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1. For 2017-18 Submitted by:: Terrence Mullens
2. APRU Complete for: 2017-18
3. Program Mission Statement: The meteorology program provides students with an in-depth knowledge of Earth's atmosphere, its associated weather and global climate processes. The program enables students to understand the scientific, societal and economic impacts of weather with an emphasis on global warming and climate change.
4. I.A.1 What is the Primary Focus of Your Program?: Transfer
5. I.A.2 Choose a Secondary Focus of Your Program?: Personal Enrichment
6. I.B.1 Number Certificates of Achievement Awarded:
7. I.B.2 Number Certif of Achievement-Advanced Awarded:
8. I.B.3 #ADTs (Associate Degrees for Transfer) Awarded:
9. I.B.4 # AA and/or AS Degrees Awarded:
10. I.C.1. CTE Programs: Impact of External Trends:
11. I.C.2 CTE Programs: Advisory Board Input:
12. I.D.1 Academic Services & Learning Resources: #Faculty served:
13. I.D.2 Academic Services & Learning Resources: #Students served:
14. I.D.3 Academic Services & Learning Resources: #Staff Served:
15. I.E.1 Full time faculty (FTEF): 1.5
16. I.E.2 #Student Employees:
17. I.E.3 % Full-time : 35.1%
18. I.E.4 #Staff Employees:
19. I.E.5 Changes in Employees/Resources: A new full-time faculty member was hired in Spring, 2017.
20. II.A Enrollment Trends: Enrollment in the Meteorology Department courses has varied as follows: 597 (2012-2013,) 756 (2013-2014) and 758 (2014-2015), 769 (2015-2016), 584 (2016-2017).

While enrollment increased notably between 2012-2013 and 2015-2016, there was a decline in enrollment in 2016-2017. During 2016-2017, our previous full time faculty member had retired, sending the department into a transition phase that was likely the greatest cause for the decline in enrollment, particularly in Fall, 2016, when we were unable to offer any face-to-face sections. However, preliminary enrollment numbers for Fall 2017 through Spring 2018 suggest a substantial increase in enrollment.

Furthermore, enrollment in the popular online sections has continued to remain robust. The department is currently seeking feedback from students regarding the popularity of the online course vs. the on campus offerings with the goal of increasing enrollment on the on campus offerings. Furthermore, the department plans to increase it's online offerings and to develop an online version of the Meteorology Laboratory course to boost enrollment as well.

Raising awareness of the department, it's course offerings, and potential transfer/major/career opportunities to current students would likely have a

positive impact on enrollment in face-to-face courses. Being located close to San Jose State, which has the only Meteorology department in the CSU system, offers unique opportunities to our department in terms of recruiting students and setting a pathway for interested students.

21. II.B.1 Overall Success Rate: The overall success rate increased from 83% in 2014-2015 to 89% in 2015-2016, but decreased slightly to 88% in 2016-2017.
22. II.B.2 Plan if Success Rate of Program is Below 60%:
23. II.C Changes Imposed by Internal/External Regulations: Did not enact any changes relative to above.
24. III.A Growth and Decline of Targeted Student Populations: The percentage of students in Meteorology classes that come from targeted ethnic groups has varied as follows: 20% (2012-2013), 22% (2013-2014), 32% (2014-2015), 29% (2015-2016), and 31% (2016-2017). The 2016-2017 percentage was slightly lower than the college average of 36%. However, there has also been a substantial increase in the total number of targeted students enrolling (from 122 in 2012-2013 to 182 in 2016-2017).
25. III.B Closing the Student Equity Gap: The student equity gap has varied from 1% to 19% over the past five years, but recently has decreased from 19% in (2014-2015) to 6% in (2016-2017). The department plans on further reducing this disparity over the next year by focusing on addressing student needs on an individual basis and intervening with students who are in danger of failing. Additionally, the department is exploring options for low-cost or open source textbooks to decrease the overall cost of taking a Meteorology course, which would improve success rates for targeted groups.
26. III.C Plan if Success Rate of Targeted Group(s) is Below 60%:
27. III.D Departmental Equity Planning and Progress:
28. IV.A Cycle 2 PLOAC Summary (since June 30, 2014): Program Level Outcomes are currently being developed by the department, and will be assessed once they have been developed.
29. IV.B Cycle 2 SLOAC Summary (since June 30, 2014): Both Met 10 SLO's have been assessed as of Spring, 2018. Met 10 SLO 1 was assessed with a success rate of 80%, and Met 10 SLO 2 has been assessed with a success rate of 92%.
30. V.A Budget Trends: Funding has made it possible to continue maintaining the De Anza College Weather Station (including repairing the rain gauge prior to the 2017-2018 rain season). This data has been incorporated into both the lecture and laboratory courses. Funding has also been approved to acquire 20 Kestrel Handheld Weather Instruments, which will begin being incorporated into both the lecture and laboratory courses in Spring of 2018.
31. V.B Funding Impact on Enrollment Trends: A decrease in equipment funding for Meteorology would hurt our ability to offer hands-on activities during lecture and laboratory courses, which would make understanding of difficult concepts more challenging.
32. V.C.1 Faculty Position(s) Needed: None Needed Unless Vacancy
33. V.C.2 Justification for Faculty Position(s): There is an ongoing need to hire additional PT instructors to expand offerings of the popular online Meteorology courses. Now that the new FT faculty has successfully completed the initial phase

of the tenure process, he is comfortable teaching additional online sections to meet demand. However, with the potential implementation of an online Meteorology laboratory, the department will still need a pool of PT faculty to meet likely demand.

34. V.D.1 Staff Position(s) Needed:
35. V.D.2 Justification for Staff Position(s):
36. V.E.1 Equipment Requests: Over \$1,000
37. V.E.2 Equipment Title, Description, and Quantity: Bacharach 25°F to 120°F Sling Psychrometers. Sling Psychrometers are used to Measure Relative Humidity.
Qty: 20 @ \$100.50 each = \$2010.00, plus tax (~\$200) and shipping (~\$90)
Total: \$2300. Can be purchased at:
<https://www.grainger.com/product/BACHARACH-Sling-Psychrometer-6T173>
38. V.E.3 Equipment Justification: Learning accurate measurement techniques is a key component of understanding the objective techniques used to forecast weather (MET SLO 1, which was recently assessed with an 80% success rate). Enhancements based on the SLOAC include hands-on demonstrations of measurement techniques, which would be enhanced with this equipment. Furthermore, teaching students sling psychrometry (the method of measuring relative humidity via a sling psychrometer) helps to reinforce several key topics that students often struggle with: Air Temperature Measurement (Assessed with an 80% success rate), Humidity (Assessed on midterm exam during Winter 2018 with an average success rate of 79%), and Latent Heat Release.
39. V.F.1 Facility Request:
40. V.F.2 Facility Justification:
41. V.G Equity Planning and Support: As there has been a substantial increase in the enrollment and demand for online courses, the department is carefully looking at how the student equity gap differs between online and face-to-face courses. Should a noticeable difference develop, the department will consider developing resources such as tutoring and supplemental instruction to improve success in online courses.
42. V.H.1 Other Needed Resources:
43. V.H.2 Other Needed Resources Justification:
44. V.J. "B" Budget Augmentation:
45. V.K.1 Staff Development Needs:
46. V.K.2 Staff Development Needs Justification:
47. V.L Closing the Loop: SLO's will be reassessed after implementation of requested instrumentation into our courses.
48. For 2016-17 Submitted by: Terrence Mullens mullensterrence@fhda.edu 8676
49. Last Updated: 04/12/2018
50. #SLO STATEMENTS Archived from ECMS: