

CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA

ACADEMIC SENATE

ACADEMIC PROGRAMS COMMITTEE

REPORT TO

THE ACADEMIC SENATE

AP-003-256

Program Review for BS, Physics

Academic Programs Committee

Date: 11/12/2025

**Executive Committee
Received and Forwarded
Academic Senate**

Date: 11/19/2025

Date: 12/03/2025

First Reading

Date: 02/04/2026

Second Reading

BACKGROUND:

As part of the University's planning cycle for academic programs, the Physics and Astronomy Department completed their self-study of the BS, Physics Program in 2023-2024. The previous program review was completed in 2016-2017. Internal reviewers Dr. Stephen Osborn (Science) and Dr. Kimberley Miller (Agriculture) visited the Physics and Astronomy Department in March 2024. External reviews of the program were performed by Professor Jennifer Klay (Cal Poly San Luis Obispo) and Dr. Brian Monacelli (Jet Propulsion Lab and Pasadena City College) during their visit on April 11-12, 2024. After the untimely loss of the department chair (and author of the self-study, Dr. Alex Small), the Physics and Astronomy department formulated their long and short-term plans to address feedback raised during the review process. The Dean has reviewed and acknowledged these plans (May 2025).

RESOURCES CONSULTED:

Dr. Matthew Povich, Chair, Physics and Astronomy Department
Dr. Alison Baski, Dean, College of Science
Dr. Jocelyn Chong, Office of Assessment and Program Review

DISCUSSION and RECOMMENDATION:

The external and internal reviewers highlighted the program's emphasis on student success and career readiness, including a high rate of student engagement in research, as well as high job satisfaction among full-time faculty and lecturers. The faculty foster social learning in the classrooms, laboratories, and during research. The students have a keen sense of belonging and are supportive of each other. This is partly facilitated by the small classroom sizes, especially in the upper division courses. With the support of their faculty mentors, students are presenting at local conferences and authoring scientific publications. The Physics and Astronomy Department places a strong emphasis on career readiness. They have expertly navigated the change to the semester system, making pertinent curricular changes that they continually assess. They maintain strong ties with their alumni who serve on the Industry Advisory Board, and frequent department and college wide events including Alumni Career Panel, annual Research Symposium, and Professor for a Day.

The external and internal reviewers highlighted the success of the BS in Physics program with emphasis on the relatively small classroom sizes that are consistent with physics education nationwide. Alumni have appreciated the smaller, "hands-on" classrooms which have improved their success in industry. To continue the program's strong record of student success, the Physics and Astronomy Department needs administrative and financial support for learning assistants and more protected time for faculty research.

The BS in Physics program faces challenges and opportunities for improvement. Administrative delays in hiring student support assistants have caused the department to carry extra workloads, especially in the first few weeks of the semester. Learning Assistants, who play an important role in providing support to students enrolled in the

introductory physics courses, are limited by the administration. An underlying problem for the department is that funds are not under direct departmental control but come from the Dean's office. The P&A department hopes to address this concern by the Dean's office communicating the number of learning assistants to the department ahead of the semester and leaving the recruitment/assignment of these learning assistants at the department's discretion.

Other challenges faced by the BS in Physics program include:

1. Workload pressures on faculty and staff. Due to high teaching and/or service loads, tenure-track faculty do not have sufficient time for research. The loss of a net half-time ASC position has meant that more administrative tasks are allotted to tenure line faculty. Staff morale is low as they feel that they are undervalued, under supported, and underpaid.
2. More focus on recruiting women or gender minority students. Current efforts to address this include efforts to support women in physics through clubs and an annual luncheon.
3. Lack of IT collaboration (such as Mac vs Windows) with faculty and lecturers in the department.
4. More space for students to sit outside of the classrooms.
5. Need more tenure line faculty to better support assigned time for research and to achieve a sustainable teacher-scholar model.

The Academic Programs Committee acknowledges the role of the late Dr. Alex Small, former Chair of the Physics and Astronomy Department, on his dedication, commitment, and leadership in producing a rigorous self-study document. The Physics and Astronomy Department is commended for following through with detailed long-term and short-term plans for the BS in Physics program. The department serves students well and contributes to the overall success of their students and Cal Poly Pomona as a whole.