



FACULTY STAFFING REQUEST FORM

Qualitative Criteria

School: School of Math and Science

Department: Astronomy/Physics

Position Title: Astronomy/Physics instructor ___ New X Replacement

Number of FT Faculty in Fall 2021: 0 (Astronomy) and 2 (Physics)

Number of PT Faculty teaching in Fall 2021: 4 (Astronomy) and 3 (Physics)

Please submit your responses to the prompts below (no more than 800 words) to the Office of Academic Affairs by October 15, 2021 at 5 PM.

1. Potential Load and/or Potential Direct Student Contact: (*FTE, Courses, number of sections, student/counselor ration; no need to submit days/times of teaching schedule at this time*):

This instructor will carry at least a full-time load. For example: Fall: ASTR 010(9AP) (two sections), ASTR 020(AP7.5), PHYS 004(AP19.5); Spring: ASTR 010(AP9), ASTR 020(AP7.5), ASTR 045(AP9), PHYS 002(AP19.5). AP = Activity points = 90 points.

2. Availability of qualified hourly faculty to teach and serve students:

We have recently lost two hourly faculty members, due to retirement and resignation. Our remaining adjunct instructors (Phil Petersen, Katie Berryhill, Maura Rabbette, Tracey Johnson, Darwin Ho, Bogdan Popescu, and Trevor Gonzalinajec) are mostly carrying at, or close to, their maximum load. One of our adjuncts has decided not to undergo training to teach online.

3. Why is it important to have a FT faculty in this role?

We have been functioning without a permanent, full-time Astronomy/Physics faculty member since Summer 2014. When Phil Petersen retired in 2014, Michael Gregg was hired to fill the same FT Astronomy/Physics faculty position. However, Gregg resigned after Spring 2015, before receiving tenure. We did hire a FT-temporary Astronomy/Physics faculty member, Alessandro Baldi, from 2015-2016, but that position was not renewed. We have been functioning since Fall 2016 with 90% or more of our Astronomy courses taught by adjuncts.

Astronomy courses are the most popular General Education science courses at SCC, and Astronomy has the potential to be a major growth area for the College. A new Astronomy faculty member could lead outreach programs, such as night-time star-gazing events, which are very popular at other community colleges. Since Spring 2018, we are offering a new Astronomy AS degree, and two new Astronomy courses, ASTR 045 and ASTR 050. The lack of a full-time faculty member is putting the health of this program, and this degree, at risk.

4. Areas where additional expertise is needed:



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The absence of someone in this position has led to a lack of leadership and vision for the Astronomy program. There are also a great number of administrative tasks, such as Program Review, Curriculum Review, Guided Pathways, co-ordination of SLO assessments, etc., that currently fall on the shoulders of full-time faculty from outside the department. It is not reasonable to expect the next Astronomy Program Review, like the last one, to be overseen by a faculty member who does not teach Astronomy, nor is it reasonable to expect it to be led by an adjunct.

5. What will be the impact (students, program, College, other) if this position is not filled?

1. The demand for all STEM courses, including Astronomy and Physics, is expected to continue to increase in the coming decade.
2. For the three academic years of 2017-2020, the FTEF %FT for Astronomy was 8.9%, and for Physics was 39.3%. These numbers are much less than the California state target of 75%, less than the actual California-wide FTEF %FT of 45%, and less than all other departments in the Math and Science Division.
3. It seems illogical to base the rankings on the total FTEF PT, rather than the *fractional* FTEF %PT. By this former criterion, larger departments will essentially *always* score higher than small departments! More generally, it should be understood that a new Astronomy/Physics position will have a transformative impact on the Astronomy Department, whereas a new position in a large department, such as Biology or Mathematics, can at best have a marginal effect.
4. Our Physics program is highly regarded among the local industry and academic community, and needs to be nurtured. As one example of the success of this program, in Fall 2018 alone, three of our former Physics students have begun PhDs: Anthony Salazar and Nick Sherman at UC Berkeley, and Rustin Domingos at MIT.
5. We have been unable to offer ASTR 049 and ASTR 050 for the past few years, due to lack of available faculty.

6. How does this position help fulfill the mission of the college and our commitment to antiracist practices?

Our Physics Department has an excellent record of educating students from under-represented groups. For example, our recent graduates Anthony Salazar and Rustin Domingos have gone on to PhD programs at Berkeley and MIT, respectively. Black graduate Eddie Barton is now pursuing a PhD at the University of Wisconsin. Hiring an additional full-time faculty will allow us to continue and strengthen our efforts in helping students from under-represented groups to excel in STEM fields.

In ASTR 049: Honors Astronomy, our students were able to help NASA discover new planets at the edges of our Solar System, using data from NASA's Wide-field Infrared Survey Explorer mission. This was done as part of NASA's Citizen Science program, which inspires a diverse student population (57% women, and 50% non-white) to pursue science careers. We have been unable to offer ASTR 049 since Fall 2019, due to lack of available faculty.



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7. Other compelling factors not identified in responses 1-7 above:

The position was identified in a previous program review: Yes

According to pp. 21-22 of the Fall 2016 Astronomy Program Review:

“The Astronomy program is currently in a state of extreme instability and uncertainty. During the past five years, adjunct faculty have carried 55% of the FTEF in Astronomy. However, the trend indicates that increasingly more teaching load is being carried by adjuncts, with the proportion of FTEF for the 2015-2016 academic year carried by adjuncts being 77%, which is far from the standard norm of 25%. Hiring one or more full-time faculty on a permanent basis would be vital to enhance the strength of the Astronomy program, by ensuring long-term stability, and a high quality educational experiences for our students.”

If no, what changed necessitating a request for a full-time faculty member?