Foothill Annual Program Review 2024

Annual Program Review Template 2024

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1. Number of full-time faculty in the program.

1

2. Number of part-time faculty in the program.

2

3. Number of staff in the program.

N/A

4. Do the above numbers reflect any staffing changes?

In order to staff lecture and lab classes during the full-time factulty member's Professional Development Leave in Spring '24, '25, and '26, two part part faculty members have been hired.

5. Refer to the most recent Comprehensive Program Review, what were the identified actions for improvement? Identify any current and/or new Strategic Goals.

The primary action items were:

- raising student awareness of in-person ASTR courses
- attendance interventions
- modernization of lab course

6. What actions identified in the Comprehensive Program Review (or most recent Annual Program Review if no Comprehensive Program Review) have you completed this year?

Modernization of the lab course continues through work with the UC Observatories' program for Bay Area community colleges to use Lick Observatory (ASTRAL). This includes:

- Student tour of Lick Observatory
- Remote observing with a research telescope at Lick Observatory
- Development of new labs with graduate student and early career participants in the UC Observatories / Institute for Scientist and Engineer Educators' Professional Development Program

On-campus awareness raising activities continue, with lab assignments involving public solar viewing, in-person lectures, and public events at the Foothill Observatory.

Attendance and participation interventions have been implemented:

- More frequent messages to students about upcoming and late assignments, including information about how to address these.
- More frequent emails to absent students with a reminder of class times and a listing of college resources to help students address challenges that could interfere with attendance.

7. Explain your implementation timeline and if there have been any changes or updates.

Further improvements to the lab course require COR updates to shift the learning goals towards modern astronomy skills. Initial efforts led to the realization that this also requires attention to the general-education documentation and to UC and CSU equivalents to ensure the course maintains articulation.

Collaboration with UC Observatories has been useful, however, further lab modernization requires updating the Foothill Observatory to be usable for regular observing (Lick is limited to 2 nights per quarter, and Foothill Observatory is limited to occasional by-eye observing). Installation of systems to carry out automated observing will allow students to carry out long term projects utilizing iterative observations over the entire span of the course.

We are now back to the full slate of course awareness raising activities, with a semi-regular presence of lab students conducting solar viewing on-campus at times of high foot traffic, and astronomy talks have returned to being conducted in-person.

8. Explain the evidence the program used to evaluate progress and provide an update on progress.

For lab modernization:

- The lab COR and general education documentation updates are currently in the organization phase, tabulating the requirements across multiple documents to ensure all requirements across categories are met.
- A plan for installation of hardware and software to automate the Foothill Observatory has been drafted, though completion will require work with Facilities and ETS.

For attendance interventions:

- Messages to absent students have led to no change in patterns of absence (or response to messages), though there has been a slight increase in completion of assignments by students who do attend class

9. Click the link and follow the instructions to the Disproportionate Impact dataset, then respond to the prompt below.

https://foothilldeanza-my.sharepoint.com/:b:/g/personal/20078222_fhda_edu/ETXoAp44fMFCppHXvzpIFgcB5ogzcvUXLknHrIXo1ghkHg?e=H8axR7

Identify the groups that are experiencing a disproportionate impact in the most recent year (highlighted in orange). In the text box below, provide the percentage point gap and the number of additional successes needed to erase the percentage point gap for each group.

For non-instructional programs that do not have program specific disproportionate impact student data, please provide an update on the program's 13-55 project (i.e., project description, students served, implementation timeline).

Latinx students: 72% success rate vs. 85% for other student populations. 15 additional successes (out of 114 students) to erase the percentage point gap.

Low income: 74% vs. 83% for non-low income populations. 11 additional successes (out of 106 students) to erase the percentage point gap.

First-generation: 62% vs. 85% for not-first generation students. 17 additional student successes (out of 73 students) to erase the percentage point gap.

The success gap for Latinx students could be due to the high proportion of first-generation and low-income. Only 23% of Latinx students are both not low-income and not first-generation, vs. 86%, 72%, and 89% of white, Asian, and Unknown ethnicity (the three other largest demographics). The success rate of Latinx students in this group matches that of other ethnicities. Half of students who are either low-income or first-generation, and 89% of students who are both low-income and first-generation, are Latinx.

10. Use this opportunity to reflect on your responses in this document. Include your closing thoughts.

Comparing daily attendance taking with course grades, students who attend classes have a high success rate, and students who do not attend have a low success rate (with the success rate dropping rapidly as days attended decreases). I do not have the information to link attendance records to student categories such as ethnicity, low-income status, or first-generation status, so I cannot compare that analysis to the demographic analysis. However, the students who do have spotty attendance often report to me when they do return to class that their absences are driven by employment or family issues. This suggests that the students who stop attending completely (and thus have a low success rate) face similar challenges.

It is likely that low-income and first-generation students face more challenges to attendance and assignment completion. Thus addressing those challenges should help all populations with lower success rates.

The success rate gap for low-income and first-generation students suggests that I should carry out more intensive efforts from the start of each quarter to direct students towards resources to help with such challenges. I already have students reflect upon challenges they will face in attending class and completing assignments (with a frequent issue in their anonymous responses being work and family commitments), but I will incorporate to this reflection assignment explicit links to resources and reflection upon how to use those to address attendance challenges.

Click on the link below to view the Annual Program Review Rubric.

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End of Annual Program Review Template 2024

Astronomy-FD

Rubric Annual Program Review

Criteria

The program's responses...

- align with the program’s goals
- align with data
- are informed by data
- are within the control of the program
- have measurable outcomes

- [x] Meets Expectations
- [ ] Needs Improvement

Feedback

Geoff Matthews is the only FT faculty member in astronomy, and he has been doing an amazing job in modernizing content and lab experiences for our students. These are done, as detailed in the report, in part by partnering with the Lick Observatory, which is a unique partnership between FH and the observatory. The main problem with this is the access issue - having students tour and remote access to the telescope come with difficult time availabilities. As more and more observatories around the globe transition to the ability to for remote access and automation, this in turn gives access to a network of telescopes around the globe. FH is in a unique position with the state of our current observatory, and it is my opinion that we should seriously look to upgrading our technology so as to access the network across the globe. This will give more access to our students, revolutionize our place in the astronomy community, and widen the community access. These details are also described in the budget request relevant to this ask.

Moreover, as Geoff takes PDL spring '24, '25, and '26, we have worked together to find two new part-timers to fill in for him during those quarters, with the most recent one being spring '24. Onboarding and guidance for the part-timers have been successful, and Geoff does a great job in coordination and communication with them beyond what I can offer at the content level.

Efforts around increasing success and equity gaps are detailed in the program review, but increase in closing the gap have proven difficult. Is it possible to identify any of such students as Geoff describes (employment; family obligations, etc.) as potential MESA students? How can we get these students more resources for success? Can we help direct them to other resources on campus?

Overall, ASTR has had very solid enrollment numbers, and continues to be true this upcoming winter '25 quarter with zero available seats across its three sections of offerings.

This form is completed and ready for acceptance.