

Department Chairs/Program Leads: Please press the edit symbol in the right-hand corner to update. Below, the text in bold corresponds both to the name of the box when editing this page and also to the first-column on the APRU worksheet. If you have questions, please contact: papemary@fhda.edu.

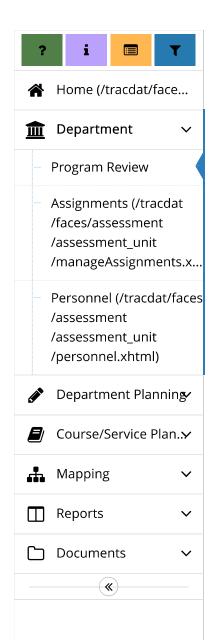
## 🔻 🧰 Dept - (PSME) Astronomy

2019-20 Annual Program Review Update Submitted By: Marek Cichanski

APRU Complete for: 2018-19

Program Mission Statement: The Astronomy Department's Program Learning Outcomes are that the student will be able to 1) appraise the benefits to society of astronomical research, 2) evaluate the impact on Earth's characteristics of the evolution of the solar system, stars, and stellar systems, and 3) evaluate astronomical news items or theories about astronomy based upon the scientific method. These outcomes contribute to the College's student core competencies in communication & expression, information literacy, and critical thinking.

- I.A.1 What is the Primary Focus of Your Program?: Transfer
- I.A.2 Choose a Secondary Focus of Your Program?: Personal Enrichment
- I.B.1 Number Certificates of Achievment Awarded:
- I.B.2 Number Certif of Achievment-Advanced Awarded:
- I.B.3 #ADTs (Associate Degrees for Transfer) Awarded:
- I.B.4 # AA and/or AS Degrees Awarded:
- I.B.5 Trends in # Degrees Awarded:
- I.B.6 Strategies to Increase Awards:
- I.C.1. CTE Programs: Review of Perkins Core Indicator and SWP Outcomes Metrics:
- I.C.2 CTE Programs: Labor Market Demand and Industry Trends::
- I.D.1 Academic Services & Learning Resources: #Faculty served:
- I.D.2 Academic Services & Learning Resources: #Students served:
- I.D.3 Academic Services & Learning Resources: #Staff Served:
- I.E.1 Full time faculty (FTEF): 3.5
- **I.E.2 #Student Employees:** This is meant for I.E.1, above, but that box wouldn't allow for the entry of text:



During the last three years (2016-17 through 2018-19), FTEF has gone from 4.1 to 3.5. Most of this came from the retirements of two full-time faculty members in June 2016 and June 2019.

The faculty member who retired in June 2016 has chosen not to teach their last available course under Article 19, and is now completely retired. The faculty member who retired in June 2019 opted for the Supplemental Retirement Plan, and as a result is fully retired, with no option to teach under Article 19.

At present, there will is only full-time faculty member in the department, who also has an FSA in Geology.

As of Winter 2020, the Astronomy department consists of the remaining full-time faculty member, described above, and four part-time instructors.

**I.E.3 Full Time Load as a %:** During the last five years (14-15 through 18-19), the full-timer percentage has been in the range of 53% to 55%, except for 16-17, when it was 44%. This was due to the retirement of a full-time faculty member at the end of Spring 2016.

**I.E.4 # Staff Employees:** Although the Astronomy department has no staff employee specifically assigned to it, the PSME Division's Computer Laboratory Administrator, Ching Bays, has been very helpful in maintaining the laptops that are used by students in the Astronomy and Geology laboratory classes.

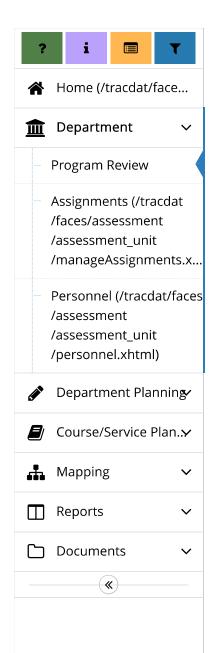
## I.E.4 #Staff Employees:

**I.E.5 Changes in Employees/Resources:** The main changes affecting the Astronomy department are the retirement of a full-time faculty member at the end of Spring 2016, and the retirement of another full-time faculty member at the end of Spring 2019.

Now that these retirements have occurred, there is only one full-time faculty member in the department, and their load will be split between their Astronomy FSA and their Geology FSA.

Additionally, the remaining full-time instructor and the PSME Division Dean have had to find qualified part-time instructors to teach class sections that were taught by the now-retired full-time faculty. The Division Dean and the remaining full-time instructor have had to train and orient the new part-time instructors to College procedures and to teaching Astronomy at De Anza College. This has included training on the Planetarium projection equipment, and the staff of the De Anza College Planetarium has assisted in this training.

II.A Enrollment Trends: From the time of the first full-timer retirement in June 2016, through Spring 2019, the Astronomy department saw a concomitant decrease in WSCH, of about 15%.



The department began teaching online classes in Fall 2018.

These online classes have filled during all of their first five quarters
(F18 through W20).

II.B Overall Success Rate: Our overall success rate for the past three years has remained steady at 80% (79%, 82%, and 80%)

II.C Changes Imposed by Internal/External Regulations:

## III.A Program Success:

III.B Enrollment Trends - Equity Lens: During the last three years (16-17 through 18-19), the percentage of Astronomy students from the targeted populations has remained steady at 38% - 39%, with a high of 40% in 2016-17. This is very close to the College average during this time, of 35%-37%.

III.C Success, Non-Success and Withdraw Rates: Disproportionate impacts are documented for the African-American and Latinx student groups. with "All Students" having a success rate of 80%, as opposed to 66% for African-American students and 71% for Latinx students.

III.D Equity Planning and Support: The Astronomy department has traditionally provided large lecture classes for non-science majors seeking to fulfill CSUGE, IGETC, and De Anza G.E. science requirements. Strategies for improving success rates of targeted groups, as indeed for all students, will need to address this reality. Probably the best avenue to explore will be the modern methods of in-class formative assessments, also known as `lecture-tutorials', `think-pair share', and `clicker questions'. Only one faculty member thus far has had exposure to these methods at all, and they have encountered challenges such as: 1) Technical difficulties with implementing in-class formative assessments in large lecture classes, and 2) Recently, their time has been devoted to creating and teaching the first online Astronomy course.

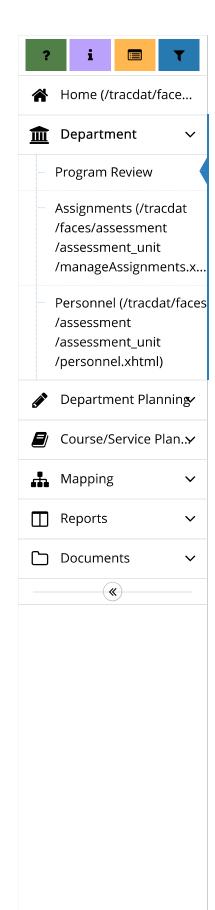
Specific Suggestion / Plan: Instead of trying to acquire and maintain physical "clickers", the College could experiment with an institutional subscription to a smartphone-based, in-class polling system like PollEverywhere.com.

III.E Departmental Equity Planning and Progress: Professional development and technical support, aimed towards implementing modern methods of formative assessment in the lecture classroom, will probably be the most useful help that the department's full-time instructor can receive.

## III.F Assistance Needed to close Equity Gap: Yes

IV. A. SLOAC Summary: The Astronomy department at De Anza College is in the process of a transition, from a department with multiple full-time instructors, to a department with only one full-time instructor, and most course sections taught by part-time instructors. This i

IV.B Assessment Planning: Astronomy 4, Astronomy 15



V.A Budget Trends:

V.B Funding Impact on Enrollment Trends:

V.C.1 Faculty Position(s) Needed: Replace due to vacancy

V.C.2 Justification for Faculty Position(s): Retirement of two full-time

faculty members:

Paul Olejniczak (June 2016)

Sherwood Harrington (June 2019)

V.D.1 Staff Position(s) Needed:

V.D.2 Justification for Staff Position(s)::

V.E Equipment Requests: No Equipment Requested

V.F Facility Request:

V.G Other Needed Resources:

V.H.1 Staff Development Needs:

V.H.2 Staff Development Needs Justification:

V.I Closing the Loop:

Last Updated: 02/02/2020

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