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

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|  | 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 |
|  | Program Description |  |  |
|  | Department Name: |  | Mathematics |
|  | 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”? (<http://www.deanza.edu/about/missionandvalues.html)> | PLO #1: Analyze and synthesize the concepts of mathematics from a graphical, analytical, numerical, and verbal approach.  PLO #2: Demonstrate and apply a systematic and logical approach to modeling and solving mathematical problems.  PLO #3: Use correct notation and mathematical precision in communicating mathematics.  #1 and #2 relate to the Institutional Core Competency “Critical thinking”. #3 relates to “Communication and expression”. |
| 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 |

Leave blank if not applicable to your program.

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| I.A.2 | Choose a Secondary Focus of Your Program. | Basic Skills, Transfer. Career/Technical, Learning Resources/Academic Services, personal enrichment or N/A | Basic skills |
| 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:  <http://deanza.fhda.edu/ir/AwardsbyDivision.html> |  |
| 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 <http://deanza.fhda.edu/ir/AwardsbyDivision.html>. 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 <http://deanza.fhda.edu/ir/AwardsbyDivision.html>  Leave blank if not applicable to your program. | 16 |

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| 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 <http://deanza.fhda.edu/ir/AwardsbyDivision.html> | 324 lib art-science math & eng  22 Math transfer |

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| 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: https://[www.deanza.edu/workforceed/ged/](http://www.deanza.edu/workforceed/ged/)  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. |  |

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| 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 |  |
| 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: 0 = no change; (-  #) 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 |  |
| I.E.1 | Full Time Faculty (FTEF) | For ALL programs: Refer to your program review  data sheet <http://www.deanza.edu/ir/program-> | 71.2 |
| 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 |  |
| 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. <http://www.deanza.edu/ir/program-review.16-> 17.html . | FT: 37.3%  Overload: 12.4%  PT: (50.4.6%)  In 2017-18, about 50% of our schedule was taught by fulltimers but only 37.3 as fulltime load. . |
| 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 |  |
| 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. |  |
|  | Enrollment |  |  |

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| II.A | Enrollment Trends | What significant changes in enrollment have you seen in the last three years? Refer to <http://www.deanza.edu/ir/program-review.16-17.html> | Our consecutive census enrollment for the past five year has been:  2013-14: 23,240  2014-15: 23,854  2015-16: 22,950  2016-17: 22,785  2017-18: 21,268  Enrollment has declined 8.5% from 2013-14 to 2016-17. The drop has been about 6.7 percent over the last two years. This is in comparison with De Anza as a whole dropping 15.4% in enrollment over the past years and 7.2% over the last year. |

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| II.B.1 | Overall Success Rate | What significant changes in student success rates have you seen in the last three years? | From 2013-14 to 2017-18, student success rate has risen from 64% to 67%. Non-success has dropped by about 2% and the withdrawal has been constant at about 15%. |
| 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% <http://deanza.edu/ir/state-of-the-college-> related-  information/pdf/Institutional\_Metrics\_2016.pdf If course success rates in your |  |

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| 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.) | • Starting in 2015-16 the seat count in our developmental classes has been reduced from 40 to 35, as negotiated by the district administration and faculty. We taught 84 sections of developmental classes in Fall 2017, so this translates to an overall loss of 420 places in developmental classes. We would have to add over 12 new developmental sections to make up for the loss, which is equivalent to the quarterly load of four full-time instructors.  • The state passed AB 705 in Fall 2017. This law mandates that we maximize students' chances of completing transfer-level math within three quarters of taking their first math class at De Anza, and that we place students directly into transfer-level math unless we can demonstrate that they are unlikely to succeed at that level. In order to comply, the department will have to completely overhaul its developmental-level course offerings, and may also need to make changes to some higher-level courses. These changes will take effect in Fall 2019. In order to meet this tight schedule, the department will be doing an extraordinary amount of curriculum work this Spring (2018) and throughout the 2018-19 school year.  • The department has taken on additional curriculum work to insure that the courses needed for transfer degrees align with the state C-ID descriptors.  • The department is creating separate curricula for honors versions of some of our courses.  The college requirement of 12 units for student’s employees has hurt the pool of potential hires. The requirement of 12 plus units makes it very difficult for them to manage a schedule as a student employee and full course load. Navigating enrollment and dedicating time as a CTE student employee places a huge burden on these students. |
|  | Equity |  |  |

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| 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 <http://www.deanza.edu/ir/program-review.16-17.html)> | 2013-14: 8,066  2014-15: 8,527  2015-16: 8,276  2016-17: 8,489  2017-18: 7,766  Targeted population enrollment has dropped 3.7% from 2013-14 to 2017-18. The non-targeted population shrank11.0% over the same time period. |
| 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: <http://deanza.edu/gov/IPBT/program_review_files.html> | The equity gap has remained basically constant at about 17% over the last 5 years. The targeted population’s success rate increased 3% from 53% to 56% and the non-targeteted population success has increased from 70% to 73% over the last 5 years.  The plan in the 2013-14 Comprehensive Program Review included decreased class size for developmental classes, increased counseling services for math classes including at the developmental level, and expansion of MPS.  MPS enrollment grew by 56% over the past 5 years in particular about 22% from the previous year. The success of MPS for targeted groups over the last year dropped by 7% from 73% to 66% and for non targeted dropped by 4% from 76% to 72%, but remained very significantly above the overall success rates for equivalent regular sections. Even though there were small declines in MPS success rates, the rates were still relatively high relative to non-MPS and so when coupled with the very large increase in total number of MPS students there was an overall significant increase in the total number of students succeeding. Over all, the equity gap for the MPS program grew from 3% to 6% which is far less than math as a whole.  Once again, the effect of decreased class size for developmental classes which was implemented starting in 2015-16, most likely accounts for some of the increase in the success rate for both targeted and non-targeted populations for the department as a whole. The MPS program expanded starting in 2016-17, and the 56% increase may account for the decreased success level. Additionally there has been retirement of some of the regular MPS faculty with high success rates which could also account for decreased success over the past 5 years (from 83% to 68%) .  We started seeing some of the effects of AB705 implementation but nothing concrete until next program review. |

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| 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% <http://deanza.edu/ir/state-of-the-college-> related- information/pdf/Institutional\_Metrics\_2016.pdf  Are success rates of targeted groups at or above 60%? If not, what are the | The targeted population had a 56% success rate in 2017-18. Much of this can be attributed to lower success rates in developmental classes. Implementation of AB 705 will have a dramatic effect on the department's developmental class offerings, starting in 2019-20. It has already changed our planning this year as we adjust to new course arrangements and student demand. More students will be placed directly into transfer-level mathematics. If success rates in these transfer-level classes remain the same, there will be an overall increase in success rates. However, as students will be placed higher than they currently are, there is a danger that our least-prepared students will suffer. If so, the change could disproportionately affect the targeted groups, since those students are overrepresented in developmental-level classes. The math department will maintain an equity focus as we adjust to the new course sequences. |
| 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? |  |

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|  | 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 | The department has a plan for assessing all Program Level Outcomes In winter 2020. The initial plan of winter 2019 had to be moved due to the extra time and energy committed to AB705 and placement. |
| 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 | % 524.2 assessment of Student Learning Outcome statements. |

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|  |  | | Spring 2019. |  |
|  |  | 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. |  |
| V.B | 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: <http://www.deanza.edu/ir/program-review.16-17.html> | The math department lost 5 full-time instructors in the 2016-17 and 2017-18 school years, with only one replacement hire. This year we are losing 3 more fulltime faculty which have not been replaced. It is becoming very difficult to find new part-time instructors, as we have tapped out the local market of qualified candidates. We face the prospect of a reduction in the number of sections we are able to offer as we lose full-time instructors without adding any new ones.  Another factor limiting our ability to expand enrollment is the availability of dedicated classrooms in high-demand time slots specially as we moved toward offering courses that require special timing (such as corequisites and possible stretch courses). As we expand MPS we need rooms that we can allocated blocks of two hours daily for each class. |
| V.C1 | Faculty Position(s) Needed | | A drop down menu will allow you to choose: Replace due to Vacancy, Growth, None Needed Unless Vacancy | Vacancy |

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| 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. | In the 2016-17 and 2017-18 school years, the department lost 5 full-time instructors and this year another 3. We hired one full-time instructor this year. This leaves 7 spots un-filled.  Our full-time faculty FTEF is only 37.3%. 62.7% of our classes are taught outside of full-time regular load, including over almost 50% taught as part-time load.  Even with our large number of long-time, part-time faculty, we have been forced to hire new part-time specially as some of those long-timers are retiring. Additionally turnover among the new part-time faculty is high. The work needed to recruit, interview, hire, mentor, support, and evaluate them is a significant burden. It is extremely difficult to find enough qualified instructors. Unless we hire more full-time faculty, we will not be able to sustain our current enrollment levels. |

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| 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. | None needed |

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| 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 | Over $1000 |

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| V.E.2 | Equipment Title, Description, and Quantity | * Description should identify if the item(s) are new or replacement(s), furniture/fixtures, instructional equipment, technology related, expected life of item, recommended warrantees etc. * Did this request emanate from a SLOAC or PLOAC process? * Does this item require new or renovated infrastructure (e.g. wireless access, hardwire access, electric, water or heat sources . . . ) | We request site licenses for mathematical and statistical software: MatLab |

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| V.E.3 | Equipment Justification | * 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. * Who will use this equipment? * What would the impact be on the program with or without the equipment? * What is the life expectancy of the current equipment? * How does the request promote the college mission or strategic goals? Refer to mission: <http://deanza.edu/about/missionandvalues.html>and strategic goals (page 15<http://www.deanza.edu/emp/pdf/EMP2015-> 2020\_11-18-15.pdf | New computers in the lab rooms, and site licenses for mathematical and statistical software will allow instructors to schedule lab projects for their classes. Our transfer agreements require a technology component in our statistics classes, and the technology is also by many instructors in-class at all levels. |

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| V.F.1 | Facility Request | 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. | . Classrooms – the department currently has scheduling priority in 12 classrooms on campus.  • We request $100,000 to update rooms S42 and S44 (specially S42) which with modification can easily be used both as a classroom and computer lab. Those rooms are not being utilized efficiently as there are old style table configuration with bolted down tables and data cables passing through them. The projector placement does not give students a reasonable view of the presentations. |
| V.F.2 | Facility Justification | * Do you have assessment data available to justify this request? If so, provide the SLO/PLO | The limited number of classrooms in which we have scheduling priority makes it very hard for us to schedule as many classes as we would like at the most popular times of day. With more classrooms we would have more flexibility in scheduling high-demand classes at high-demand times. This would make it easier for more students to take the courses they need. |

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|  |  | assessment data, reflection, and enhancement and/or CTE Advisory Board input to support this need. If not, provide other data to support this need.   * Who will use this facility? * What would the impact be on the program with or without the facility? * What is the life expectancy of the current facility? * How does the request promote the college mission or strategic goals? |  |
| V.G. | Equity Planning and  Support | Has this work generated any need for resources? If, so what is your request? | Not at this time |
| 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. | • Instructor copies of on-line textbooks.  • Increased budget for photocopying.  • Funding for department workshops and/or retreats. |
| 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. | • Instructor copies – many of our instructors are excited to use open educational resources such as on-line textbooks. This can be a great benefit to the students. With traditional textbooks, instructors usually receive free copies from the publishers. More instructors would be likely to choose on-line textbooks if we had copies of the textbooks available to us.  • Photocopying – the current budget is extremely limited, and only allows for copying quizzes and exams. Students that want paper copies of syllabi, worksheets or other handouts are forced to print them themselves. This presents an equity issue, as not all students can afford to print out their own copies.  • Workshops & Retreats – sample topics could include AB 705, multiple measures and common assessment, technology training, equity solutions in the classroom, and an introduction to Common Core mathematics. These and other topics will be valuable to all members of the department. In particular, the math department has a very large number of part-time instructors, who often don’t have a chance to interact with many of their colleagues. |
| V.J. | “B” Budget Augmentation | 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 mission: <http://deanza.edu/about/missionandvalues.html>and strategic goals (page 15 <http://www.deanza.edu/emp/pdf/EMP2015-2020_11-18-15.pdf>  State the SLO/PLO assessment data, reflection, and enhancement and/or CTE Advisory Board input to support this need.  If you do not deal with the B budget directly, you can use the comment: “please refer to the | Please refer to the Dean’s summary. |

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| V.K..1 | Staff Development Needs | 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 mission: <http://deanza.edu/about/missionandvalues.html>and strategic goals (page 15 <http://www.deanza.edu/emp/pdf/EMP2015-2020_11-18-15.pdf> | Staff development is an integral part of maintaining relevancy in the faculties’ specific fields of study. It is important for student success that faculty continue to refine their level of expertise within their fields.  Students directly benefit from the integration of new technologies, processes and theories learned through training.  This includes training in current technologies and college administrative software. Lack of training would create a lack of competency. | |
| V.K.2 | Staff Development Needs Justification | 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 | All new equipment and technologies need some research (conferences, seminars) and training. Conferences have also supported networking and enhanced department’s community (outside exhibitions and guest lecturers). | |
| 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?” | We plan to assess the outcomes of receiving additional resources by analyzing the data in light of the degree to which it supports:  • increased enrollment  • decreased equity gap  • improved overall success rates | |
|  | Submitted by: | APRU writer’s name, email address, phone ext. | Mehrdad Khosaravi  [Khosravimehrdad@fhda.edu](mailto:Khosravimehrdad@fhda.edu) x5384 | |
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|  | Last Updated: | Give date of latest update (Set next box to YES when done and ready for Dean review). | 4-1-19 | |