevaluating our course offerings and modalities of those courses. The Astronomy Laboratory class is now offered twice per year and has been a reliable source of enrollment each time it is offered. This, along with additional in-person Stellar Astronomy sections has resulted in the benefit of using the Planetarium facilities during class time. Students come away from these classes with the vivid memory of having class in the Planetarium, taking advantage of the immersive and engaging format of the projector systems.

   Our online class offering has also remained popular in terms of enrollment for the past several quarters, which we are working on making it possible for online students to visit the planetarium as well. At this point, we are continuing to assess the best distribution of course modalities to maintain strong enrollment while also advancing our mission statement to offer high quality, supportive learning environments for our students.

2. **Describe any changes or updates that have occurred since you last submitted program review (comprehensive program review submissions)**

   Our department has a couple of updates we'd like to highlight for this year:

   a. **Planetarium Upgrade** – We continue to collaborate with Planetarium staff to ensure the upgrade is on track and will be implemented by Fall 2025. At this point, we are coordinating to schedule a remote training session of the software for full-time instructors this spring. Training for part-time instructors will be offered over the Summer, after the installation of the new system is complete.

b. **Open Educational Resources (OER) Textbook Development** – Instructors Caitlin Kepple and Rachel Mastrapa have begun collaboration on a $40,000 state-funded grant to develop two OER textbooks for ASTR 4 and ASTR 10. We are collaborating with De Anza's ZTC Textbook Coordinator, Shagun Kaur, who will provide training and support for this project. This effort is in alignment with our department's mission and goals, as we intend to improve on the current textbook materials each of our Astronomy instructors use—which is the OpenStax Astronomy textbook.

3. **Provide a summary of the progress you have made on the goals identified in your last program review (as included in the comprehensive program review).**

   Adoption and Revision of new SLO language – During our most recent department meeting, we discussed a new set of SLOs for the ASTR 4 and ASTR 10 courses. The SLOs are modeled after those developed for the CCN General Astronomy templates, which are currently being reviewed across the state. Our intent is to adopt the new SLOs once the courses come up for their next 5-year revision.

4. **If your goals are changing, use this space to provide rationale, or background information, for any new goals and resource requests that you'll be submitting that were not included in your last program review.**

   The goals for our department have not changed since submitting the last program review.

5. **Describe the impact to date of previously requested resources (personnel and instructional equipment) including both requests that were approved and were not approved. What impact have these resources had on your program/department/office and measures of student success or client satisfaction? What have you been able to and unable to accomplish due to resource requests that were approved or not approved?**

   Our request for funds to implement the Planetarium upgrade was approved by the Board of Trustees and will be spent before the end of the 2024-2025 fiscal year. This upgrade will have a major impact on our department's ability to provide updated planetarium demos for students. As of now, many of the visuals are out-of-date, considering the advances made in astronomy and space exploration since the last upgrade (circa 2013). All of the in-person astronomy classes use this equipment regularly, and will likely increase usage once this upgrade is in place.

   In addition to the planetarium upgrade, new laboratory equipment is also currently in use as of the Winter 2025 quarter. The gas discharge tubes (and power supplies) are a vital part of

the Astronomy laboratory curriculum, especially because this course is only taught in person currently.

6. **How have these resources (or lack of resources) specifically affected disproportionately impacted students/clients?**

   We do not have any specific metrics that can speak to how these resources affect disproportionately impacted students. However, our goal is to provide students with a high-quality educational experience that is enhanced through interactive and immersive tools for learning. These resources enable all students to actively engage with the material, regardless of background or preparation for a physical science class. In contrast to online courses that often rely on students' prior knowledge and present circumstances as a student, our in-person courses offer an extra layer of support and engagement that simply cannot happen online.

7. **Refer back to your Comprehensive Program Review under the section titled Assessment Cycle as well as the SLO website (https://www.deanza.edu/slo/) for instructional programs. In the table below provide a brief summary of one learning outcome, the method of assessment used to assess the outcome, a summary of the assessment results, a reflection on the assessment results, and strategies your area has or plans to implement to improve student success and equity. If your area has not undergone an assessment cycle, please do so before completing the table below.**

   Our department has not implemented a regular assessment cycle with current SLOs listed in the course outlines. We have discussed this point and clarified how to complete the assessment for our current students at the end of this quarter.

   As mentioned in the response to question 2 above, our department intends to adopt a new set of SLOs for ASTR 4 and ASTR 10 that closely match the CCN templates that will (likely) be adopted by the state. We believe this new set of SLOs will be easier to assess widely and on a regular basis.

8. **Dean Manager Comments:**

   Our Astronomy program has not only been serving our students by offering a variety of courses in different modalities satisfying the General Education and Lab Science requirements, they have also been growing as a department. Under their leadership, they have started regular department meetings in which they discuss equity, student support, and ways to develop and offer more advanced courses keeping up with the new technology and modern approaches. In the past year they have started upgrading the Planetarium which will benefit our students and the community greatly. Just like other small departments with one or no fulltime faculty, this department could also benefit from another fulltime faculty, but that is a conversation to have down the line when more funding is available. The additional

fulltime faculty would be providing relief and help with development of programs within the department.