**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. The third column is where you can input your data/responses at this time. You will be able to copy and paste or type in your information from the third column directly into the TracDat boxes. Save this Word doc in the following format: sp2016cpr\_deptname. Last steps: ALWAYS keep a soft copy of your work in your files to ensure that your work is not lost. Upload a copy of this document into the Trac Dat, “Documents file”. Also upload the Program Review Data sheet(s). If you have questions, please refer to your workshop handout (<http://www.deanza.edu/slo/tracdat.html>) or contact: [papemary@fhda.edu](mailto:pappemary@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 explanations.** |
|  | **Program Description** |  |  |
|  | Department Name: |  | **Engineering** |
|  | 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>) | * Students will demonstrate familiarity with the wide range of engineering disciplines and the general requirements and skills necessary to pursue a career in those disciplines. * Students will demonstrate a general understanding of key components of an engineering project development cycle; including analysis, design, implementation, documentation, refinement, and commercialization. They will also demonstrate a familiarity with the tools commonly used during those phases. * Students will demonstrate the necessary discipline specific technical knowledge and skills required to successfully transfer to an engineering baccalaureate program. |
| 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 | 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>  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 <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. |  |
| 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>  Leave blank if not applicable to your program | 268 |
| 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/  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: # 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 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. <http://deanza.fhda.edu/ir/program-review.14-15.html> . |  |
| 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 student employees; 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. <http://deanza.fhda.edu/ir/program-review.14-15.html>. | 100% taught by PT; no change |
| 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. |  |
| 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** |  |  |
| II.A.1 | Enrollment Trends | What significant changes in enrollment have you seen in the last three years? Refer to <http://deanza.fhda.edu/ir/program-review.14-15.html> | Enrollment growth from 2012-13 to 2013-14 was 57% and from 2013-14 to 2014-15 was 13. The net growth over the past three reporting years has been an astonishing 77%. Increases have been driven by a complete overhaul of the curriculum completed in the years preceding the start of the current study period and an increasing emphasis on employment opportunities in engineering. The very recent hire of a STEM Director, one of whose duties is to encourage the recruitment and success of underrepresented students (including women) into engineering disciplines should further accelerate our enrollment in future years. Enrollment growth is currently constrained by our ability to recruit qualified part-time instructors and lack of sufficient classroom and laboratory space. We expect a continuing moderate growth rate in this program, and at the current rates of growth, we feel that in the near future a full-time faculty position will be justified to support significant enrollment with no existing FT faculty assigned to the department. |
| II.B.1 | Overall Success Rate | What significant changes in student success rates have you seen in the last three years? | Over the past three years the overall student success rates have increased by 4% from 83% to 87%, resulting in a positive percentage change from the original rate of about 4.8%. Positive changes in success rates for targeted (5.0%) and non-targeted groups (4.7%) are almost identical, with a slightly greater percent change in targeted student populations. |
| 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://www.deanza.edu/ir/deanza-research-projects/2012_13/ACCJC_IS.pdf>  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. | Successful course completion and success rates are far above the 60% base level. |
| 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.) |  |
|  | **Equity** |  |  |
| 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://deanza.fhda.edu/ir/program-review.14-15.html ) | Over the three year period, total enrollment has increased by 77%, with an increase of enrollment of 66% for targeted groups. At the start of the three year period, targeted groups comprised 25% of the total engineering enrollment. At the end of the three year period, targeted groups represented 28% of total engineering enrollment. These targeted group enrollments are very high for a technical discipline and are the result of a conscious effort of the department to encourage underrepresented groups to consider engineering. The very recent hire of a STEM coordinator to encourage students, especially those in underrepresented groups, to enroll in technical majors should even further enhance our past success. |
| 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> | Between 2012-13 and 2014-15 the equity gap has remained at 4%. This equity gap is one of the lowest in the division, and certainly a positive anomaly in a technical field nationally characterized by extreme differences in underrepresented enrollment and success. The department has made great efforts to recruit instructors who are sensitive to a wide variety of students. The department has also encouraged student directed projects and employed curriculum that emphasizes topics of interest to our student population, all of which appears to encourage all students nearly equally. The low and constant small overall department equity gap does hide differences in success rates between the lower and higher level engineering courses. Beginning next year the department will receive data that shows success rates and equity gaps in specific course, and future work in reducing the equity gap will be directed to those courses in which the gap is highest. Again, we anticipate the newly hired STEM director will be highly involved in our future effort. |
| 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://www.deanza.edu/ir/deanza-research-projects/2012_13/ACCJC_IS.pdf>  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. | Yes, success rates of targeted groups (84%) are substantially above the 60% baseline. |
| 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? | Please see response to IIIB. |

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|  | **Assessment Cycle** |  |  |
| IV.A | Cycle 2 PLOAC Summary (since June 30,2014) | Give the percentage of Program Level Outcome statements assessed since June 30, 2014. Run Ad Hoc report entitled “Cycle 2 XXX PLOAC Work” and scroll to the bottom of the report for count~~.~~ Then calculate #Reflections & Analysis/#PLO statements times 100~~.~~ All program level outcomes are to be assessed at least once between Fall 2014 and end of Winter 2019. | Unable to run report. This department has no full time faculty assigned and has not as yet completed the assessment cycle during the reporting period. With current changes in part-time SLO responsibilities, PT engineering faculty are being trained in SLO assessment techniques and requirements, and expect to complete an SLOAC plan that will meet the W19 deadline. |
| IV.B | Cycle 2 SLOAC Summary (since June 30, 2014) | Give the percentage of Student Learning Outcome statements assessed since June 30, 2014. Run Ad Hoc report titled “Cycle 2XXX SLOAC work- Active Only” and scroll to the bottom of the report for count. Then calculate #Reflections & Analysis /#SLO statements times 100. All Student Learning Outcome statements are to be assessed at least once between Fall 2014 and end of Winter 2019. | Unable to run report. This department has no full time faculty assigned and has not as yet completed the assessment cycle during the reporting period. With current changes in part-time SLO responsibilities, PT engineering faculty are being trained in SLO assessment techniques and requirements, and expect to complete an SLOAC plan that will meet the W19 deadline. |
|  | 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. | For many years the low enrollment and low success rates of engineering have limited our ability to request funding for laboratory equipment and facilities. With the very significant increases in enrollment and success during the past four years and the long neglect of existing equipment and supplies, we would like to request a modest equipment budget that will support a reinvigorated program and provide necessary, current, and relevant laboratory supplies and equipment for our students. |
| 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://deanza.edu/ir/program-review.14-15.html> | As described above, providing a modest equipment budget for the engineering program will encourage student projects that enhance their educational experience, provide engagement and excitement, and meet the hands on component of curriculum required by transfer institutions. |
| 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 currently, but as described in IIA.1, with 100% of sections taught by part-time faculty and with a very significant growth in enrollment and success, we anticipate a need for a full time faculty member in the near future |
| V.C.2 | Justification for Faculty Position(s): | * Briefly, how will this position support student needs? * 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 and/or CTE Advisory Board input to 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. | None currently, but in the past the physics lab technician had provided significant support for the engineering program, and if a replacement for that position is funded, we would like to continue the close relationship between departments. |
| V.D.2 | Justification for Staff Position(s): | * Briefly, how will this position support student needs? * 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 | Items under $1,000 & long-term (shared) equipment over $1,000 |
| 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 . . . ) | The department has submitted a modest equipment request totaling $9,400 to the Dean for review and divisional prioritization. The equipment request includes 6 student lab stations for each of the major engineering courses offered:  Engineering 10 (Intro to Engr): 6 classroom lab station with basic mechanical and electrical tools necessary for student projects and computer aided design software  Engineering 37 (Intro to Circuits): 6 classroom lab stations including circuit boards, electronic components, soldering facilities, multimeters, and circuit simulation software  Engineering 35 (Statics): wood, plastic, and metal supplies and tools; mechanical design modeling software  The department is also requesting a long term equipment budget for the replacement of existing, aging large desktop computers in S48 with smaller laptops and suitable desks. In addition to bringing the computers into compliance with modern software needs, such a purchase will allow the room to be used for both lecture and lab. The current large screens block the view of students and instructors and make the classroom very difficult to use for lecture sessions. Such a change will significantly enhance S48 usage and make the classroom available to other PSME classes as both a lecture and lab facility. |
| 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> | In order to prepare students for transfer to 4 year engineering programs (see PLO’s in Program Mission Statement), we must provide an adequate and up to date laboratory facility. We currently cobble together donated equipment and supplies, and students are limited in the projects and experiments they can do by the lack of adequate equipment. Students also require adequate facilities to practice and demonstrate discipline specific knowledge and skills (see PLO’s) and also require adequate equipment and supplies to implement and demonstrate successful completion of an engineering project (see PLO’s) |
| 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. | Long term upgrade of S48 to provide flexible lecture/lab dual use classroom. In addition to the modernization of the current computer equipment in the room, we will need adequate tables, wiring, and network connections. These lecture/lab facilities would be shared with Math and other PSME departments. |
| V.F.2 | Facility Justification | * 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. * 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? | See V.E.3 |
| V.G. | Equity Planning and Support | Has this work generated any need for resources? If, so what is your request? | We have a serious need for faculty staff development opportunities that enhance faculty knowledge and skills around best equity practices and that are specifically targeted to STEM programs. |
| 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. | We could use additional tutoring and counseling support for STEM students; both in recruiting underrepresented students into engineering and enhancing their success. A STEM dedicated counselor who is familiar with engineering programs and their requirements and who is familiar with the special needs of students underrepresented in engineering disciplines (including women) would be extremely beneficial. We would like to provide a closer relationship with existing pathway programs such as MPS, Puente, etc. to provide an enhanced opportunity for underrepresented students to participate in engineering opportunities |
| 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. | The startling lack of underrepresented students (including women) in engineering disciplines is a well-documented national issue. As US demographic trends continue, unless we find a way to engage these underrepresented groups in engineering, the future economic health of our nation will be severely compromised. |
| V.J. | “B” Budget Augmentation | If there is a new initiative/project that requires additional funding, please state:   * Who/what could be supported if this additional funding was awarded? * What would the impact be on the program with 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> * How much money is being requested?   State the SLO/PLO assessment data, reflection, and enhancement and/or CTE Advisory Board input to support this need and/or other data to support this need.  If you do not deal with the B budget directly, you can use the comment: “please refer to the Dean’s summary”. |  |
| 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> |  |
| 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 |  |
| 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?” |  |
|  | Submitted by: | APRU writer’s name, email address, phone ext. | Manizheh Zand; [zandmanizheh@fhda.edu](mailto:zandmanizheh@fhda.edu), X8800 |
|  | Last Updated: | Give date of latest update (Set next box to YES when done and ready for Dean review). | 4/26/16 |