▼ 🏛 Dept - (B/CS) Computer Information Systems ✎

Program Mission Statement: De Anza's Computer Information Systems department has been a leading educational institution in Silicon Valley since the college was founded. Over the years it has developed a rich and diverse series of courses in many areas. Our courses meet the needs of both the transfer student and the industry professional.

I.A.1 What is the Primary Focus of Your Program?: Transfer

I.A.2 Choose a Secondary Focus of Your Program?: Career/Technical

I.B.1 Number Certificates of Achievment Awarded: 44

I.B.2 Number Certif of Achievment-Advanced Awarded: 5

I.B.3 #ADTs (Associate Degrees for Transfer) Awarded: 7

I.B.4 # AA and/or AS Degrees Awarded: 31

I.C.1. CTE Programs: Impact of External Trends: In state of California, the number of Database Administrators , Computer and Information Systems Managers, Network and Computer Systems Administrators, Information Security Analysts, and even the entry level Computer Network Support Specialists are expected to grow much faster than average growth rate for all occupations and for other states. The growth predictions and current median incomes for these careers in the state of California are:

    -> Database Administrators and related fields projected growth rate between 2014 - 2014 is 24% or 560 jobs annually with current median income of 94,100.

    ->Computer and Information Systems Managers projected growth rate between 2014 - 2014 is +30% or 2,120 jobs annually with current median income of $153,800.

    ->Network and Computer Systems Administrators projected growth rate between 2014 - 2014 is +21% or 1,450 jobs annually with current median income of $88,800.

->Information Security Analysts projected growth rate between 2014 - 2014 is +26% or 320 jobs annually with a current median income of $107,200

    -> Computer Network Support Specialists projected growth rate between 2014 - 2014 is +20% or 20% jobs annually with a current median income of $74,600

To meet these needs the following courses have been added (and applicable certificates/degrees updated)
Mobile development:
   iOS Development course (CIS 55)
  Java for Mobile Development (CIS 53)
Database:
  Introduction to Large Scale Processing Systems (CIS 64E)
  Introduction to Big Data and Analytics (CIS 64F)
Security:
  Enterprise Security Process Management (CIS 75D)
  Enterprise Emergency Response Planning (CIS 75F)
  Ethical Hacking (CIS 102)
  Digital Forensics and Hacking Investigation (CIS 104)

(Spring 2017 as CIS 82Z Current Topics) Cloud Computing
Project Management:
  Managing Cloud Projects (CIS 95F)
  Agile Project Management - A Practicum (CIS 95G)
Python Programming Language (CIS 40, CIS 41A, and CIS 41B)

Challenge: Curriculum Committee timeline which does not allow for us to update curriculum to keep pace with the technological development.

Challenge: These cutting edge technology classes tend to draw a small number of students at first. We are attempting to combat this issue through the use of Strong Workforce monies to support instructor salaries in order to offer classes such as Cloud Security where we know the enrollment during the first through third offering of the course will be below twenty.

I.C.2 CTE Programs: Advisory Board Input: Input from our Advisory Board:
• Our Advisory Board feedback indicated that the skill of programming in Python is as much in demand as other areas such as programming in Java and web development. Python is mostly replacing the need for Perl. For 2016-17 we introduced CIS 40 for the student with no programming experience, CIS 41A and CIS 41B for the intermediate level programmer who wishes to develop Python programming skills for the workplace. The advisory board has suggested adding a sequel course with an emphasis on data analysis.
• In the area of database skills our teaching of SQL is precisely what is needed as indicated by the Board. With the introduction in 2015 of CIS 64F Introduction to Big Data and Analytics, we are teaching one of the second most desired database skills, Hadoop. R Programming course and a course dedicated to analytics are suggested additions.
• Web Development certificate was considered one of the most beneficial for those without a Bachelor's degree. In the area of Web development, new course Representational Style Transfer (REST) paired with JSON protocol is the suggested direction for updating and enhancing the present Web development course offerings. Ruby on Rails was suggested. More emphasis on PHP would also benefit students.
• When asked "what courses could De Anza College offer to help your company or organization address needs related to computers or information technologies", the advisory group replied with Cloud Computing, Android Development, Requirement of Analysis and Design, Data Warehousing, iPhone Development, Team Based Software Development
• Begin a program in Functional Programming including robotics.
• It should be noted that of the courses listed we teach Cloud Computing (CIS 95F), Android Development (CIS 53), Analysis and Design (CIS 28), Data Warehousing (CIS 64F), and iPhone Development (CIS 55). It should also be noted that a team project is part of the CIS 22C curriculum.
• Only a third of respondents were willing to hire an applicant without any work experience. An internship would suffice was a comment by some. Thus, we are endeavoring to find ways to establish connection with industry to provide students possibilities for internships, paid and unpaid. These opportunities are published on the CIS Department's website: http://deanza.edu/cis/internships.html and by working with Ashley Phillips, CTE Program Coordinator. In addition, through Strong Workforce monies a mentor has been hired to work with local companies such as Google to build an alliance where our students would benefit from speakers, mentors, site visits, and internships.

I.D.1 Academic Services & Learning Resources: #Faculty served:

I.D.2 Academic Services & Learning Resources: #Students served:

I.D.3 Academic Services & Learning Resources: #Staff Served:

I.E.1 Full time faculty (FTEF): 8.7

I.E.2 #Student Employees:

I.E.3 % Full-time : -1.0% between 2014-15 and 2015-16; a -26% (decrease) in the four years since 2012-13.

I.E.4 #Staff Employees:

I.E.5 Changes in Employees/Resources: While 2.2 additional full-time instructors have been added to the department since 2012-13, the number of students has grown so dramatically that our ratio of full-time employees to part-time employees has actually decreased by 26%.

Availability of rooms equipped with computers for each student to use is often the deciding factor not only for when to offer a class but if another section should be opened. While statistics for core courses suggest the majority of students prefer day classes, in recognition for the need of equity, we must still make these available in the evening. Other courses, both CTE and those that draw students primarily from those working a full-time daytime job, must also be offered in the evening. Thus, there is no room to grow our program in the 6:00 - 7:50 pm time-frame.

One way to alleviate the room issue is through offering more sections online where appropriate. However, this has brought about a significant issue in the proctoring of exams. Once again, too few rooms equipped with computers.

II.A Enrollment Trends: Enrollment 2012 - 2013: 4663
Enrollment 2013 - 2014: 5677
Enrollment 2014 - 2015: 7443
Enrollment 2015 - 2016 8349

Not only are our core courses overcrowded, but many of the courses needed to achieve certificates and degrees are overcrowded (CIS 28, CIS 29, CIS 26B, CIS 89A, CIS 66). Ratio of students to instructor is, perhaps, the most crucial issue in increasing success.
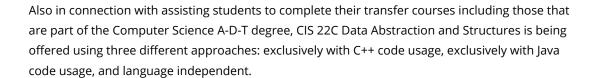
II.B.1 Overall Success Rate: Success rate 2012-13: 70%
Success rate 2013-14: 70%
Success rate 2014-15: 71%
success rate 2015-16: 72%

II.B.2 Plan if Success Rate of Program is Below 60%: N/A

II.C Changes Imposed by Internal/External Regulations: De Anza College is Project Management Institute member. Moreover the Collegewith its Project Management Practitioner program is recognized as PMI Registered Education Provider (R.E.P.).

The Computer Science AS Transfer Degree is now a reality and is available to students beginning Fall, 2015. In an effort to fill the needs of our students, parallel tracks for curriculum in both C++ and Java have been expanded and are continuing to be expanded. Curriculum for CIS 36A Introduction to Java and CIS 36B Intermediate programming in Java are being updated to gain C-ID approval in order to offer another pathway for students to achieve the A-D-T Computer Science degree.

Also in connection with assisting students to complete their transfer courses including those that are part of the Computer Science A-D-T degree, CIS 22C Data Abstraction and Structures is being offered using three different approaches: exclusively with C++ code usage, exclusively with Java code usage, and language independent.

In order to begin to develop the A-D-T in computer science, all core curriculum courses needed to be taught in C++. According to SLO assessments the students are achieving desired outcomes in our C++ courses. However, the CIS 22 series courses are not yet as good as the C courses they replaced. The C courses had an excellent text book which was precise, practical, attuned to the needs of industry, and to the De Anza student. The department faculty had fine-tuned these courses to meet the student needs through many years of use. The new C++ core courses were collaboratively developed and we will continue our collaborative effort to improve them. Students benefit from us teaching using the same materials in the same ways at the same time. Students are able to collaborate across classes and our teaching assistants are more productive and helpful when working with students from different course sections.

With the discontinuance of CAOS department new courses are continuing to be developed to fill the gap left , A class in Flash was offered for the first time in 2016-17.

III.A Growth and Decline of Targeted Student Populations: From 2012-13 to 2015-16, the targeted group population grew by 120%; The non-targeted group grew at the slower rate of 71%

III.B Closing the Student Equity Gap: The gap between targeted group and non-targeted group in relation to success rates is fairly flat:
2012-13 => 15%
2013-14 => 14%
2014-15 => 14%
2015-16 => 15%

Close inspection of the targeted population by ethnic group yields some interesting information. The Filipino, Latino, and Pacific Islander enrollments have each more than doubled. Success rates of each group have risen. Subjectively considering these statistics one might surmise that sense of community plays an important role. Of course, building a sense of community should begin in the classroom, but we perceive that the teaching assistant programs and the three CIS clubs each with a different intended outcome play an important role in community building. These clubs and programs lead students to say to themselves "if you can, then so can I". As part of post Winter 2016 quarter student survey (212 respondents), approximately 50% of the students have sought TA assistance and, of these, 90% were satisfied or very satisfied with the help they received.

The rationale for improving success rate continues to be to provide multiple methods for delivery of learning materials and to provide each student with one-on-one assistance in several ways: tutoring by our volunteer teaching assistants, peer-to-peer assistance through forums and chat groups, online instructor hours,and in-class teaching assistants. Fall of 2016, one-on-one tutoring by appointment was piloted with funds from Adult Education. We began with one tutor and for Spring there will be two tutors servicing our students' tutoring needs. Each tutor is subject to a maximum of 300 hours per quarter for Fall, Winter, and Spring, but only 50 hours during Summer session.

With the introduction of LanSchool software installed on all CIS classroom computers, student attention during class has grown.
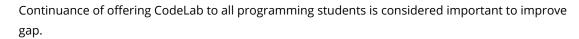
Continuance of offering CodeLab to all programming students is considered important to improve gap.

III.C Plan if Success Rate of Targeted Group(s) is Below 60%: With the elimination of a coordinator for the CIS lab, the department lost the person that was devoting most of 40 hours per week on our tutoring program. This loss hurt the targeted groups most.

As a remedy, several action plans are in place. Our tutors are back but they are now truly our "Teaching Assistants". Essentially each faculty member has taken on the responsibility of training teaching assistants by having them start as in-class TAs. Fall 2013 saw the number of tutors dwindle to ten with only five tutors working in the lab. For Winter 2017 there are over 36 teaching assistants volunteering their time in the lab and in the classroom during regularly scheduled meeting times.

Some students require the support of one-on-one tutoring sessions. Through grant from Adult Education we have been able to hire one such tutor for Fall 2016, one for Winter 2017, and two for Spring 2017.

Faculty are providing more back-up assistance to students in being available more online, setting up chat sessions, rewarding students for posting to forums, available face-to-face in the lab as well as online during online times and utilizing online tutorials. Teaching Assistants have also been added into Catalyst to assist in the answering of doubts and questions online.

The lab accommodates students' needs for access to computers and the Internet. The lab is designed to promote peer-to-peer support.

To close this gap further, class size in the core class needs to be kept closer to the maximum of 40.

There has been a definite shift in the development of course materials from teacher by teacher to departmental groups. This was evidenced in the Catalyst Master Shells created for our new core courses of CIS 22A Beginning Programming Methodologies in C++ and CIS 22B Intermediate Programming methodologies in C++. CIS faculty, both full-time and adjunct, met and contributed materials to develop the shell. This will lead to more uniform skills learned by students by the end of these courses.

Continuance of the program offering CodeLab to programming students at no charge is important.

III.D Departmental Equity Planning and Progress: The CIS Department is offering a Lecture series.

We are contributors to the STEM initiative.

We have CIS clubs with CIS faculty as advisers. Assessments of SLOs (e.g. SLOAC for CIS21JB_SLO_1) "From this experience, it was observed that if students were actively learning and felt a common bond with each other. . ., they tend to encourage each other and be more likely to succeed. "

Fall 2016 was the first offering of CIS 40 Introduction to Programming in Python. This class is aimed at the non-computer science major. It well serve as an excellent starting point for targeted

groups and all who are less comfortable around computers and with applying problem solving skills. This course will serve to prepare students to be successful in the computer transfer path who are required to complete either CIS 22A or CIS 36A.
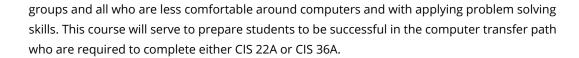
For Spring 2017 we hav been able to hire a mentor with Strong Workforce monies. The mentor has begun quest to find speakers from local IT companies who are themselves representative of our targeted groups. In addition, the mentor is reaching out to schedule site visits to the companies and endeavoring to establish internships for our students. It is hoped that these monies will continue for 2017-18 so that the efforts can be expanded and perhaps also focus on specific areas such as Security.

We are investigating the feasibility of becoming part of a LinC program.

IV.A Cycle 2 PLOAC Summary (since June 30, 2014): One of 15 Program Level Outcome statements has been assessed since June 30, 2014 = 7%

IV.B Cycle 2 SLOAC Summary (since June 30, 2014): 21 of the 112 SLO statements have been assessed since June 30, 2014 = 17%

V.A Budget Trends: CIS gets the FTEF that we can schedule classes for. Since the State has allotted the College a bigger budget and since the Business/CS/AppliedTech Division enjoys an increasing enrollment, budget has not been the deciding issue. For us in CIS, the deciding issues are good instructors, adequate support for our students, and availability of classrooms with computers for each student.

However, we have trouble with first offerings of cutting edge courses since these often fail to meet the minimum of 20 at first. Then the certificate is not attainable for the student since the class has been canceled. In addition, the lead time for new curriculum prohibits us from being "cutting edge". We have found a solution for Spring 2017 by combining funds received from Strong Workforce along with re-purposing CIS 82Z Current Topics class as Cloud Security. We hope to be able to do this for one course for each quarter for 2017-18. Of course, the difficult part is to advertise the "Cloud Security" course when it cannot be listed as that in the schedule. Hopefully students will learn to look at CIS 82Z offerings for cutting edge classes.

V.B Funding Impact on Enrollment Trends: 1) For our transfer students, our core classes are over-crowded and students must often wait between taking sequential courses.
2) We are restricted in the number of cutting edge courses we can offer for those wishing to improve the technical skills in their quest for employment or expanding their career options.
3) Too few classrooms equipped with computer for each student.

V.C.1 Faculty Position(s) Needed: Growth

V.C.2 Justification for Faculty Position(s): CIS Department wishes to grow its core transfer program while simultaneously adding courses focused on cutting-edge topics. Two new faculty positions are needed. Ideally, each full-time member needs to be capable of teaching our core transfer courses while bringing to the "table" the ability to teach courses in one of our higher academic and/or career enhancement areas.

Since 2012-13 and our department enrollment has grown by 3686 students or 92 sections of 40 students each. The number of full-time faculty during this same period has grown by 2.2 which equates to approximately 20 sections!

In addition we have created new certificate and new area: security. Furthermore, we would like to add ITIS CSU Transfer degree.
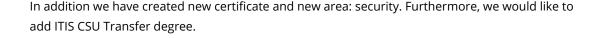
The area most pressing is Security program which was begun in 2014-15. For the academic years of 2014-15 and 2015-16, there have been 868 students enrolled in Security courses. There is a great need for this expertise, but a full-time instructor poised to push for a solid security program is needed. For 2016-17, there will be no full-time instructor teaching most of these cutting edge security courses.

V.D.1 Staff Position(s) Needed: Replace vacancy

V.D.2 Justification for Staff Position(s):: Instructional Associate is needed to replace a vacancy due to a retirement in December, 2013. The person needs to be well-versed in writing C++, Java, and python code in order to assist our students in the lab.

Survey indicates that students wish for more support.

V.E.1 Equipment Requests: Over $1,000

V.E.2 Equipment Title, Description, and Quantity: 1) Camtasia & Snagit by TechSmith on each computer in AT 203B and in 5 classrooms (AT 203, 204, 205, 311, and 312).
2) Computer in AT 203F cloned as computers in lab
3) PolyCom phone to allow dial-in access to the meetings in AT 203F.
4) Each CIS Faculty member's office desktop computer needs parallel software to software on computers in AT 203 and in the classrooms. Office computers need direct access to AT 203 server.
5) Each CIS Faculty member needs a laptop in addition to a desktop. The laptop needs software in parallel to software used by students in lab and classrooms
6) 3D optical facial recognition camera for Windows 10 hello
7) Smart boards for the classrooms
8) A second overhead projector in AT 204, AT 205, AT 311, and AT312
9) Faster login, desktop initialization and opening of apps on lab computers.

V.E.3 Equipment Justification: 1) Allows capture and immediate editing of lecture with code development for later viewing by students. Several enhancements list such issues as "flipping" the classroom more and the fact that students need to work on lab assignments during class face-to-face time. Having videos there for students to review would speed up lecture time and allow for more one-on-one time during class.

2) Computer in AT 203F cloned as computers in lab. With the growth in the number of students our lab is often noisy and crowded. instructors were assisting students in AT 203B but this needs to be reserved as a preparation area for adjunct faculty. The solution is using CIS 203F for instructors to hold sessions with individual or small groups of students. This necessitates the need for computer in there. This speaks to equity as well since it is the at-risk students who are the least likely to have their own laptop to use during conference with instructor.

3) PolyCom phone to allow dial-in access to the meetings in AT 203F. There is only a 30 minute period during the day when no faculty areteaching. Due to the three CIS clubs with meetings on Fridays, faculty are busy attending these meeting as advisers. PolyCom Phone would facilitate some faculty being able to join meeting from off campus allowing more creative scheduling of department meetings times.

4) There is little time before or after the class to prepare for the lecture or to post code created

live during the class.

5) Instructors need to assist students in the lab, in AT 203F, and, in addition, with all assignments being submitted online (rather than students printing and submitting hard-copy) the time it takes to correct programming labs has more than doubled. This means correcting anywhere and everywhere one has the opportunity. On the other hand choosing a laptop over a desktop is not ergonomically a good idea since faculty are spending more time than ever in front of computers correcting work.
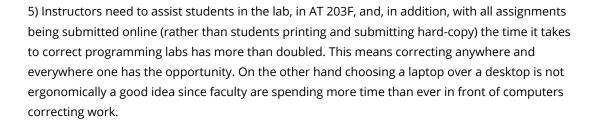
6) Face recognition camera for Windows 10 for students in security classes to use and for demonstration purposes. Having current hardware available for student usage is a key way to keep our program viable and students engaged.

7) Many of our students experienced smart boards in their high schools but not here at De Anza even in the Advanced Technology Building.

8) The issue of trying to simultaneously show code along with slides or other means to explain the rudimentary background information still exists. Ideally this is accomplished with two projectors in each classroom.

9) Login time, desktop initialization, and opening Visual Studio take an unacceptable long amount of time. It makes faculty and students alike use their own laptops in preference to lab computers. This would not be a problem except that the larger screen is much better for collaboration. If speeding up login is not possible then means to use monitors with laptops easily needs to be provided for.

V.F.1 Facility Request: 1) Two more smart classrooms between the hours of 6:00 - 8:00 pm; one more classroom during the daytime (9:30 - 5:20 pm).
2) More electrical outlets are needed in the lab
3) A Mac classroom equipped with a Mac computer for each student to use
4) Re-design for AT 205
5) More areas with computers for students in online classes to take midterms and finals

V.F.2 Facility Justification: 1) Currently we are using the area at the back of the Lab (AT 203) to hold classes. This and all other options are exhausted during several times of the day especially between 6:00 pm to 7:50 pm.

CIS program is growing each year. This growth can only be sustained if we can offer more classes from 6:00 pm to 7:50 pm. A focus group assessment with students conducted Winter 20115 revealed that the later time frame, 8:00 - 9:50 pm is extremely difficult for our students who depend on public transportation.

The availability of a classroom often is the deciding factor of whether or not another class section can be added to handle the over-flowing wait-lists.

2) A survey of all current CIS students was conducted at the end of Winter quarter 2016. 47.4% of the 212 respondents listed too few electrical outlets in the lab as an issue. There needs to be an electrical outlet at each station dedicated to allow student to plug in their laptop. 61.5% of the 212 respondents to survey indicated they use their own laptop in the lab. Currently there is a problem when some students unplug the lab computer so they can plug-in their computer and then they
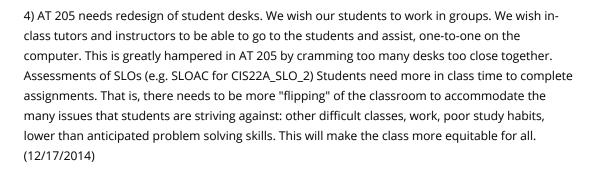
fail to plug the lab computer back in upon leaving.

3) CIS 55 iOS Development is a popular class but they have no classroom equipped with Mac computers. The lecture is held in a small classroom without computers and then students must switch to AT 203 for working with Macs in there. This is not conducive to keeping students engaged nor to making them feel a part of a small community that is learning very sought after skills.

4) AT 205 needs redesign of student desks. We wish our students to work in groups. We wish in-class tutors and instructors to be able to go to the students and assist, one-to-one on the computer. This is greatly hampered in AT 205 by cramming too many desks too close together. Assessments of SLOs (e.g. SLOAC for CIS22A_SLO_2) Students need more in class time to complete assignments. That is, there needs to be more "flipping" of the classroom to accommodate the many issues that students are striving against: other difficult classes, work, poor study habits, lower than anticipated problem solving skills. This will make the class more equitable for all. (12/17/2014)

5) The best time for students to take exams is in the evening. Presently all classrooms including the back of the Lab are are filled with classes and, thus, the lab itself is divided up to accommodate proctored tests. However, we still run out of suitable areas with computers for each student.

V.G Equity Planning and Support: Offer a linked course between mathematics and a beginning programming course. Assistance is needed in setting up such a program starting from the point of what discipline would be willing to work with us and how do we ascertain what pairing up of courses would result in the best outcome for students.

Continue and expand one-on-one tutoring.

Continue offering CodeLab online tutorial free to all our students.

Continue to search for low or no-cost textbooks. Some examples presently in place:
->Ron Kleinman: The students get the course notes, which is what I exclusively teach from, and for the rest (Unified Modeling Language artifacts, OO terminology, Design Patterns) they type the terms into Google and follow up on the results. I occasionally supply specific URL's (ex: to the free PDF of the entire "Gang of 4" Design Patterns book).
->Clare Nguyen: For Python 40 students get the course notes, which is "what I exclusively teach from" (and is available for anyone who wants to teach CIS 40). For students who like to have a book, we use a free textbook (Downey's Think Python, under the Creative Commons license) that is widely popular, such that there is a Codelab exercise version for this book, so that I can use Codelab for quizzes.

V.H.1 Other Needed Resources: Stipend for the development of alternatives to textbook for core courses. This stipend should be equivalent to the average/median salary paid for one course taught by full-time faculty as overload. This stipend maybe shared if 2-3 faculty wish to collaborate.

V.H.2 Other Needed Resources Justification: The department conducted an informal survey among all students registered for CIS 22A Beginning Programming Methodologies during Fall 2015. Only a small percentage (<25%) actually purchased the text.

Enhancements of assessments (e.g. SLOAC for CIS 18C) suggest the weekly assignments and quizzes kept everyone on task and built students' knowledge consistently. However, students need to learn the skill of reading and assimilating technical material from a source such as a textbook.

V.J. "B" Budget Augmentation: OK Teaching Assisting program needs B-budget support.
Our volunteer teaching assistants are performing a much needed service. Fortunately, we are able to provide the ones working multiple quarters with parking permits but we would appreciate being able to award them with perhaps more social get-togethers, best practices in tutoring computer science students presentations, etc.

Raising female retention in computer science program
There seems to be a growing number of females enrolling in CIS courses. To retain these special gatherings with/without speakers, food, etc.

Speaker seminars for particular areas of interest
Sukhjit Singh has been able to expand the Project Management program by offering evening and weekend symposiums with special presentations from industry and refreshments.

Printing
'B' budget needs to be expanded to cover the expenses for the following:
• Printing of tests including quizzes, midterms, and finals
• Ability to offer students "spur of the moment" handouts
• Students need to be able to print code for working in groups, desk checking, and in instructor discussions.

V.K.1 Staff Development Needs: • OK Canvas training.
• Assistance with creating courses compliant with the OEI rubric
• Equity training that the department members could take together.
• Assistance in becoming part of LinC program

V.K.2 Staff Development Needs Justification: For the Online Educational Initiative pilot program high demand Associate Degree for Transfer (ADTs; AA-T/AS-T) courses were chosen based on their inclusion in ADTs, student demand data, and course fulfillment of transfer area requirements. CIS Department has 5 C-ID courses with two more (CIS 36A & 36B) submitted for approval. No Computer Science courses were chosen for the OEI pilot program but we would like to be among the colleges offering these courses in the second round. In Winter 2015 we offered 23 sections of these C-ID courses with (See document on TracDat "Growth of C-ID classes.xlsx") total enrollment of 899. In Winter of 2016 this increased to 29 sections for a combined enrollment of 1087. This data is from Year to Year Enrollment Report -- Estimated WSCH - By Section released by FHDA Institutional Research and Planning on 1/06/2016.

The department is anxious and willing (department meeting minutes of 1/13,2016) to move from Catalyst and individually chosen sites to align ourselves for OEI acceptance. We need the opportunity to use this course management system and minimal training (online tutorials should suffice). Since few of us are experts at creating courses to be delivered online, we would progress with authoring OEI accepted courses if there was a consultant to help us with this.

Equity training based on our particular subject area is needed. Based on the program review data

(http://deanza.fhda.edu/ir/Program_Review_2014-15/CIS.pdf) we have made little progress in closing the target vs. non-targeted .

Close inspection of the targeted population by ethnic group yields some interesting information. The Filipino group grew in numbers from 87 in 2012-13 to 255 in 2014-15. Their success grew from 53% (below acceptable) to 65%. Likewise, the Pacific Islander success rate jumped from 50% to 76% as their enrollment approximately tripled. Subjectively considering these statistics would sense that sense of community plays an important role. While our teaching assistants program and and three CIS clubs do build a sense of community for many of our students a Linc program would reach out more directly to our students from the targeted groups.

V.L Closing the Loop: OK In addition to meeting target on all course level and program level outcome assessments, two main methods for assessment:
1) Increase success rates
2) Increase number of certificates and degrees awarded
3) Closing the gap between targeted and non-targeted groups

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Last Updated: 03/24/2017

APRU Complete for 2016-17: Yes

#SLO STATEMENTS Archived from ECMS: 21