De Anza College

Instructional Annual Program Review 2021-22

**Instructions**: The first column is section and question number, followed by ask without explanation The third column fully describes the information that the IPBT is requesting. The blank column is where you will type your response. Save program review as a Word document. This is the document you will send to your Dean. It will be posted on the De Anza website in pdf format.

In addition to this document, please also submit to your Dean the Resource Request spreadsheet making sure facilities requests are on “Facilities” tab and large-ticket items are on Large-ticket Items” tab.

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|  | **Information Requested** | **Explanation of Information Requested.** | **Enter your answers here** |
|  | Department Name: |  | Meteorology |
|  | Program Mission Statement: | How does your program mission statement relate to the mission of De Anza College and our Institutional Core Competencies”? (<https://www.deanza.edu/about-us/mission-and-values.html> ). | 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.  In the next year, the department wants to revisit and revise this mission statement to better relate to De Anza’s mission, and to have greater lens towards equity and inclusion of marginalized groups in the sciences. |
| I.A.1 | What is the Primary Focus of Your Program? | Choose from General Education, Transfer. Career/Technical, Learning Resources/Academic Services, personal enrichment or N/A | General Education |
| I.A.2 | Choose a Secondary Focus of Your Program. | Choose from General Education, Transfer. Career/Technical, Learning Resources/Academic Services, personal enrichment or N/A | Personal Enrichment |
| I.B.1 | # Certificates of Achievement Awarded | State the number of Certificates of Achievement awarded during the 2020-21 academic year. Please refer to: <https://www.deanza.edu/ir/AwardsbyDivision.html> . If you do not offer Certificates of Achievement please state “none offered”. | None Awarded, as the department does not have any currently available awards. |
| I.B.2 | # Certificates of Achievement-Advanced Awarded: | State the number of Certificates of Achievement - Advanced awarded during 2020-21 academic year. Please refer to  <https://www.deanza.edu/ir/AwardsbyDivision.html> If you do not offer Certificates of Achievement” please state “none offered”. | None Awarded, as the department does not have any currently available awards. |
| I.B.3 | # ADTs (Associates Degrees for Transfer) Awarded | State the number of Associate Degree Transfer awarded by you department during the 2020-21 academic year. Please refer to <https://www.deanza.edu/ir/AwardsbyDivision.html> . If you do not offer Associate Degree Transfer, please state “none offered”. | None Awarded, as the department does not have any currently available awards. |
| I.B.4 | # AA and/or AS Degrees Awarded: | State the number of Associate of Arts or Associate of Science degrees awarded during the 2020-21 academic year. Please refer to <https://www.deanza.edu/ir/AwardsbyDivision.html> .If you do not offer Associate of Arts or Associate of Science Degree, please state “none offered”. | None Awarded, as the department does not have any currently available awards. |
| I.B.5. | Trends in # Total Awards | If applicable to your program, has total number of certificates and degrees increased, decreased or stayed the same? What thoughts do you have on these changes? | As the department has not previously offered awards, there are no trends to report here. |
| I.B.6. | Strategies to Increase Awards | What strategies (1, 2, 3. . . .) does your department have in place to ensure students are obtaining awards when it is applicable to their educational goal? (e.g. Outreach, In-reach, graduation workshops, collaborations with other offices, etc.) | The primary tactic in increasing awards given through the Meteorology department is by simply creating them. Prior to the COVID-19 pandemic, there was discussion and some concept mapping about developing an interdisciplinary Climate Change certificate, involving Meteorology, Environmental Sciences, Geology/Oceanography, and Economics. Those conversations were sidelined by the necessary pivoting to online modalities and helping students through the COVID-19 pandemic, but the department is now eager to get those discussions back on track. |
| I.C.1 | CTE Programs: Review of Perkins Core Indicator and SWP Outcomes Metrics | Review the most recent Perkins Core Indicator and SWP Outcomes Metrics data for your program(s). Cite planned interventions and activities to enhance student and program outcomes.  Perkins Core Indicator Reports provided by Margaret Bdzil. Cal-PASS Launchboard SWP Metrics: <https://www.calpassplus.org/LaunchBoard/Home.aspx> | https://www.calpassplus.org/LaunchBoard/Home.aspx |
| I.C.2 | CTE Programs: Labor Market Demand and Industry Trends: | Review and summarize statewide and regional labor market (LMI) data for occupations that are closely aligned with your program. Cite current industry trends. Provide an overview of your program advisory committee's recommendations relating to existing and new course and certificate/degree offerings. Cite additional data when applicable.  California EDD LMI Info: <https://www.labormarketinfo.edd.ca.gov/cgi/dataanalysis/areaselection.asp?tablename=occprj> |  |
| I.D.1 | Academic Services and Learning Resources: # Faculty Served | Only for programs that serve staff or students in a capacity other than traditional instruction, e.g. tutorial support, service learning, etc. State number of faculty served per year (Fall, Winter and Spring): Provide number from previous year, and # increase or decrease. To the extent possible, specify what data you used to arrive at this number. |  |
| I.D.2 | Academic Services and Learning Resources: # Students Served | Only for programs that serve staff or students in a capacity other than traditional instruction, e.g. tutorial support, service learning, etc. State number of students served per year (Fall, Winter and Spring): Provide number from previous year APRU, and # increase or decrease. To the extent possible, specify what data you used to arrive at this number. |  |
| I.D.3 | Academic Services and Learning Resources: # Staff Served | Only for programs that serve staff or students in a capacity other than traditional instruction, e.g. tutorial support, service learning, etc. State number of staff served per year (Fall, Winter and Spring): Provide number from previous year APRU, and # increase or decrease. To the extent possible, specify what data you used to arrive at this number. |  |
| I.E.1 | Full Time Faculty (FTEF) | For ALL programs: State the number of FTEF assigned to your department/program. Refer to your program review data sheet:  <https://www.deanza.edu/ir/program-review.20-21/index.html> . | In 2020-2021, the FTEF of the department was 2.5, with 1.0 assigned to a Full Time faculty member, 0.6 assigned as overload, and 0.9 as part-time load. |
| I.E.2 | # Student Employees | If applicable to your program, state number of student employees and if there were any changes between number this academic year and the previous two academic years. | No student employees in the department. However, if possible, the department would like to explore opportunities to hire one or two student employees in the future to serve as Meteorology tutors. |
| I.E.3 | Full Time Load as a % | State the percentage of courses taught by full-time faculty (exclude overload). Refer to your program review data sheet. <https://www.deanza.edu/ir/program-review.20-21/index.html> or access within the program review tool. | The Percentage, as of 2020-2021, is 40.9% |
| I.E.4 | # Staff Employees | If applicable to your program, state number of staff employees and if there were any changes. ONLY report the number of staff that directly serve your program. Deans will make a report regarding staff serving multiple programs. | None |
| I.E.5 | Changes in Employees/Resources | Briefly describe how any increase or decrease resources/employees (exclude teaching faculty) has impacted your program. What strategies does your program have in place to ensure students are being supported and able to reach their full capacity when faced with these changes and challenges**?** (e.g. Mentors, embedded tutors, extended lab hours, instructional support, non-credit support, etc.) | There have been no notable changes in staffing in the previous several years. However, the current full-time faculty member is almost at overload capacity and the one part-time faculty member regularly maxes out on load, meaning that if enrollment and demand were to continue trending upward, additional staffing may be needed. |
|  | **Enrollment** |  |  |
| II.A | Enrollment Trends | What changes in enrollment have you seen in the last three years? Refer to <https://www.deanza.edu/ir/program-review.20-21/index.html> or access within the program review tool. You do not need to list enrollments; rather reflect on enrollment trends. What strategies does your department have in place to increase or maintain current enrollment trends? | Enrollment has grown tremendously from 2016-2017 to 2020-2021, with unduplicated headcount increasing by 78.6%, and census enrollment increasing by 93.5%.  It should be noted, however, that a portion of that enrollment growth can be attributed to a recovery from declining enrollment prior to 2016-2017, when the previous Meteorology faculty member retired, and the new faculty member had not yet developed a rapport with students.  However, the department also attributes a significant amount of this enrollment growth to improving and increasing the number of online, hybrid, and flexible-schedule courses, even pre-pandemic.  While the department is excited to begin offering some on-campus courses starting in Fall, 2022, we would like to, at most, return to a similar On-Campus/Online ratio that we had in the 2018-2019 and 2019-Winter 2020. Some concerns have been voiced in the department that “forcing” most, if not all of our offerings to be on-campus could severely jeopardize future enrollment growth.  Another major concern in the department regarding enrollment is the nature of early class cancellation policies. For example, in Winter, 2022, an asynchronous online section was cancelled a full three weeks before the beginning of the term, despite all other sections being full with waitlists. If the class had been allowed to go, it would have likely seen a growth in enrollment that brought it well beyond the safe zone, and likely into profitability (even if not, the fact that other sections were completely full would have more than compensated for a lower enrolled class). In essence, we turned away perspective students. The department strongly urges senior administration to revisit and revise the current cancellation policy in favor of a more nuanced policy that takes the availability of seats in other sections into account. |
| II.B. | Enrollment Trends for disproportionately impacted student groups | Using the program review data tool, what is the enrollment of African American, Latinx, Filipinx, and Pacific Islander students as a percentage of your entire program compared to other student groups in campus-wide percentages? You do not need to list enrollments, but rather reflect on what the trends look like. Link to equity plan and strategic plans   1. What could be contributing to the differences? 2. What strategies does your department have in place to increase or maintain enrollment of these student groups?   Are there other trends that you see when drilling into the data that may be important to explore? | In terms of trends, the enrollment of targeted populations has more than doubled in the past 5 years (from 182 in 2016-2017 to 368 in 2020-2021). This growth has been, in essence, an anomaly compared to the decline in targeted enrollment college-wide. The department attributes much of this growth to the increase in flexible modalities available, even pre-pandemic. Many of these targeted groups need to work, or care for family members, and thus need more flexible options for their education. The department has been successful in offering such flexibility. |
| II.C. | Overall Success Rate | What changes in student success rates have you seen in the last three years? You do not need to list success rates, rather reflect on trends in success rates.   1. What could be factors that influence success rates? Please refer to: <https://www.deanza.edu/ir/program-review.20-21/index.html> 2. What strategies does your department have in place to increase or maintain current success rates? | Despite the change to primarily online modalities, success rates for targeted populations has remained relatively flat, with some notable increases from a minimum of 76% in 2018-2019, to 86% in 2021-2022. The equity gap has also shrunk from 12% in 2018-2019, to 5% in 2020-2021. The department attributes much of this to the increased flexibility that instructors have offered their students in classes during the COVID-19 pandemic. While it’s essential to scale back SOME of the pandemic era leniency (such as the accessibility of EW grades), the department is currently evaluating what practices should be allowed to continue, and which ones should be adjusted. |
| II.D. | Success, Non-Success and Withdraw Rates for disproportionately impacted student groups | Using the [Disproportionate Impact Tool](https://www.deanza.edu/ir/program-review.18-19/Access_DI_tool.pdf) within the [Program Review Tool](http://deanza.edu/ir/PRGuide_PrintingPDF.pdf) explore differences in success rates by ethnicity, gender and special student populations (foster youth, individuals with disabilities, Veterans and low income students). Of the rows that are highlighted (which indicate there are disproportionate impacts for that group):   1. What differences do you see in successful course completion rates? 2. What are your thoughts on these differences?   What strategies might be helpful in closing gaps in successful course completion? | The population groups that are disproportionately impacted are African American, Latinx, Low Income Students, and Veterans. However, it should be noted that, due to the extremely small sample size, disproportionate impacts from African Americans (22 enrolled, 18 succeeded), and Veterans (11 enrolled, 9 succeeded) are not statistically significant, and thus any conclusions made by those data may not be representative of true needs from those communities.  Low Income and Latinx students, however, show a much larger, statistically significant disproportionate impact, with a percentage point gap of 15 and 12 respectively. As a result, efforts to close those gaps for our program will be focused on providing flexibility for students who, due to either family (caring for other family members) or financial (needing to work more hours to make ends meet) issues, are unable to attend college classes in a traditional manner. Such students have greater difficulty attending classes, affording course materials, staying on top of coursework, and reaching out when they need help.  Two strategies that have been/are being employed by the department include the complete removal of required textbooks and replacement with free Open Educational Resources (some of which are being developed by our department), and utilizing the college’s Early Alert system to intervene earlier in the quarter when a student struggles. |
| II.E. | Changes Imposed by Internal/External Regulations | Address program changes implemented as a response to changes in College/District policy, state laws, division/department/program level requirements or external agencies regulations? How did the change(s) affect your program? (e.g. any curriculum, reorganization of program AB 705, noncredit curriculum, loss of personnel, etc.) | Besides the necessary switches in modalities due to the COVID-19 Pandemic, there have been no significant changes to department structure, requirements, or policies. Impacts of the Modality changes due to COVID-19 are addressed in sections II.A-II.D. |
|  | **Equity** | In order to meet the goals within our [State Equity Plan](https://www.deanza.edu/sssp-se-bsi/documents/DAC_Student_Equity_Plan_2019-22_Final.pdf), [Institutional Metrics](http://deanza.edu/ir/planning/planning_files/InstitutionalMetrics_2019_4.29.19.pdf), and [Educational Master Plan](http://deanza.edu/ir/state-of-the-college-related-information/documents/EMP2015-2020_3-11-16.pdf), the following section asks you to reflect on questions focused on student equity to help inform our goals. |  |
| III.A. | Equity Plans for groups other than the acknowledged disproportionately impacted groups | Are there other groups of students besides the acknowledged disproportionately impacted groups of African American, Latinx, Filipinx, and Pacific Islander students that your department intentionally focused support for. | A major group of focus for our department has included Asian, Eastern European, and other non-native speaking students, many of whom sign up for our classes with very little understanding of English, or common American phrases. The department targets students early in the term whom struggle with English as their second language, and provides them with extra assistance to ensure that language does not become a barrier to their understanding of science.  A resource that could be very helpful in this endeavor is providing the department with resources to hire a few bilingual students whom can assist non-native speakers in the course.  Another group that the department is becoming increasingly focused on is the LGBTQ+ community, which is often underrepresented in STEM fields, and so the department is making it a point to highlight numerous LGBTQ+ Meteorologists and Climatologists in relevant units of our courses. |
| III.B. | Program Success | Describe any events/program changes/successes that you would like to share relative to your equity efforts? | The Department has been heavily involved in the Physical Sciences and Technology Guided Pathways Village, helping hold events such as Opening Day, a STEM Career Panel (which included a Fire Weather Scientist and a Transgender Climatologist), and an LGBTQ+ in STEM panel. Future events targeting International Students, Targeted Populations, and the LGBTQ+ community are in the works for 2022-2023. |
| III.C. | Equity Planning and Support | Has equity work generated any need for resources? If so, what is your request? Include staff/position needs. | The primary need for future resources is tutoring. With the increase in enrollment, current faculty members have had to take on more students, and teach more sections, thus being spread thinner and thinner. We are now teaching almost double the number of students that we were five years ago, and while we feel there is no need for additional faculty at this time, a big obstacle to our students’ success is simply that, in terms of offering assistance/office hours/tutoring/review sessions, there’s more of them than there are us. Assistance on assignments has had to be triaged in the past couple of years, and it would be helpful for our students to have a few peers that they could get assistance in Meteorology with. |
| III.D. | Departmental Equity Planning and Progress | Identify which of the following resources you need? How would the resource help?   * Professional Development – what areas? * Enhanced support for students * Departmental Collaborations * Best Practices * Coaching/Consultation | Our department could use professional development in the following areas:   1. Basic foreign language training to assist international students. 2. Ways to engage students who are remote, but unmotivated (the “black box” syndrome). 3. Training on how to “cheat proof” assessments, and how to scan popular cheating websites (such as Chegg and CourseHero) for unauthorized posting of course material/answer keys. While this may not seem like an equity issue, the ease of cheating during the pandemic has made instruction less effective, which ultimately hurts the student long term.   We could also use enhanced support for students, in terms of tutoring, as mentioned in Section III.C. |
| III.E. | Assistance Needed to close Equity Gap | Would you like assistance with identifying strategies and/or best practices and/or resources to help facilitate student success? | Yes |
|  | **Assessment Cycle** | Navigate to <https://www.deanza.edu/slo/> and click “TracDat is gone” which will take you to accordion listing SLO assessments under “Student Learning Outcomes and Assessments Summaries by Division:” |  |
| IV.A | SLOAC Summary | Describe an accomplishment or enhancement that resulted from SLO assessment starting with Spring 2020 through end of Spring 2022.. | SLO Assessment has been paused in the department during the Pandemic, for fears that sudden changes in modalities and uncertainty would skew the data. However, the department is planning on resuming the SOLAC in 2022-2023, as we adjust to a more post-pandemic setup. |
| IV.B | Assessment | List the names of the courses in your department (e.g. CIS 22A) that are planned to be assessed by the conclusion of 2021-22 academic year. | All three of our flagship courses (Met 10, Met 10L and Met 12) will be assessed beginning in Fall 2022. |
|  | **Resource Requests** |  |  |
| V.A | Budget Trends | Over the past five academic years, describe impact, if any, of external or internal funding trends that you might be currently dealing with ( eg COVID demands) upon the program and/or its ability to serve its students.  If you don’t work with budget, please ask your Division Dean to give you the information. | The primary budgetary concerns the department has are related to pressures to maintain strong (well above 90%) fill rates, which has oftentimes resulted in department members overenrolling their courses, and adding students much later than faculty are comfortable with (thus having to catch them up). While fill rates are a valuable tool in measuring demand, they are also a function of class capacity, which makes them an inequitable metric (since many of our classes have caps of 50 and 60, there is higher pressure to overenroll popular online courses in case we have an on campus class of 40, which even though the class is still profitable to the college, is looked down upon because it only has a 66-80% fill rate, depending on the cap). This inequity has prevented the department from exercising any creativity in scheduling (such as offering evening classes, 4 day a week classes, hybrid or hyflex classes, field trip classes, etc.) for fear that it would harm our fill rate too much, and instead sticking with popular modalities, such as online courses, to keep high fill rates.  As the college begins to return to campus and envisions a post-pandemic campus culture, the department would request some flexibility in offering courses that may not fill as easily, in order to figure out what works best for both student demand, and pedagogical best practices. The long term goal, of course, is to provide a robust diversity in course offerings that would be viable and productive. |
| V.B | Funding Impact on Enrollment Trends | Over the past five academic years, describe the impact, if any, of external or internal funding changes upon the program’s enrollment and/or its ability to serve its students. Refer to Program Review data sheets for enrollment information: | No major impacts not already mentioned V.A |
| V.C.1 | Faculty Position(s) Needed | Describe each request as: “Replace due to Vacancy”, “Growth”, or if none state “None Needed Unless Vacancy” | None Needed Unless Vacancy. |
| V.C.2 | Justification for Faculty Position(s): | Do you have assessment data available to justify this request for a faculty position? If so provide the SLO/PLO assessment data, reflection, and enhancement that support this need. If not, provide other data to support this need. |  |
| V.D.1 | Staff Position(s) Needed | Choose: “Replace due to Vacancy”, “Growth”, “None Needed Unless Vacancy”  Only make request for staff if relevant to your department only. Division staff requests should be in the Dean’s summary. | None Needed. |
| V.D.2 | Justification for Staff Position(s): | Do you have assessment data available to justify this request for a staff position? If so, provide the SLO/PLO assessment data, reflection, and enhancement and/or CTE Advisory Board input to support this need. If not, provide other data to support this need. |  |
| V.E | Equipment Requests | List all equipment resource needs on the Excel spreadsheet. Be sure to include to justification and costs in appropriate columns. | None needed (since we were approved for equipment in our last program review, we’d like to take time to utilize that equipment and assessing its impact on student success prior to requesting more). |
| V.F | Facility Request | List all facility needs on the spreadsheet. Be sure to include to justification and costs in appropriate columns. | While there is no need for new or upgraded facilities, the department would like to begin offering all on-campus courses in computer labs (such as S42 and S48) so computers could be utilized for in-class activities. This is something that can be arranged with our Dean. |
| V.G | Other Needed Resources | List any other resource needs on the spreadsheet. Be sure to include to justification and costs in appropriate columns. |  |
| V.H.1 | Staff Development Needs | Based on what you have written above, what professional development support/resources do you need to achieve your goals? |  |
| V.H.2 | Staff Development Needs Justification | Please provide reasons for your professional development needs. If you have assessment data available to justify this request for professional development, please provide the SLO/PLO assessment data, reflection, enhancement, and/or CTE Advisory Board input, etc. to support this need. If not, provide other data to support this need. |  |
| VI. | Closing the Loop | Over the last five years, how did you assess the results of the requested resources, and what were those results? How do you plan to reassess the outcomes after receiving each of the additional resources requested this year | Prior to the COVID-19 pandemic, our department made excellent use of the Kestrel Pocket weather instruments we were previously granted. An instant outcome was improved scores on assessments regarding daily temperature and relative humidity cycles, which were concepts that students regularly struggled with prior to using the instructional equipment. |
|  | Submitted by: | APRU writer’s name | Alicia Mullens |
|  | Last Updated: | Give date of latest update | 5/20/22 |