

**Las Positas College**  
**PROGRAM PLANNING UPDATE (Instructional) AY 2015-2016**

<b>Name of Program</b>	<b>Division</b>	<b>Author(s)</b>
Computer Studies (CIS/CNT/CS)	STEMPS	Moh Daoud, Debbie Fields, John Gonder, LaVaughn Hart, Colin Schatz

**INSTRUCTIONS:**

1. This Program Planning Update covers the academic years 2012-2013 and 2013-2014.
2. The planning should be for the academic year 2015-2016.
3. Use the Save As feature in Word to save this template with your program name, so that you do not overwrite the original template. Please use your program's catalog rubric and this format when naming your document:

Rubric INS PPU 15\_16

e.g., ESL INS PPU 15\_16

4. If the document displays in large type with only File, Tools, and View tabs at the top of the page, select **View, Edit Document**. You will then be able to type where it says "Click here to enter text" and you will be able to click on the check boxes to select them.
  5. In each section, click in the box under the instructions and fill in your information. The box will expand as you type. If a section is not pertinent to your program enter N/A in the box; do not leave it blank.
  6. When you have completed the form, run the spell-checker (**click inside the text in the first box**, then click on the Review tab and find Spell-Check in the far left corner of the ribbon).
  7. Please address your questions to your Program Review Committee representatives or the PR Chair Karin Spirn. Concerns, feedback and suggestions are welcome at any time to PRC representatives or co-chairs.
  8. Instructions for submitting your Program Planning Update will be available at the start of the fall semester.
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**I. STUDENT LEARNING OUTCOMES**

Review of academic years 2012-13 and 2013-14

**SLO Assessment Review**

Review your program's SLO assessment results through spring 2014 and respond to the following questions.

1. Discuss how assessment results indicate success in student learning. Identify results that indicate a need for improvement.

In 2013-2014, assessment data for CIS shows that student achievement of stated learning outcomes rose from 84% in the Fall to 86% in the Spring. CNT and CS will be updated within the next two weeks. CNT-- Assessment results are still being organized and evaluated. Preliminary indications are that students completing the semester do well. Given that these classes are oriented to career advancement, a significant number of students experience 'success' by their definition by getting a job, a better job, or increased responsibilities as a result of our classes. This unfortunately means they either drop or do not do as well as they would have from a grade point of view. We have, however, succeeded in getting them a better job.

2. Discuss how distance education courses assessment results compare to face-to-face courses, if applicable? (Respond to this question if your program has distance education courses.)

In CNT, only one course has been offered in both online and face-to-face modalities (CNT 7401). This course is cross-listed with CS 41. The modality does not seem to be a factor in student success in these courses. Overall drop rates seem to be somewhat higher but for those students that complete the course, the success rate is comparable. Student retention follow the school result, which is excellent in comparison to face-to-face classes.

CIS offers many courses in online, hybrid, and completely face-to-face modalities. Again, drop rates in some online courses are higher. However, there isn't a consistent pattern across in any course that would indicate that the modality in which the courses were offered had a significant impact on student success.

In CS, except for the cross-listed course mentioned above, there are no "test cases" of courses with multiple sections in different modalities (face-to-face vs online).

3. Discuss how your discipline, or someone in your discipline, made changes in pedagogy as a result of SLO assessment results.

Our full-time CS instructor, based on past SLO assessments, along with student feedback and in-class data collected during each semester, has evaluated the difficulty of specific courses, topics and assignments. Using this, he has adjusted the time spent on particular topics -- for instance, function definitions in CS1 -- and eliminated or adjusted standard course assignments that were unreasonably challenging for students.

CIS migrated all application classes to Office 13 in Spring 14. All text books were changed and in several course new online resources were added. We will be reviewing SLO data to determine if the change in text and/or addition of online resources has a significant impact on student learning.

In CNT, an examination of SLO performance as well as student surveys clearly indicate that any and all increases in the flexibility of class operations as well as improved and clarified instructional videos are useful modifications for CNT classes.

4. Give an example of a change in the number of units and/or lab hours based on assessment data, if applicable.

N/A

5. Did your program discover the need for additional resources (for AY 2015-16) based on the assessment results? YES  NO

If yes, please explain.

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### SLO Process

1. Describe how your program reaches consensus when writing student learning outcomes that are used in multiple sections.

My program offers only one section of each course.

CNT: Only one section of each course is offered in a semester.  
CIS/CS—for courses with multiple sections, the lead instructor for the course develops the SLO, requests input from other instructors which teach the course, and enters the final SLO into eLumen.

2. Describe how your program reaches consensus when developing and evaluating assessment results for student learning outcomes that are used in multiple sections.

My program offers only one section of each course.

CNT: Only one section of each course is offered in a semester.  
CIS/CS—data is requested from all faculty teaching the course and from institutional research. The lead faculty collects the data and enters it into eLumen.

3. What methods does your program use for documenting SLO related discussions? Check all that apply.

Program emails

Program meeting minutes/agendas

Blackboard/other website

Other (please describe):

CIS/CS/CNT faculty have informal discussion related to how students are succeeding in our courses; we discuss changes in texts, software, and scheduling and the impact that these may have on our students. As an example, in Spring 2011, the three faculty who teach CIS 54 selected a new textbooks and online resources for the course. Textbooks were reviewed by all three instructors as well as our instructional assistants who work with students in the computer lab. A new textbook and publisher provided online resource was

adopted for Fall 2011. Throughout the fall semester, the instructors discussed issues with the online resource, problems that students were having with the text, and issues that were identified when using the text for both online and face-to-face modalities. It became clear that the text and online resources were not meeting the needs of the students (nor the instructors). By October 2011, the three instructors began reviewing texts again. The instructors determined while the publisher provide online resources for another textbook were not usable, the textbook itself was of much higher quality and provide a much better resource for student learning. The new textbook was adopted for Spring 12. This type of collaboration occurs frequently between the instructors in the CIS/CS/CNT programs. While informal, these discussions of what is working, what isn't working, and how to make changes that will impact student learning are the most critical component in our efforts to improve student success.

## II. PROGRAM ANALYSIS

Review of academic years 2012-13 and 2013-14

Review the student data provided by the Office of Institutional Research and any additional data your program has collected. Then respond to the sections below.

### A. Data Review

If applicable, summarize any **changes** in your program's data since the Annual Program Review of 2011-12 or observed significant trends that will affect program planning or resource requests.

**NOTE:** Only include changes that affect student learning, program planning or resource requests.

CNT--Two items of interest are:

1. Although the total headcount seems to have declined from 2010 to 2014, the number is not meaningful by itself because the total number of classes has declined and has not been constant. The enrollments per unit offered might be a useful number. Given that some classes have shifted to being offered biennially, rather than annually, this is also a factor in usefully evaluating numbers like this.
2. The shift from older students to an increased 25-29-year-old demographic coincides with a shift from a wave of layoffs around 2010 to a wave of career improvement or re-training students who have some employment and desire current training and skills improvement and preparation for more certifications.

### B. Program-Set Standard for Successful Course Completion Rates

Your program-set standard for successful course completion rates (i.e., number of grades of 'A', 'B', 'C', 'CR', and 'P' divided by total grades) is calculated by averaging successful course completion rates for your program over a five-year period and then multiplying that result by 95%.

In order to determine if you have achieved your program-set standard for successful course completion rates for a given year (e.g., 2012-13), you will need to assess if your program met or

exceeded 95% of the previous 5-year average (i.e., 2007-08 through 2011-12) for your program; these calculations are done for you (*see links below*).

1. What was your program-set standard for successful course completion rates in 2012-13 and 2013-14?

	Program-Set Standard for successful course completion	Did you meet your program-set standard? (Yes or No)
2012-13	<a href="http://tinyurl.com/mmfwgfe">http://tinyurl.com/mmfwgfe</a>	CIS: No CNT: No CS: No
2013-14	<a href="http://tinyurl.com/q6dah55">http://tinyurl.com/q6dah55</a>	CIS: Yes CNT: Yes CS: No

2. If your program did not meet your program-set standard, discuss possible reasons and how this may affect program planning or resource requests.

Firstly, we note that the shortfall in all cases below the program-set standard is only 1% to 2%. For CS, recent years have seen an increase in sections and the introduction of new courses. Between the introduction of more advanced or elective courses and a greater influx of new students, CS courses as a whole have included students with less preparation. These results will be used to reconsider planning of topics and activities in newer courses, and to prompt examination and dialogue among multiple faculty about student experiences in our intro course, as well as potential alternative opportunities for “on-boarding” novice students (e.g., non-transfer oriented intro courses, electives that don't require prior experience).

### C. Curriculum Review

1. Review your program’s current curriculum. If applicable, describe any internal or external impacts which will affect your curriculum plans for 2015-16.

The ADT for CS needs to be developed. There is a significant issue with the TMC for this area as our courses do not fit into the unit limit for the degree. Change our curriculum to conform to the TMC would significantly impact the program’s ability to provide students with the learning environment that promotes student success and could jeopardize articulation agreements with UCs and other 4-year institutions.

CIS and CNT are currently reviewing curriculum to determine alignment with model curriculum being developed for ICT.

Discussions have begun with Lawrence Livermore National Labs on the development of a cohort program for a “Computer Information Technologist” program -- the name is still under discussion -- that would encompass CS, CIS, and CNT courses. Development of this program may require modification of existing courses and/or new courses.

In CNT, An increased emphasis on security and cloud computing in the workplace indicates a need to respond with an increased emphasis on these in the curriculum.

**D. Human Resources**

1. Have there been changes in the number of full-time or part-time faculty associated with your program since the Annual Program Review of 2011-12? If yes, briefly describe the changes.

We have hired two new part-time faculty members in Computer Science in the last year.

2. Have there been changes in the number of full-time or part-time classified staff associated with your program since the Annual Program Review of 2011-12? If yes, briefly describe the changes.

No

3. If applicable, describe how the changes indicated in 1 and 2 have impacted student learning?

If we hadn't hired these two part-time instructors we could not have offered several CS courses over the last two years. It is critical that we continue to recruit qualified CS instructors. In part due to the structure of the Bay Area / Silicon Valley employment market, it is extremely difficult to find individuals who meet statewide minimum qualifications in Computer Science that are available, willing and able to teach these courses.

**E. Other information pertinent to the program**

There is a continued lack of a consistent source of sufficient line item funding which impairs our ability to operate our programs optimally, particularly with regard to upgrading of equipment needed for CNT courses.

With the ending of Measure B funding for instructional equipment, we are concerned that moving forward, there will not be funding to upgrade and maintain the computer labs necessary for CIS/CNT/CS program. Campus IT has been extremely supportive and helpful in maintaining computer labs but we are concerned about how needs will be met in the future.

Lack of a college webmaster to assist in keeping discipline web pages up to date and to keep the college's web site updated, informative, easily navigated, etc. needs to be addressed. Currently a few people have the ability to "contribute" to web pages; however, there is no consistent approach to how web pages will be maintained, developed, checked for accuracy, etc. The LPC web page is static and not particularly user friendly, and lacks the degree of dynamic design and content that contemporary web users have come to expect. To maintain a vibrant and consistent web presence, disciplines need to have the ability to work with a professional web master who can provide guidance and assistance in creating and maintaining discipline specific web pages.

**III. PLANNING**

**A. Planning Update**

Summarize your program's plans, initiatives, and objectives accomplished since the Annual Program Review of AY 2011-12 (include accomplishments for the academic years 2012-13 and 2013-14).

CNT—Will be re-evaluating assessments in conjunction with student survey data as to the relevance of the curriculum and SLOs as compared to actual industry based desirable qualifications for jobs.

**B. Program Planning for AY 2015-16**

As appropriate for your program, please address each of the following areas. For each area, describe your program's plans, initiatives, and objectives for the academic year 2015-16. Focus on how planning will impact student learning or the student experience at Las Positas College.

SLO assessments. NOTE: 100% of courses in your disciplines should be assessed a minimum of once every two years. As a guideline, each program should be assessing 25% of its courses every semester.

1. How does your program plan to use assessment results for the continuous improvement of student learning? Examples might include (Your responses may vary.):
  - changing number of units/lab hours
  - changing pedagogy/curriculum
  - changing assessments

In CS, based on broader disciplinary considerations (e.g., transfer institutions' curricula, industry trends), we plan to develop and potentially offer new courses covering Android application development and modern scripting languages like Python and Ruby.

In CIS, courses will be updated to align with transfer model curriculum and as appropriated submitted for C-ID approval. Faculty are working closely with BACCC to review recommended 2-associate degree for computer support technician and review our curriculum to insure that student are learning what is needed to success in the job market.

In CNT, we are:

1. implementing updated curriculum developed by NSF in conjunction with industry sources in a number of classes
2. We are using the Netlab system to provide increased online labs
3. Coordinating and crosslisting classes with Chabot to provide more classes to students with the same FTEF.

2. Have your assessment results shown a need for new SLOs? YES  NO

If yes, in the table below, state the number of courses in your program and estimate the percentage of courses for which your program will write new SLOs.

Number of Courses	Estimated Percentage for which new SLOs will be written
Click here to enter text.	Click here to enter text.

3. What percentage of courses will your program assess in the next academic year (2015-16)?

CIS: We have assessed 100% of our courses for over the last 2-3 semesters. For 2015/16, we plan to assist at least 80% of the courses that we offer.

CNT: To insure that we have assessment data for at least two years, 100% of CNT courses offered will be assessed.

CS: To insure that we have assessment data for at least two years, 100% of CS courses offered will be assessed.

However, not all CIS/CNT/CS courses are offered every year -- some are only offered every 3-4 semesters, and with the reduction in available FTEF, some courses have not been offered in over 2 years. As a result, it is possible that not all Computer Studies courses will have assessments

4. In order to budget to pay part-time faculty to work on SLOs during the academic year 2015-16, estimate the number of part-time faculty in your program and the percentage of them who are likely to participate in the SLO process in 2015-16.

Estimated Number of Part-time faculty	Estimated Percentage who will participate in the SLO process
13-15	15%

4. Curriculum

- a. Considering the criteria of relevance, appropriateness, achievement of course objectives, currency, and future needs and plans, will your program be making any changes to **existing** curriculum to address any of these criteria? If yes, please describe the changes and your program's reasons for the changes. Please provide any data which supports your program's reasons for the changes to your curriculum. Include a discussion of how the changes will improve student learning.

Because of the nature of the courses offered in our programs, we are always revising our curriculum to address industry standards and workplace needs. Although these revisions do not always result in the new for modification to course outlines, faculty regularly and routinely update their course presentations to include the latest technological innovations and changes in industry standards. For example, last spring all CIS courses were updated to address the latest release of Microsoft Office, e.g., Office 2013. Whenever there is a change in the programs that we teach in our courses, textbooks, online resources, assignments, testing, projects, etc. are reviewed for relevancy, currency, and accuracy.

Certification classes in CNT -- e.g. CNT69, 62A, etc. -- will continue to be modified each year in response to changes in the objectives of the associated certification test, e.g. CompTIA Security+, Cisco CCNA, etc.

- b. Will new curriculum be submitted to the Curriculum Committee for the academic year 2015-2016? If yes, please describe briefly what new curriculum is planned and the rationale for the new curriculum. Please provide any data which supports your reasons for the new curriculum. Include a discussion of how the changes will improve student learning.

It is likely the at least one new course will be developed for the cohort project with LLNL. Additional, there may be a need to modify several course outlines to insure that they address specific content areas.

We are also reviewing the model curriculum being developed for ICT and will be determining which course outlines will need to be modified to address the model curriculum.

#### 5. General Program Planning

Use this area to describe any program plans, initiative, or objectives your program wishes to accomplish in 2015-16 and their impact on student learning or the student experience. Focus on what the plans are and how they are to be accomplished (not resources needed).

There is a current, ongoing initiative to develop a local Associates degree for a cohort program in conjunction with LLNL. This program will focus on specific job skills and workplace competencies needed for employment in local companies and labs.

We are also actively involved with the Middle College program under development with the three Tri-Valley K-12s. We are working with the Middle College Advisory Board to identify career pathways and courses within our programs that would support those pathways.

#### IV. Resource Requests for AY2015-16

Complete all areas that apply to your program's resource needs for 2015-16 (**not all areas apply to all programs**).

For each request, in the rationale section:

- Describe how meeting this request will improve student learning or the student experience.
- Provide any data or evidence which supports this request.

##### A. Enrollment Management

1. Request: New FTEF. Indicate amount being requested.

For 2015/16, a minimum of .7 FTEF is needed to support growth in the number of students enrolling in CS.

2. Rationale for request(s).

We need to be able to expand our offerings in CS and to offer more sections of our entry level courses (CS 7, CS 1, etc). To meet student need for CS courses, we have reallocated some of the FTEF allocated to Computer Studies. However, moving forward, we cannot continue to take from one program in order to add to another. Additional FTEF is needed.

**B. Human Resources**

1. Request: New or replacement faculty position(s).

We have requested a new full time position for CS for Fall 2015. The position is ranked 6<sup>th</sup>.

2. Rationale for faculty position request(s).

The Computer Science discipline was reduced from 2 full-time instructors to 1 full-time instructor beginning Spring 2004. Beyond the difficulty of finding part-time teaching staff, the persistence of Computer Science as a "one person" discipline, even while enrollments rise, has other negative impacts on student experiences and student success. It gives students less consistency and stability in the teaching they are exposed to, provides fewer instructor office hours across the discipline as a whole, and gives the single full-time instructor no natural collaborators in curriculum development and similar efforts in a field subject to rapid change.

Computer Science as a discipline is also implicated in various potential longer-term partnerships or arrangements with community or regional institutions, including Lawrence Livermore National Labs and San Ramon Valley Unified School District. Endeavors of this nature will both increase opportunities for course offerings in Computer Science and further spread thin the resources of the current single full-time instructor.

3. Request: Classified staff position(s) (for example, new or replacement classified staff position(s) or increasing classified hours/position level).

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4. Rationale for classified staff position request(s).

Click here to enter text.

**C. Financial**

1. Request: Maintenance of, or increase in, existing program budget (e.g., for supplies, etc.).

CNT: \$5,000 is needed per year for ongoing support of required software and hardware maintenance and membership in EMC, Cisco, and VMware Academic partnerships are needed to meet the needs of the various classes.

CIS needs to be able to maintain ongoing contracts with vendors such as Microsoft Academy, Oracle Academy, and Certified Internet Webmaster so that we can continue to offer classes and continue to access the student learning resources provided by these vendors. The yearly cost is approximately \$5,000.

2. Rationale for financial request(s).

While we have a small departmental budget, it does not cover the costs of the contracts, software, hardware maintenance and memberships that are described above. Without these, we cannot continue to offer the courses that we currently are offering. Technology is constantly changing and our students need to have access to the latest technology to be competitive in the marketplace. The certifications and job training that students obtain are only useful if they entail training with and on the current software and hardware that will be used in the workplace.

**D. Technology (software only – discuss hardware in section E)**

1. Request: Upgrade existing software or purchase new software.

CNT: FTK Forensics Toolkit, Netscan tools pro, are ongoing costs of \$1500 per year.  
CS: Our Computer Science courses use a variety of programs, primarily free, that are regularly updated by their respective publishers and/or open-source communities.

2. Rationale for technology request(s).

These are required to conduct the corresponding CNT and CS courses.

**E. Facilities, Equipment (include technology hardware), and Supplies**

1. Request: Renovation or upgrade of existing facilities or new facilities.

CNT: A classroom with workbenches for computer repair and maintenance would enhance the student success in several of our CNT courses.

CS: A mobile Mac lab consisting of 30+ Mac laptops that could be used for our mobile applications development course. Currently we have 20 outdated Mac laptops. Because these laptops are outdated, we cannot offer our mobile applications development course at this time. We are working with campus IT and looking for grants to help fund the laptops and a mobile cart so that we can offer the mobile applications development course.

CIS/CS: It is hoped that in fall of 2015, CIS and CS along with Math will have a new lab available in building 700. It is our understanding that this lab will be built out in part of the existing building 700 and that it will be primarily for the use of these three programs. Without this lab, we will not have computer lab space available to offer courses to our students. The current number and quality of computer lab classrooms is not sufficient to meet the needs of our programs and to also address the needs of other disciplines that have added lab components to their curriculum but have done nothing to ensure that lab space is available.

2. Rationale for facilities request(s).

CNT: The existing desks in 804 are not designed for computer repair work. They are too low, too narrow, and there isn't enough room to work around the production computers that are used for applications courses. Having workbenches that could be used by students in our A+ program (CNT 51A/51B) would enhance the student success and provide for more real world practice experience for students to practice their hands-on skills.

CS: Currently we have 20 outdated Mac laptops. Because these laptops are outdated, we cannot offer our mobile applications development course at this time. We are working with campus IT and looking for grants to help fund the laptops and a mobile carts so that we can offer the mobile applications development course.

CIS/CS: Without this new lab, we will not have computer lab space available to offer courses to our students. The current number and quality of computer lab classrooms is not sufficient to meet the needs of our programs and to also address the needs of other disciplines that have added lab components to their curriculum but have done nothing to ensure that lab space is available.

3. Request: Upgrading of existing equipment or purchase of new equipment.

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4. Rationale for equipment request(s).

Click here to enter text.

5. Request: New supplies

Click here to enter text.

6. Rationale for supplies request(s).

Click here to enter text.