

**Instructions:** The first column below matches key words in TracDat where you will enter the requested information. The second column fully describes the information that the IPBT is requesting. It also represents the information you would see if you pressed the help button (a question mark) by each box in TracDat. You will be able to copy and paste or type in your information into the TracDat boxes. **SAVE OFTEN WHILE ENTERING INFO!!!!** ALWAYS keep a soft copy of your work in your files to ensure that your work is not lost. You will save program review as a pdf through the print option of your browser. This is the document you will send to your Dean and it is the document that will be posted on the De Anza website. If you have questions, please refer to your workshop handout (<http://www.deanza.edu/slo/tracdat.html>) or contact: [papemary@fhda.edu](mailto:papemary@fhda.edu).

- Section I: Overall program description (including CTE)
- Section II: Overall student enrollment and success
- Section III: Equity
- Section IV: Assessment Cycle
- Section V: Resource requests

In TracDat. Limit narrative to 100 words; bullet points encouraged

	Information Requested	Explanation of Information Requested. ? TracDat Help button will reveal the same cues (sorry no hyperlinks)	Input your answers in columns provided. Note: reference documents can also be attached. Make sure to note the name of any reference documents in your explanations.
	<b>Program Description</b>		
	Department Name:		<b>Geology</b>
	Program Mission Statement:	“What are your Program Learning Outcomes? How do your Program Learning Outcomes relate to the mission of De Anza College and our Institutional Core Competencies?” <a href="http://www.deanza.edu/about/missionandvalues.html">http://www.deanza.edu/about/missionandvalues.html</a>	The mission of the De Anza College Geology department is to give students an opportunity to successfully complete science coursework for transfer, Associate degree, or lifelong learning, with transfer being the primary goal of most Geology students.  As noted in the previous Comprehensive Program Review (2008-09), the Geology department seeks to foster an awareness, understanding, and appreciation of the complexity of the planet that the students, faculty, staff, and all of humanity live on. Some of this drive stems from the desire to enable the students to be better-informed citizens of our increasingly crowded world, while some of it comes from the faculty's desire to draw the students into the sheer fascination of the Earth's dynamism and complexity.

			In terms of concrete educational goals, the department expects to provide students with an opportunity to earn transferable general education credits. This outcome applies to the majority of the Geology 10 students, with smaller fractions of them taking the class for the A.A. Degree, personal interest, or lifelong learning.
I.A.1	What is the Primary Focus of Your Program?	Select Basic Skills, Transfer. Career/Technical, Learning Resources/Academic Services, personal enrichment or N/A	Transfer
I.A.2	Choose a Secondary Focus of Your Program.	Basic Skills, Transfer. Career/Technical, Learning Resources/Academic Services, personal enrichment or N/A	Personal Enrichment
I.B.1	# Certificates of Achievement Awarded	If applicable, enter the number of Certificates of Achievement awarded during the current academic year. Please refer to: <a href="http://deanza.fhda.edu/ir/AwardsbyDivision.html">http://deanza.fhda.edu/ir/AwardsbyDivision.html</a> Leave blank if not applicable to your program.	
I.B.2	# Certificates of Achievement-Advanced Awarded:	If applicable, enter the number of Certificates of Achievement - Advanced awarded during the current academic year. Please refer to <a href="http://deanza.fhda.edu/ir/AwardsbyDivision.html">http://deanza.fhda.edu/ir/AwardsbyDivision.html</a> . Leave blank if not applicable to your program.	
I.B.3	# ADTs (Associates Degrees for Transfer) Awarded	List Associate Degree Transfer awarded by you department during the current academic year. Please refer to <a href="http://deanza.fhda.edu/ir/AwardsbyDivision.html">http://deanza.fhda.edu/ir/AwardsbyDivision.html</a>  Leave blank if not applicable to your program.	
I.B.4	# AA and/or AS Degrees Awarded:	If applicable, enter the number of Associate of Arts or Associate of Science degrees awarded during the current academic year. Please refer to <a href="http://deanza.fhda.edu/ir/AwardsbyDivision.html">http://deanza.fhda.edu/ir/AwardsbyDivision.html</a>  Leave blank if not applicable to your program	
I.C.1	CTE Programs: Impact of External Trends	Career Technical Education (CTE) programs: provide regional, state, and labor market data, employment statistics. Refer to "CTE Program Review Addenda" at: <a href="https://www.deanza.edu/workforcecd/ged/">https://www.deanza.edu/workforcecd/ged/</a> Identify any significant trends that may affect your program relative to: 1) Curriculum Content; 2) Future plans for your program e.g. enrollment management plans.	
I.C.2	CTE Programs: Advisory Board Input:	Career Technical Education (CTE) programs: provide recommendations from this year's Advisory Board (or other groups outside of your program, etc.). Briefly, address any significant recommendations from the group. Describe your program's progress in moving towards assessment or planning or current implementation of effective solutions.	
I.D.1	Academic Services and Learning Resources: #	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: 0 = no change; (-	

	Faculty Served	#) decreased; # increased; leave blank if not applicable to your program	
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: 0 = no change; (- #) decreased; # increased; leave blank if not applicable to your program	
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: 0 = no change; (- #) decreased; # increased; leave blank if not applicable to your program	
I.E.1	Full Time Faculty (FTEF)	For ALL programs: Refer to your program review data sheet. <a href="http://deanza.edu/ir/program-review.15-16.html">http://deanza.edu/ir/program-review.15-16.html</a>	1.3 (2.0 but one member of the faculty also teaching in Astronomy Department).
I.E.2	# Student Employees	State number of student employees and if there were any changes: 0 = no change; (- #) = decreased; # = increased; blank if not applicable to your program	0 no change
I.E.3	Full-time to Part-time ratio % of Full-time Faculty Compared to % Part-time Faculty Teaching	Compare the changes in % of FT and PT faculty teaching in your department? 0 = no change; (- %) = decreased; % = increased; blank= not applicable to your program. Refer to your program review data sheet. <a href="http://deanza.edu/ir/program-review.15-16.html">http://deanza.edu/ir/program-review.15-16.html</a> .	%
I.E.4	# Staff Employees	State number of staff employees and if there were any changes: 0 = no change; (- #) = decreased; # = increased; blank if not applicable to your program ONLY report the number of staff that directly serve your program. Deans will make a report regarding staff serving multiple programs.	0 no change
I.E.5	Changes in Employees/Resources	Briefly describe how any increase or decrease of employees/resources has impacted your program. Leave blank if not applicable to your program.	There has been no apparent impact from last year to this year.
	<b>Enrollment</b>		
II.A	Enrollment Trends	What significant changes in enrollment have you seen in the last three years? Refer to <a href="http://deanza.edu/ir/program-review.15-16.html">http://deanza.edu/ir/program-review.15-16.html</a>	<p>A 16% increase in student headcount was seen from 2015-16 to 2016-17. Overall there is a 12.8% increase of the four year trend. Part of the increase is due to the popularity of the online Oceanography class (GEOL 20). This same class because of the way it is buried in Geology in the schedule is hard to find for many students who might take the face-to-face sections. The online class is easy to find because it's in a separate schedule for online it is readily seen by prospective students.</p> <p>The Geology Department has been working with the Dean from PSME to avoid unnecessary early cancellations of campus and believe we will see increases in enrollments over the next year as a result. Historically, a record going back several</p>

			decades, geology classes tend to fill later in the enrollment process than others on campus. This probably reflects students' perceptions of rigor in these courses compared to others they might enroll in to try to fill their schedule.
II.B.1	Overall Success Rate	What significant changes in student success rates have you seen in the last three years?	Our overall success rates in the last three years have been consistently in the high 70% range with the 21015-16 academic year dropping to 76% from a high of 80% for the year before. We feel this reflects a slightly different mix in classes and sections offered during the last academic year. But the overall rates are strong in an area considered by many students as a moderately rigorous.
II.B.2	Plan if Success Rate of Program is Below 60%	In accordance with ACCJC requirements, the college has adopted an institutional standard for successful course completion at or above 60% <a href="http://deanza.edu/ir/state-of-the-college-related-information/pdf/Institutional_Metrics_2016.pdf">http://deanza.edu/ir/state-of-the-college-related-information/pdf/Institutional_Metrics_2016.pdf</a> If course success rates in your program fall below 60%, what are the department's plans to bring course success rates up to this level? Leave blank if N/A.	
II.C	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, program reorganization, staffing etc.)	
	<b>Equity</b>		
III.A	Growth and Decline of Targeted Student Populations	Briefly, address student enrollment data relative to your program's growth or decline in targeted populations: African Americans, Latinos, Filipinos. (Refer to <a href="http://deanza.edu/ir/program-review.15-16.html">http://deanza.edu/ir/program-review.15-16.html</a> )	Minor fluctuations in student enrollment in "targeted populations" occurred over the three academic years 2013-14 through 2015-16. With net changes of +5 students in 2013-14, -11 students in 2014-15 and +87 students in 2015-16 of the targeted groups. We attribute most of the change in 2014-15 to class cancellations that limited the number of available seats. The percentage of students enrolled in geology classes, in targeted populations, stayed at 39% over the last four academic years..
III.B	Closing the Student Equity Gap:	What progress or achievement has the program made relative to the plans stated in your program's 2013 -14 Comprehensive Program Review, Section II.A.3, towards decreasing the student equity gap? See IPBT website for past program review documentation: <a href="http://deanza.edu/gov/IPBT/program_review_files.html">http://deanza.edu/gov/IPBT/program_review_files.html</a>	As we have noted in previous program reviews the department has been exploring new collaborative models that have tracked with substantive increases in success rates

			amongst targeted groups. The current rate has dropped to 69% from a high 73% the year before tracking with an overall drop. We think this is reflective a of similar drops in overall success rates as a result of a slightly different mix of classes and sessions to the previous year.
III.C	Plan if Success Rate of Targeted Group(s) is Below 60%	In accordance with ACCJC requirements, the college has adopted an institutional standard for successful course completion at or above 60% <a href="http://deanza.edu/ir/state-of-the-college-related-information/pdf/Institutional_Metrics_2016.pdf">http://deanza.edu/ir/state-of-the-college-related-information/pdf/Institutional Metrics 2016.pdf</a> Are success rates of targeted groups at or above 60%? If not, what are the department's plans to bring the success rates of the group(s) up to this level? This applies to African American, Latino/a and Filipino students.	
III.D	Departmental Equity Planning and Progress	What progress or achievement has the program made relative to the plans stated in your departmental 2014-15 Equity Plan?	Our increases in collaborative learning models in classes in the department seems to have an impact on increasing success rates in targeted populations. Our rates remain high for targeted populations.

	Assessment Cycle		
IV.A	PLOAC Summary	Give the percentage of Program Level Outcome statements assessed to date. Run Ad Hoc report entitled "XXX PLOAC Work" and scroll to the bottom of the report for counts. Then calculate #Reflections & Analysis/#PLO statement times 100. This percentage may be over 100% or 0%. All program level outcomes are to be assessed for a minimum of a second time before the Comprehensive Program Review in Spring 2019.	100%
IV.B	SLOAC Summary	Give the percentage of Student Level Outcome statements assessed to date. Run Ad Hoc report titled "XXX SLOAC work- Active Only" and scroll to the bottom of the report for counts. Then calculate #(Reflections & Analysis + #Archived from ECMS) /#SLO statement times 100. (N.B. Number of SLOs assessed and archived from ECMS is the last item in Department -> General Information page.) This percentage may be over 100% or 0%. All course level outcomes are to be assessed for a minimum of a second time before the Comprehensive Program Review in Spring 2019.	825%
	Resource Requests		
V.A	Budget Trends	Describe impact, if any, of external or internal funding trends 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.	Though funding for classes continues to staff sections funding has been slow to be allocated for much needed lab equipment. Critically needed computer equipment to replace the aging data/imaging processing computer in the geology lab has been requested for several years and has just recently been allocated. Inclusion of data in

			our geology labs and oceanography activity sessions utilizes the capability of this system. Astronomy classes have also used images processed by this system in lectures and labs. Also we use color hardcopies printed to the color laser printer in the lab. We also require replacement toner cartridges for the color laser printer. Requests for these necessary equipment and supplies have been made in past program review and are only now are being processed. This delay has impacted our geology labs, oceanography activity sessions, and astronomy labs. We look forward to receiving this equipment and hope that any future allocations can be applied in a more timely fashion.
V.B START HERE	Funding Impact on Enrollment Trends	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: <a href="http://deanza.edu/ir/program-review.15-16.html">http://deanza.edu/ir/program-review.15-16.html</a>	Not a problem with enrollment, but the critical needs in our classes is impacting our ability to keep students at the cutting edge.
V.C1	Faculty Position(s) Needed	A drop down menu will allow you to choose: Replace due to Vacancy, Growth, None Needed Unless Vacancy	None Needed
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	A drop down menu will allow you to 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.	No Staff 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.1	Equipment Requests	A drop down menu will allow you to choose: Under \$1,000 or Over \$1,000 or no equipment requested	Replacement toner cartridges for Color Laser Printer: color: 3 (2 per color) x 244 = 732.00 black: 1 (4 cartridges) x 416.00 Seismometer Station: MG-PEPPV vertical seismometer, vibration isolation vault, computer & display station= 7500.00
V.E.2	Equipment Title, Description, and	<ul style="list-style-type: none"> <li>Description should identify if the item(s) are new or replacement(s), furniture/fixtures, instructional equipment, technology related, expected life of item, recommended warrantees</li> </ul>	The replacement toner cartridges support not only hands on learning in our geology

	Quantity	<p>etc.</p> <ul style="list-style-type: none"> <li>• Did this request emanate from a SLOAC or PLOAC process?</li> <li>• Does this item require new or renovated infrastructure (e.g. wireless access, hardwire access, electric, water or heat sources . . . )</li> </ul>	<p>laboratory sections, but in oceanography discussion activities, and supports the Astronomy Lab class offered by the Astronomy department. The seismometer station will support discovery-based hands-on learning in all of our classes and provide all students with a view of real-time local, seismic data. This also augments current observation of the earth system in the Meteorology Departments through use of its weather station. The new seismometer will be installed by students and will used telemetered data to limit the need for new cabling.</p>
V.E.3	Equipment Justification	<ul style="list-style-type: none"> <li>• Do you have assessment data available to justify this request for equipment? If so, provide the SLO/PLO assessment data, reflection, and enhancement and/or Advisory Board input to support this need. If not, provide other data to support this need.</li> <li>• Who will use this equipment?</li> <li>• What would the impact be on the program with or without the equipment?</li> <li>• What is the life expectancy of the current equipment?</li> <li>• How does the request promote the college mission or strategic goals? Refer to <b>mission:</b> <a href="http://deanza.edu/about/missionandvalues.html">http://deanza.edu/about/missionandvalues.html</a> and strategic goals (page 15 <a href="http://www.deanza.edu/emp/pdf/EMP2015-2020_11-18-15.pdf">http://www.deanza.edu/emp/pdf/EMP2015-2020_11-18-15.pdf</a>)</li> </ul>	<p>This equipment and items replaces materials that are integral to SLOs within the Geology curriculum. The seismograph equipment and items are used by students directly in hands-on inquiry-based laboratories. These laboratories and the items mentioned above broadly support multiple SLOs and PLOs but specifically Geology 10 SLO 3.</p> <p>The addition of a vertical seismometer to our equipment has been in the planning stage for several years. This supports our core competencies including critical thinking and an understanding of the earth system a framework of understanding required for pursuing environmental justice.</p>
V.F.1	Facility Request	<p>Name type of facility or infrastructure items needed. Renovation vs new. Identify associated structures needed to support the facility e.g. furniture, heat lamps, lighting, unique items above and beyond what is normally included in a similar facility.</p>	
V.F.2	Facility Justification	<ul style="list-style-type: none"> <li>• Do you have assessment data available to justify this request? 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.</li> <li>• Who will use this facility?</li> <li>• What would the impact be on the program with or without the facility?</li> <li>• What is the life expectancy of the current facility?</li> <li>• How does the request promote the college mission or strategic goals?</li> </ul>	

V.G.	Equity Planning and Support	Has this work generated any need for resources? If, so what is your request?	No
V.H.1	Other Needed Resources	List resource needs other than faculty, staff, facility, and equipment needs. For instance, assistance in working with counselors, finding tutors to work with students, support for assessment projects.	
V.H.2	Other Needed Resources Justification	Do you have assessment data available to justify this request? 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.J.	“B” Budget Augmentation	<p>How much? Who/what could be supported if this additional funding was awarded? What would the impact be on the program with or without the funds? How does the request promote the college mission or strategic goals? Refer to <b>mission</b>: <a href="http://deanza.edu/about/missionandvalues.html">http://deanza.edu/about/missionandvalues.html</a> and strategic goals (page 15 <a href="http://www.deanza.edu/emp/pdf/EMP2015-2020_11-18-15.pdf">http://www.deanza.edu/emp/pdf/EMP2015-2020_11-18-15.pdf</a>)</p> <p>State the SLO/PLO assessment data, reflection, and enhancement and/or CTE Advisory Board input to support this need.</p> <p>If you do not deal with the B budget directly, you can use the comment: “please refer to the Dean’s summary”.</p>	<p>B budgets in PSME are inadequate. Given the heavy emphasis in testing in the sciences and mathematics printing costs eat up most if not all of the B budget. Currently the Geology Department minimizes printing costs by sending digital copies of most materials directly to students. Please refer to Dean’s summary for issues regarding B budgets in the Physical Sciences.</p> <p>Restoration of B budget for Field Trip Buses, this item is recurrent from the department's last program review:</p> <p>Geology classes have field trips that are required for articulation. If the B budget were ever restored to a level that allowed us to once again hire buses for the field trips, then students would not have to drive their own vehicles. This would be particularly helpful in the quest to serve traditionally underrepresented students, who may not have as much access to private vehicles, and who may not have the same level of access to rides from other students as their classmates.</p> <p>Restoration of yearly B budget money would allow the department to replace samples and equipment that get worn out from frequent use by large numbers of students who are taking lab courses in order to meet CSUGE and IGETC transfer GE requirements.</p>



V.K.1	Staff Development Needs	<p>What would the impact be on the program with or without meeting this need? How does the request promote the college mission or strategic goals? Refer to <b>mission:</b> <a href="http://deanza.edu/about/missionandvalues.html">http://deanza.edu/about/missionandvalues.html</a> and strategic goals (page 15 <a href="http://www.deanza.edu/emp/pdf/EMP2015-2020_11-18-15.pdf">http://www.deanza.edu/emp/pdf/EMP2015-2020_11-18-15.pdf</a>)</p>	<p>Currently the Geology and Meteorology Departments are participating in the NSF funded project SAGE promoting change and best practices in undergraduate geoscience education at 2-year colleges nationally. Two faculty members have been participating in workshops at College of William and Mary in Virginia and the University of Wisconsin Madison. Additional support for these and other faculty members to participate in the American Geophysical Union and Geological Society of America's national meetings would augment this drive in faculty development within the Earth Sciences at De Anza.</p>
V.K.2	Staff Development Needs Justification	<p>Do you have assessment data available to justify this request for staff development? 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</p>	<p>Lower-division general-education courses in the sciences, particularly in the Earth Sciences, have been identified as "gateway" courses that draw members of underrepresented populations into STEM majors. DiLeonardo has been very active over the last two decades in National Science Foundation and NASA supported projects intended to improve undergraduate Geoscience education and impact STEM education nationally. Most recently a push has been to seek and employ strategies defined by ongoing research nationally that support those goals and push to a further goal of increasing the participation and better serving underrepresented populations in STEM. Over the last three years implementations of these methods in instruction has seen a steady 3 to 4% increase per year in success rates in Geology classes for members of targeted populations (see discussion above). The department asks the College to support our continuing success by directly supporting involvement of our faculty in national meetings and symposium. The additional</p>

April 16, 2017

			benefits, beyond efforts to close the equity gap on the De Anza campus include our department's ability to disseminate our testing of these methods to the larger college and university populations across the country.
VI.	Closing the Loop	How do you plan to reassess the outcomes after receiving each of the additional resources requested above? N.B. For the Comprehensive Program Review the question becomes "What were the assessments showing the results of receiving the requested resources over the last five years?"	<p>For our request, including computer requested, the department will continue to focus on outcome-based assessments. These include maintaining high success rates overall and improving them for targeted populations. Additionally the impact of items and equipment requested above will be considered in the department's ongoing SLO assessment in each course.</p> <p>We are also in this request looking to combine knew data acquisition with a CMG-PEPPV seismometer from Gurlap Systems Ltd. This will augment our current weather station real-time data maintained in the Meteorology Department.</p> <p>For staff development, given the focus of success on the use of best practices in our departmental offerings, we intend to track our success rates in targeted populations specifically and overall within our classes.</p>
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	Last Updated:	Give date of latest update (Set next box to YES when done and ready for Dean review).	3/28/17