



## 2018-19 Annual Program Update

### **Program Overview**

Please verify the mission statement for your program. If there is no mission statement listed, please add it here.

The mission of the physics program is to provide students with a strong foundation in physics in an accessible, engaging manner.

The Physics department offers courses that provide a foundation for students transferring to four-year schools in engineering and in the physical and biological sciences, as well as courses that meet general education requirements. The PHYS 4A/4B/4C courses are a three semester calculus-based series for engineering and physical science majors. The PHYS 3A/3B courses are a two semester calculus-based series for biological and medical science majors. The PHYS 10 course is a general education survey course and is the only Physics course without a laboratory segment. As a segment of the Physics department we offer one class in Astronomy, ASTR 10, and also does not have a laboratory segment.

List your Faculty and/or Staff

#### **Full-time**

Niel Allen Nicol (ASTR/PHYS)

#### **Part-time**

Mehrdad Mohebi (PHYS)

Andrew Combs (PHYS)

Rosa Alvis (PHYS)

Andrew Fittingoff (ASTR/PHYS)

Dietmar Kraus-Varban (ASTR/PHYS)

The Program Goals below are from your most recent Program Review or APU. If none are listed, please add your most recent program goals. Then, indicate the status of this goal, and which College and District goal your program goal aligns to. If your goal has been completed, please answer the follow up question regarding how you measured the achievement of this goal.

#### **Goal 1. Maintain articulation of PHYS 4A/B/C with University of California.**

This past year we completed a critical MATH prerequisite/corequisite update to the PHYS 4A/B/C sequence - has been approved by the state. Changes will go in to the next catalog - 2019-2020.

#### **Goal 2. Complete the AS-T degree in Physics**

Completed in spring 2018 - pending state approval

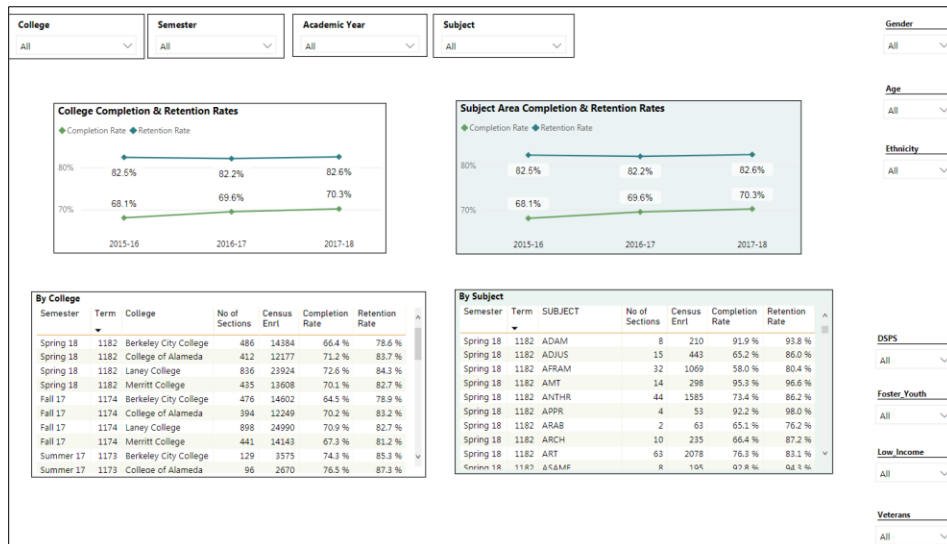


Describe your current utilization of facilities, including labs and other space

Physics (and Astronomy) lectures are currently held in A233, A239, A266, A273, D200, and the Forum. Physics laboratory class meet solely in room A274, the physics lab room.

The only official faculty office space currently shared by the one full- and all part-time faculty is the area in the Physics stockroom A 272. Storage areas for Physics materials are in the stockroom, A 272 and the instrument room A 274A.

### Program Update



### Program Update Power BI dashboard

Using the dashboard, review and reflect upon the data for your program. Describe any significant changes and discuss what the changes mean to your program. Consider whether performance gaps exist for disproportionality impacted students. Focus upon the most recent year and/or the years since your last comprehensive program review. Cite data points from the dashboard to support your answer.

Total enrollment over the last three years in PHYS courses is 208-269 students/semester with 6-7 sections. Very slight increase in overall enrollment is noted in 2017-18.

Some notable items from the BI Dashboard.

1. Overall completion (80.6%) and retention (86.9%) rates are up from previous two years and is above the school average.
2. Male retention and completion rates are on average, both higher than female rates (this is opposite to the numbers for CHEM)
3. Black and Asian completion and retention are both very high. Hispanic is identical to school average

Overall, enrollment in PHYS/ASTR is consistently at or near the capacity of the class offerings. All physics courses in the 3A/B and 4A/B/C series are necessary for several transfer pathways and in high demand. The only item of concern with regard to future demand in our classes is whether other colleges in the district will continue to open up sections of the same classes that we offer, without doing a careful district-wide supply and demand analysis, i.e. effective enrollment management.

Describe the department's progress on Student Learning Outcomes (SLOs) and/or Administrative Unit Outcomes (AUOs) since the last Program Review/APU. If your discipline offers a degree or certificate, please describe the department progress on Program Learning Outcomes (PLOs).

The Physics and Astronomy department performs regular assessments of all sections of each class offered every semester. The minimum is that each course assessed at least on course SLO. All data has been added to Curricunet for Spring and Fall 2018 and is listed as either active or in review.

|               |      |                                |            |           |
|---------------|------|--------------------------------|------------|-----------|
| Laney College | ASTR | ASTR 10 25609 SLO1 Spring 2018 | 5/29/2018  | Active    |
| Laney College | ASTR | ASTR 10 41839 SLO1 Fall 2018   | 12/29/2018 | In Review |
| Laney College | PHYS | PHYS 10 30372 SLO1 Summer 2018 | 7/31/2018  | In Review |
| Laney College | PHYS | PHYS 3A 41740 SLO2 Fall 2018   | 12/29/2018 | In Review |
| Laney College | PHYS | PHYS 3A 41910 SLO1 Fall 2017   | 1/18/2018  | Active    |
| Laney College | PHYS | PHYS 3B 25422 SLO1 Spring 2018 | 5/29/2018  | Active    |
| Laney College | PHYS | PHYS 4A 41742 SLO2 Fall 2018   | 10/15/2018 | In Review |
| Laney College | PHYS | PHYS 4A 41913 SLO1 Fall 2017   | 1/18/2018  | Active    |
| Laney College | PHYS | PHYS 4B 25420 SLO1 Spring 2018 | 5/29/2018  | Active    |
| Laney College | PHYS | PHYS 4C 41746 SLO2 Fall 2018   | 10/11/2018 | In Review |
| Laney College | PHYS | PHYS 4C 41917 SLO1 Fall 2017   | 1/18/2018  | Active    |

The Physics department just completed the AS-T degree and submitted to the state - it is pending approval.

Describe the outcomes and accomplishments from previous year's funded resource allocation request.

| <b>Brief description of funded request</b> | <b>Source (any additional award outside your base allocation)</b> | <b>Total Award Amount</b> | <b>Outcome/Accomplishment</b> |
|--|---|---------------------------|-------------------------------|
| N/A  |   |                           |                               |
|  |   |                           |                               |
|  |   |                           |                               |

**Prioritized Resource Requests Summary**

In the boxes below, please add resource requests for your program. If there are no resource requested, leave the boxes blank.

| <b>Resource Category</b>            | <b>Description/Justification</b>   | <b>Estimated Annual Salary Costs</b> | <b>Estimated Annual Benefits Costs</b> | <b>Total Estimated Cost</b> |
|-------------------------------------|--|--------------------------------------|--|-----------------------------|
| <b>Personnel: Classified Staff</b>  |  |                                      |  |                             |
| <b>Personnel: Student Worker</b>    | Request for 1 student worker to assist in the physics laboratory program   | ?                                    |  |                             |
| <b>Personnel: Part Time Faculty</b> | In PHYS/ASTR for fall 2019 we need 2.0 Temp FTEF and for spring 2020, 2.0 Temp FTEF.<br><br>So, for the 2019-2020 academic year we will need <b>4.0 Part-time FTEF</b>     | ?                                    |  |                             |
| <b>Personnel: Full Time Faculty</b> | Our current coverage of classes for PHYS/ASTR for 2019-2020 is with <b>35% full-time and 65% part-time faculty.</b><br><br>We need to hire <b>1.0 FTE Physic/Astronomy</b> | ?                                    |  |                             |

| <b>Resource Category</b>                                   | <b>Description/Justification</b> | <b>Total Estimated Cost</b> |
|--|----------------------------------|-----------------------------|
| <b>Professional Development: Department wide PD needed</b> |                                  |                             |

|  |  |  |
|--|--|--|
|  |  |  |
| <b>Professional Development:<br/>Personal/Individual PD needed</b> |  |  |

**Prioritized Resource Requests Summary - Continued**

| <b>Resource Category</b>                              | <b>Description/Justification</b>   | <b>Total Estimated Cost</b> |
|---|--|-----------------------------|
| <b>Supplies: Software</b>                             |  |                             |
| <b>Supplies: Books, Magazines, and/or Periodicals</b> |  |                             |
| <b>Supplies: Instructional Supplies</b>               | Annual shared budget is for Chemistry, Physics and Astronomy. For Physics, needs are primarily for consumables (paper, toner, etc.) and replacement of older equipment for physics laboratory experiments. Primary percentage of the budget is for Chemistry supplies. | \$25,000                    |
| <b>Supplies: Non-Instructional Supplies</b>           |  |                             |
| <b>Supplies: Library Collections</b>                  |  |                             |

| Resource Category                              | Description/Justification | Total Estimated Cost |
|--|---------------------------|----------------------|
| <b>Technology &amp; Equipment: New</b>         |                           |                      |
| <b>Technology &amp; Equipment: Replacement</b> |                           |                      |

**Prioritized Resource Requests Summary - Continued**

| Resource Category             | Description/Justification  | Total Estimated Cost |
|-------------------------------|--|----------------------|
| <b>Facilities: Classrooms</b> | <p>Science classes rely heavily on whiteboards for presentation of material. Where the school has recently invested heavily on updating A/V technology in all classrooms on campus, we still require the use of whiteboards in our lecture and laboratory classes.</p> <p>Please ensure that in our most commonly used lecture rooms that we install multi-panel whiteboards to accommodate these pedagogies. The rooms include: A233, A239, A266, A273, D200, the Forum.</p>  | ?                    |
| <b>Facilities: Offices</b>    | <p>The ASTR and PHYS departments need more office space for full- and part-time faculty. Currently faculty use either the corner of the Physics general stockroom, room A272 or the Physics laboratory, room A274. Students need access to instructors during office hours. The space in A272 is simply too small and compact to hold office hours, so faculty end up using the laboratory space in A274. However, faculty need a location to hold office hours that is not the lecture or laboratory room, and with increased use of this A274 for other programs on campus, such as Engineering, the room is increasingly becoming less available.</p> | ?                    |
| <b>Facilities: Labs</b>       |  |                      |

|                          |  |  |
|--------------------------|--|--|
|                          |  |  |
| <b>Facilities: Other</b> |  |  |

| <b>Resource Category</b>            | <b>Description/Justification</b> | <b>Total Estimated Cost</b> |
|-------------------------------------|----------------------------------|-----------------------------|
| <b>Library: Library materials</b>   |                                  |                             |
| <b>Library: Library collections</b> |                                  |                             |

| <b>Resource Category</b> | <b>Description/Justification</b> | <b>Total Estimated Cost</b> |
|--------------------------|----------------------------------|-----------------------------|
| <b>OTHER</b>             |                                  |                             |