[Plans for Computer Information Systems / Computer Science / Multimedia](#) >> 2017 - 2018 Computer Information Systems CHC Instructional Annual Plan 2017-2018

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Instructions

The annual plan provides the opportunity for each program to update their four-year action plan and requires each plan to provide the current status on their course outcomes assessment, progress on effectiveness measures, and progress each program has made on achieving their goals and objectives.

Please respond to the following questions. Please consult the Integrated Planning and Program Review Handbook for detailed instructions, the timeline for due dates, and the schedule for the four-year plan schedule.

1. Mission

Updating this Question is <u>Optional</u> on the Annual Plan!
a. Tell us your unit's mission: Provide a mission statement for your unit that clearly and succinctly describes your unit's purpose, idealistic motivations, and change it hopes to inspire.
b. Alignment with the college Mission: **Rubric Item** (Mission Alignment): The Mission of Crafton Hills College is to advance the educational, career, and personal success of our diverse campus community through engagement and learning. **In what ways does your program advance the mission of the college?**
A. VISION
The Vision of the CHC CIS/CS Discipline is to be the college of choice for students who want to acquire the knowledge and skills needed to transfer to a four-year institution with a CIS/CS degree and/or to secure an IT job as the result of acquiring the most current IT knowledge and skills. In order to achieve this we must:

- Grow our courses offerings

- o We intend to attract more students to our program through outreach and marketing. We want to increase the number of courses that we offer each semester, as well as add new courses in order to meet the demands of the workforce. We also want to increase our online / hybrid course offerings to meet the needs of different students.
  - o Specifically for the CS program, we want to include more sections of introductory CSCI classes so that the advanced courses maintain a student population of 25 or more students.
  - o To grow our program, we must have at least three full-time faculty members.
- Provide a robust digital media program, focusing on identified high-need career and transfer pathways
  - o Within four years from now, we expect to have a full-time faculty member who specializes in digital media, as well as A.S. degrees and certificates that are well aligned with transfer institutions and the industry, respectively.
- Increase transfer rate and the completion of AS-T degrees
  - o We aim to be the program of choice for transfer-oriented students majoring in CIS/CS. By having clear transfer pathways between our program and transfer institutions, students will be able to establish their transfer plans and complete their coursework within a reasonable time frame.
- Offer courses in high growth areas, including software development, networking, and database administration
  - o We plan to add new courses in network management and system administration (wireless, security, server courses), as well as courses in mobile app development and systems analysis. We also want to regularly offer our database course, which we have not been able to offered for the past number of years due to budget constraints.
- Promote student success
  - o Our faculty members focus on supporting students in achieving their educational, career, and personal goals. Faculty members will continue to discuss how to improve student learning and how to help students transfer and enter the workforce. Faculty members will continue to learn about best teaching practices and resources available for helping students.

B. Alignment with the College's Mission and Vision

The CIS/CS programs are dedicated to the mission of advancing the educational, career, and personal success of our diverse campus community through engagement and learning. The CIS/CS students are actively engaged in the learning process. Knowledge and skills are developed through group discussions, skills-based projects, labs and hands-on tutorials. Recognizing the diversity of learning styles, the CIS/CS department has modified the course delivery options, to include hybrid and fully online courses as well as traditional face-to-face courses. The CIS/CS faculty members value academic excellence and the advancement of each individual as evidenced by our efforts to stay current, to improve student learning, and to offer students the courses they need in order to achieve their goals by providing new courses, certificates, and degrees that meet current and emerging workplace demands.

The CIS/CS faculty will continue to improve and enhance our curriculum in order to be recognized as the best program of choice for CIS/CS students who seek deep learning, personal growth, and a supportive faculty. The CIS/CS discipline will continue to examine the current

course offerings and research emerging trends in technology and teaching to determine which CIS/CS courses programs and services best meet the needs of both the transfer-focused and career-oriented students.

Mission:The mission of Crafton Hills College is to advance the educational, career, and personal success of our diverse campus community through engagement and learning.
Vision: Crafton Hills College will be the college of choice for students who seek deep learning, personal growth, a supportive community, and a beautiful collegiate setting.

Crafton Hills College values academic excellence, inclusiveness, creativity, and the advancement of each individual.

2. Description of Program

Updating this Question is <u>Optional</u> on the Annual Plan!
a. Organizational Structure and Staffing
b. Describe any activities in addition to instruction that you provide.
c. Describe any alternative modes of instruction and schedules of delivery: e.g.: online, hybrid, early morning, evening services.
d. **Rubric Item**: Describe how your curriculum is up-to-date and Needs-Based. Base the description on surveys, labor market data, transfer patterns such as GE, IGETC, CSU, AA-T, or AS-T, accreditation standards, and/or articulation agreements. Consider the results of your most recent curriculum reviews in this section.
e. **Rubric Item**: Attach your scheduling matrix to show when courses in your area are offered. Click here for sample!

A. Organization

The Computer Information Systems/Computer Science (CIS/CS) discipline is one of three disciplines within the BEIT (Business, Economics, and Information Technology) department under the Arts and Sciences Division. Our discipline offers courses in both CIS and CSCI (Computer Science). Our CIS courses span a number of specialty areas, including hardware, networking, graphic design, animation, web design, and programming, whereas our CSCI courses provide major preparation for students who plan to transfer to four-year institutions. The staffing of our discipline includes two full-time instructors, eight part-time instructors, one full-time lab technician, and hourly employees who staff the computer lab. One of our full-time faculty members has expertise in hardware and networking, whereas another full-time faculty member has expertise in programming and computer science. Adjunct faculty members provide additional expertise in areas such as web design and development, digital media, and hardware. Our courses are taught in up-to-date computer-based classrooms. Two of the classrooms (LADM 216 & 220) have 30 workstations, and the third classroom (LADM 101) has 35 workstations. In order to provide students with workforce relevant instruction, the course specific software applications and the classroom-based PCs must be kept current. Replacement costs for software suites, such as Adobe Creative Suite, Autodesk, and Microsoft office are included in each program review and subsequent annual plan goals and objectives as a top-level priority. Upgrading the CIS classroom computers, printers and video projectors is the responsibility of the CHC IT department. The District Information Technology plan calls for the replacement of the lab-based computers every three years. The computers in LADM 220 were updated in the summer of 2014, and the computers in LADM 101 and LADM 216 are now in their second year of use. It is anticipated that the LADM computer lab classrooms will be renovated starting in the

summer of 2015. The renovation of the CIS computer classrooms will include the installation of new computers, printers and video projectors. The three-year replacement cycle would resume thereafter. The discipline faculty remains current with emerging trends in computer hardware and software by attending conferences, reading professional journals and participating in online technical seminars.

B. Mission

The mission of the CIS/CS discipline is to support the educational, career, and personal success of CIS/CS students through hands-on learning and active engagement. In particular, the discipline

- prepares students for transfer to four-year institutions, and
- provides students the skills needed to succeed in a technologically dependent workforce

C. Whom We Serve

The CIS discipline serves students who are:

- transferring to four-year colleges or universities;
- obtaining a two-year associate degree;
- acquiring and/or updating the technological skills required to succeed in the workforce;
- seeking industry recognized certificates such as the Cisco Certified Network Associate (CCNA), Network+ certification, and/or the A+ certification.

Data provided by the CHC research department indicates that the CIS/CS courses service the same percentages of students as the college in terms of age. In terms of gender, the ratio of females to males in CIS course is lower than the college ratios. We are encouraged by the fact that the CIS courses have realized a slight increase over the past three years. In 2010-2011, the percentage of Females in CIS courses was 37% and in 2013-14, the percentage of females was 41%, which represents a 4% increase. The percentage of Hispanic students in CIS courses is 38%, whereas the percentage of Caucasian students in CIS courses is 47%, which is higher than the college average of 41%. Although our proportion of Hispanic students is lower than the college average, it has been steadily increasing over the last three years.

CSCI courses were offered the first time in the year 2013-14. Enrollment data shows that 12% of CSCI students are female, and 88% male. The percentage of females in CSCI courses is significantly lower than the college average of 53%. The CSCI courses service similar proportions of students as the college in terms of age and ethnicity. A lower percentage of women in CIS/CS course is a recognized norm; and while this may be the norm it is a program deficiency we are dedicated to improving. As such, the CIS/CS faculty has and will continue to evaluate and improve our courses, programs, and marketing strategies in order to attract and retain more female students.

D. Services We Provide

The CIS/CS discipline offerings are diverse and comprehensive, providing students with numerous options to explore a wide variety of technological fields. The CIS class with the most significant enrollment, CIS 101, is the primary course at the college to equip students with technological and computer competency skills and is a requirement for students preparing to transfer in many fields, including business administration, radiologic technology, and education. The CIS/CS classroom/labs are designed for hands-on learning, enabling students to practice the skills they are taught in a real-world environment. Open-lab time (currently held in LADM 101) is built into the class schedule. The open lab hours are staffed by highly skilled lab tech/tutors who assist students with their class assignments and projects. In addition, the computer lab-techs

provide troubleshooting support, free of charge, for students who are experiencing application or hardware issues on their personal computers.

Finally, the discipline helps students acquire expensive software at drastically reduced costs through programs such as Microsoft Dreamspark Program, which provides an inexpensive way for academic departments to offer the latest version of Microsoft applications available in labs, classrooms, and on student PCs. This assistance is invaluable to the many students on fixed incomes.

E. How We Provide Our Services

Our classes are taught in a variety of formats including day and evening, hybrid, and online. The graphics and media instructor commented that evening classes work best for the majority of his students as a large percentage of the students in the evening media classes are working professionals. The working professionals tend to prefer the one night per-week classes, plus the longer time slot affords the instructors time to present a lesson and still interact one-on-one with each student. The discipline currently offers CIS 101 in face-to-face, hybrid, and fully online formats. The discipline is also in the process of evaluating the feasibility of offering additional courses via an online/hybrid format. The flexibility that exists with an online course may help increase enrollments in single-section upper-level classes. Our program also offers internship courses in web design, hardware, and networking, in which students earn academic credits for their practical work experience in the field.

F. Up-to-date and Needs-based Curriculum

All CIS/CS courses abide by the minimum six-year revision requirements. However, given the rapidly changing nature of technology, a number of the CIS/CS courses must be updated more frequently in order to meet current industry standards. For example, CIS 130 (hardware technology) and CIS 140-143 (CCNA Networking) must use the Cisco Networking Academy curriculum which is revised every three to four years.

To support student transfer, The CIS/CS discipline has been working on offering and revising courses and degrees to follow the C-ID descriptors and the Transfer Model Curriculum (TMC) provided by the California Community College Chancellor's Office. New Computer Science courses were added to the discipline to provide preparation for students who want to transfer to four-year institutions. These courses follow C-ID descriptors, and the new A.S.-T in Computer Science also follows the TMC and is in the process of being approved by the state. The full-time faculty members will investigate the possibility of offering an A.S.-T in Information Communications Technology (ICT), for which the TMC is currently being developed.

With collaboration with our local high school partners, articulation agreements of our CIS/CS courses with high schools are periodically updated. As of fall 2014, articulation agreements for applicable CIS/CS courses with Yucaipa High School, Redlands East Valley High School, Redlands High School, San Bernardino School District have been updated. In addition, brochures providing the articulation information have been created.

The CIS advisory committee, which consists of local technology industry representatives, high school educators, and our college faculty members, meets once a year to discuss topics related to our program development, industry needs, and alignments with high school curriculum. The yearly discussion helps us to continue improving our program according to the educational and industry needs of the local region.

G. Scheduling Matrix

See attached file.

3. External Factors with Significant Impact

Updating this Question is <u>Optional</u> on the Annual Plan!
What external factors have a significant impact on your program? Please include the following as appropriate:
a. Budgetary constraints or opportunities
b. Competition from other institutions
c. Requirements of four-year institutions
d. Requirements imposed by regulations, policies, standards, and other mandates
e. Job market
   i) Requirements of prospective employers
   ii) Developments in the field (both current and future)

A. Budgetary Constraints or Opportunities
Growth for the CIS/CS programs and courses continues to be limited by budget constraints. During the budget crisis we lost two full-time CIS/CS faculty members due to retirements. We were able to hire one full-time replacement with expertise in programming, however our annual planning request to hire an additional CIS/CS faculty member with expertise in digital media for the past 5 years has not been fulfilled. The lack of a full-time faculty member in digital media makes planning and growing a highly demanded field difficult at best. Moreover, 17 of the 24 CIS classes are now taught by part-time instructors which has dramatically increased the workload of the remaining full-time professors. Finally, one of the full-time CIS/CS faculty members serves as the President of the CHC Academic Senate and is given a .6 release for this position, which means the discipline is served by 1.4 Full-time faculty members which again, puts a strain on the entire program.
The state budget has improved in the last two years which allowed the discipline to regain some of the sections that were lost in the economic downturn. However, we still need additional growth funds to regain all the sections lost and to add courses in our identified high-demand areas. We would like to be able to offer a wider variety of courses to meet the needs of both four-year transfer-oriented students as well as the increasing number of re-entry students who are looking to retrain and/or to expand their technical skills. However, we do not feel the college has prioritized our desire for growth.
The HSI-STEM Pathways grant was a budgetary opportunity that allowed the discipline to add new courses and a degrees in Computer Science to support students who aim to transfer to four-year institutions. As a result, new Computer Science courses have been offered since Fall 2013, and A.S. and A.S-T degrees in Computer Science have now been developed and added to the discipline.

B. Competition from Other Institutions
The CIS/CS discipline understands the issues related to competition from neighboring educational institutions. Community Colleges in our service area, including SBVC, RCC and CCC have larger student populations and as such, are able to offer a wider variety of technical courses, certificates, and degrees. A wider offering of CIS/CS courses draws students to a campus. The CHC CIS/CS discipline will continue to evaluate existing program offerings and explore new degrees and certificates in order to attract students to our program. For example, recognizing the value of a CS transfer degree, we have worked hard to develop the CSCI program and are excited by the initial growth in enrollment. Additionally, we have identified digital media as a growing industry in our service area. As such, we have and will continue to advocate for the inclusion of digital media as a way to provide our students with the technical

skills they need to excel in our media dependent workforce. If given an opportunity to grow, we would focus on strengthen our Network Technician program by adding courses in wireless networking, server services, operating systems, and security.

C. Requirements of Four-Year Institutions

As discussed in question 1, the CIS/CS discipline has been working on offering courses and degrees that follow the C-ID descriptors and the Transfer Model Curriculum (TMC) provided by the California Community College Chancellor's Office in order to address the needs of four-year institutions. New Computer Science courses have been added to the discipline and are now offered to prepare students who want to transfer to four-year institutions. The faculty members will investigate the possibility of offering an A.S.-T in Information Communications Technology, for which the TMC is currently being developed.

D. Regulatory Requirements

The only requirements the discipline currently has in terms of mandates is with the Cisco Networking Academy courses. The CCNA courses are developed by Cisco and academy instructors must complete mandated training for each course they are certified to teach. Academy course curriculum and materials are updated every 18 months with major revisions every three to four years. Instructors are required to use the latest versions of the CCNA and A+ curriculums which places an additional demand on the program and instructors.

E. Job Market

According to data from the 2013 Madrid Environmental Scan, which analyzed job market data for the Riverside/San Bernardino/Ontario metropolitan statistical area, high-demand information technology positions include:

Occupational Title	2010 Annual Average Employment	2012 Annual Average Employment	Employment Change	2010 to 2020 Percent Change
Web Developers	1,460	1,780	320	21.9%
Graphic Designers	1,990	2,310	320	16.1%
Computer Programmers	1,280	1,480	200	15.6%
Computer and Information Systems Managers	1,300	1,550	250	19.2%
Computer Systems Analysts	1,870	2,240	370	19.8%
Database Administrators	590	790	200	33.9%
Network and Computer Systems Administrators	1,540	1,990	450	29.2%
Computer Network Architects	1,460	1,780	320	21.9%
Information Security Analysts	1,460	1,780	320	21.9%

Software Developers, Applications	1,250	1,530	280	22.4%
Computer Network Support Specialists	3,440	4,110	670	19.5%

These high growth occupations are in web development, software development, information systems, and network support and administration. Our existing CIS/CS degrees and certificates help students gain essential job skills in web development, programming, and network. The discipline will evaluate the program degrees and certificates and will revise as needed to better support the identified local workforce needs, especially in database and network administration.

i) Requirements of prospective employers

At our annual advisory committee meetings, employers in technology-related fields provide input into desirable skills of prospective employees. Besides technical skills, soft skills have repeatedly been brought up as an essential skill. In response to this identified need, we have added a soft skills course to our curriculum offerings. Additional courses in Adobe Creative Suite have also been added to our program to enrich our digital media program. We will continue to obtain inputs from local employers in order to design our program to current industry needs.

ii) Developments in the field (both current and future)

There is no downtime in the information technology field and there are very few jobs and industries that have not been impacted by or become dependent on technology. In fact, technological know-how has become an essential skill in both education and in the workforce. The constant evolution of technology has a significant impact on our discipline. Major changes in software and hardware can occur every 18 months, presenting a constant challenge in terms of program currency. Many of the CIS/CS courses must be redesigned every three to four years to address emerging trends. It is also essential that the discipline be allocated the funds required to purchase the latest software. Additionally, the classroom PCs must be upgraded every three years (as per the IT plan) in order to deliver the latest application versions quickly and efficiently. CIS/CS professors must spend numerous hours learning about new hardware components, software releases, operating systems revisions, and new developments in the industry and as such, conference attendance is essential for maintaining currency.

4. Progress on Outcomes Assessment (Annual Question)

Updating this Question is <u>Required</u> on the Annual Plan!

Refer to the [SLO Cloud] to evaluate the results from your course level Student Learning Outcomes (SLOs) and to develop actions reflected in your program review action plan (i.e. Question 10).

a. Please summarize **course SLO assessment results**. Include a discussion of whether or not the program met its target for each course SLO.

b. Please describe any course and/or instructional improvements you plan to make as a result of the course SLO assessment(s).

c. What objective(s) or action step(s) will you add to Question 10 as a result of the SLO assessment(s)? If none, please explain.

A. Progress on program and/or course Level SLO measures since last program review

Since our last program review submitted in Fall 2014:

The following courses submitted SLOs during the 2014 - 2015 academic year:

- CIS 101, 104, 117, 140, 141, 142, 143, 163, 173, 180, 182, 190B
- CSCI 110, 120, 200, 240

The following courses submitted SLOs during the 2015 - 2016 academic year:
- CIS 95, 101, 104, 163, 165
- CSCI 110, 120, 230, 240

In August 2015, CIS PLO #1 and one CSCI PLO #1 were reviewed, and actions were proposed to address the results from the assessment of these PLOs.

In Fall 2016, all SLOs have been reviewed, updated as needed, and mapped to their corresponding PLOs. They have been submitted to the research office for inclusion on the SLO cloud.

All CIS faculty members are now using the SLOCloud tool to submit SLO results. At the last department meeting in December 2016, faculty members met to discuss SLO assessment results.

B. Program/course and/or instructional improvements made as a result of the outcomes assessment process

Instructional improvements made as a result of SLO assessment results include: development of practical projects to help CIS 101 students to apply skills acquired in Microsoft Office, incorporation of creative team project that addresses social issues in CSCI 120 in order to provide real-world applications. Faculty discussed SLO assessment results in both CIS 140 and 141. Additional examples of the OSI and TCP/IP models were incorporated into the CIS 140 class. In the CIS 141 course, basic router and switch commands were reinforced using Lynda.com tutorials and instructor led demo's captured with Camtasia and posted in the LMS.

C. Plan for continuously completing the assessment cycle

Our plan is to assess at least one SLO of each course that is offered per academic year. One department meeting per semester will be dedicated to SLO discussion.

The plan for assessing course SLOs in 2016 - 2017 is as follows:

Fall 2016: CIS 095, 111, 113, 130, 140, 161, 163, 180, 184, 190A; CSCI 110, 120

Spring 2017: CIS 101, 104, 117, 141, 165, 173; CSCI 200, 230

5. Unit's Performance on Institutional Quantitative Effectiveness Indicators

Updating this Question is Required on the Annual Plan!

Please discuss your program's performance on each data item below.

a. Instructional Program Health Evaluation Rubric

i) **Rubric Item**: Use Office of Institutional Effectiveness, Research, and Planning (OIERP) data to set a Course Completion Rate target and provide an explanation for the target that has been set. Click HERE to access your program specific data.

ii) **Rubric Item**: Use OIERP data to set a Course Success Rate target and provide an explanation for the target that has been set. Click HERE to access your program specific data.

iii) **Rubric Item**: What is your FT/PT Faculty Ratio, how is it impacting your program, and student success? Click HERE to access your program specific data.

iv) **Rubric Item**: Use OIERP data to set a WSCH/FTEF Ratio target and provide an explanation for the target that has been set. Based on Faculty dialogue what is a feasible WSCH/FTEF (productivity) target for your area? (Note: 525 may not be a realistic target for your area.) Click HERE to access your program specific data.

v) **Rubric Item**: The Fill rate target is 80% or higher. Use the data provided by the OIERP and please provide a reason for any deviation from the target. This may involve a discussion around

the appropriateness of the cap and how it was set. Click <u>HERE</u> to access your program specific data.

I. Course Completion Rate
The CIS course completion rate for 2015-16 is 87.2% (715 total / 820 GOR). The CSCI course completion rate is 86.2% (131 total / 152 GOR). The target for course completion rate for our program is set to 88%, which is in line with the Crafton completion rate of 90.6% and the trends within both disciplines for the last four years.

II. Course Success Rate
The course success rate for CIS courses in 2015-16 is at 64.3% and has remained at a similar level as our last program review. The course success rate for CSCI is 73.0%. A reasonable target for our program is 70%, which is in line with the discipline success rates for the past five years and is also in line with the college wide success rate 72.4%.

III. FT/PT Faculty Ratio
The FT/PT faculty ratio for the CIS courses has decreased from 45% to 11% over the past 5 years and a 50% decrease from 2014-2015. The CSCI FT/PT ratio is 51% which represents a 23% decrease from 2014-2015. In May of 2015 the full-time Cisco Networking Academy CIS Instructor applied for and was awarded a new postion as the CHC Distance Education Coordinator. This resulted in the loss of the FT faculty discpline member leaving only one full-time faculty members in a program that requires multiple areas of expertise. The lack of FT faculty in the discipline is a major concern. As has already been stated, the discipline also lacks full-time faculty expertise in digital media. The lack of full-time faculty members who can provide expertise in specific areas makes planning for a comprehensive digital media degree difficult at best, which in turn negatively impacts students who want to excel in the digital media arena. To support students who are interested in digital media, a full-time faculty member with digital media expertise is needed to establish courses, certificates, and degrees that are closely aligned with the four-year institutions and the industry trends. Our goal is to have 66% of our courses taught by full-time faculty. To achieve this goal we would need to hire a third full-time faculty member.

IV. WSCH/FTEP Ratio
The WSCH/FTEF ratio for CIS courses in 2015-16 is at 321, and the WSCH/FTEP ratio for CSCI courses is at 302. The discipline has set a target WSCH/FEF ratio of 350. <u>This would equate to approximately 20-35 students per class</u>. The one issue is with our advanced classes. These classes traditionally do not fill. We would need to be able to offer multiple sections of the beginning courses in the sequence to which we have not be able to do because of the budget constraints.

V. Fill Rate
The 2015-16 fill rate in CIS courses is 68%, and the fill rate in CSCI courses is 67.6%. The fill rate of of CIS courses in 2015-16 is less than the previous year rate of 75% because the course caps have not been set to match historical trends but instead are set to the room sizes. In addition, to increase students to enroll in our program, marketing efforts have also been sent to advertise our program courses to students. We believe some of the reduction in interest in CIS courses may also be due to the improving economy which has been a historical trend with Community College CTE programs.

6. Other Unit-Specific Quantitative and Qualitative Results
Updating this Question is Optional on the Annual Plan!

a. Rubric Item: How do your program student demographics relate to the college demographics? What are the discrepancies? – Click HERE to view program and college demographics by year.

b. Summarize the results of any quantitative or qualitative measures not provided in the previous question that you have chosen to gauge your program's effectiveness (e.g.: transfers, degrees, certificates, satisfaction, enrollments, Perkin's data, equity data, student research experience, student clubs, etc.) Click HERE to access your program specific data on degrees and certificates.

c. What improvements/changes have you implemented or do you plan to implement as a result of your analysis of the measures illustrated in 6a and 6b?

A. Program Effectiveness Measures

We have chosen the following quantitative measures to gauge our program's effectiveness:

1. Number of Degrees and Certificates

2. Perkins IV Core Indicators of Performance

> *a. Technical Skill Attainment:* percentage of students enrolled in our CTE courses above the introductory level who have earned a GPA of 2.0 or higher
>
> *b. Completions:* percentage of students who have successfully completed a minimum 12 or more units in the CTE program and who have receive a degree, certificate or equivalent or have completed a transfer program
>
> *c. Persistence*: percentage of students who persisted in education at the community college level or transferred to a two or four-year institution
>
> *d. Employment*: percentage of students who did not transfer to a two or four-year institution and were found during one of the four quarters following the cohort year in an apprenticeship program, UI covered employment, the Federal Government, or the military
>
> *e. Nontraditional Participation*: percentage of females participating in the program
>
> *f. Nontraditional Completion*: the percentage of female student completion of the program

3. In terms of our efforts in improving transfer rate in our discipline, we will use the measure of student contacts with the transfer advocate in our program and the number of transfer applicants to CIS/CS related programs.

B. Results of Program Effectiveness Measures

1. Number of Degrees and Certificates

In the past five years, a total of 20 students were awarded the Associate of Science Degree in CIS, and a total of 74 students were awarded a certificate in CIS. Eight out of the 20 A.S. degrees awarded were in the Programming emphasis, and seven out of the 20 were in the Webmaster emphasis. 57 out of the 74 certificates awarded were Cisco networking certificate.

2. Perkins IV Core Indicators of Performance

> a. *Technical Skill Attainment*: 93.23% (above the performance goal of 86.88%)
>
> b. *Completions*: 62.67% (below the performance goal of 77.72%)
>
> c. *Persistence*: 77.08% (below the performance goal of 84.42%)
>
> d. *Employment*: 44.78% (below the performance goal of 79.18%)
>
> e. *Nontraditional Participation*: 49.74% (above the performance goal of 22.60%)
>
> f. *Nontraditional Completion*: 44.26% (above the performance goal of 26.50%)

3. CIS/CS faculty member Margaret Yau has been a transfer adovcate since Fall 2011. She regularly informs students about transfer resources and meets with students who have questions about transfer, especially in the CIS/CS area. In the past, she had met with over 20 students individually about transfer and witnessed a number of her former students transfer to computer science programs at universities including UC Berkeley, UC Santa Cruz, CSU San Bernardino, and CSU Fullerton. Data provided by the Transfer Center indicates that nine

students applied to computer science or electrical engineering majors at UCs and 13 students applied to computer science, computer engineering, or graphic design majors at CSUs in 2013 - 2014.

C. Reflection and Plan for Improvments

1. A majority of the CIS degrees are awarded in the Programming and Webmaster emphases. As our computer science program grows, we expect the number of degrees to increase. We plan to improve our CIS degrees by establishing clear pathways to transfer. We already have an A.S.-T in Computer Science that is designed for transfer. We will investigate the possibility of the A.S.-T in Information and Communication Technologies (ICT) and Graphic Design in order to help students successfully transfer to four-year institutions. To improve our certificate offering in graphic design, we also plan to secure grant funding to hire a professional expert to align our certificate to industry certification, such as that for Adobe Certified Expert (ACE), as well as to investigate the possibility of establishing a testing center on campus.

2. According to our Perkins data, our CTE students' level of technical skill attainment, as well as our program nontraditional participation and completion are above the performance goals. The identified gaps in the core indicators are completion, persistence, and employment. Our plan to address these gaps include:

b. *Completion*
- Distribute information on CIS certificates, degrees, and transfer options to students in both printed and digital formats.
- Expand program offerings in distance education formats in order to increase course accessibility to students.
- Maintain CIS open lab hours during which students can complete assignments using up-to-date equipment and obtain help from lab tutors.
- Reevaluate course offering matrix on an annual basis to ensure students can complete degrees and certificates in a maximum of two-year cycle.

c. *Persistence*
- Investigate transfer degrees in ICT and Graphic Design
- Continue to develop core courses that transfer to four-year CIS-related disciplines.

c. *Employment*
- Work with the career center coordinator to expand the number of outside agencies who provide internships and/or employment opportunities for CIS students.
- Refer students to the campus career services for internship/employment resources and job search skills workshops.
- Research Adobe certification exams and update as needed the related course outlines to align to the certification exam objectives.

To address the gap in employment, we have developed a customer support/businesses communications "soft skills" course and internship courses for programming (CIS190D) and digital media (CIS190E).

3. Having a faculty transfer advocate specific to our discipline is a good resource for students interested in continuing in their study in computing. We will continue to have a faculty transfer advocate to assist students seeking to transfer to a four-year degree program.

7. Evaluation

Updating this Question is Optional on the Annual Plan!

Evaluation: You have already provided a description and analysis of the program in questions 1-6, please provide an analysis of what is going well/not well and why, in the following areas:

- Alternative modes and schedules of delivery (e.g.: online, hybrid, early morning, evening services, etc.)
- Partnerships (internal and external)
- Innovation and Implementation of best practices
- Efficiency in resource use
- Staffing
- Participation in shared governance (e.g., do unit members feel they participate effectively in planning and decision-making?)
- Professional development and training
- Compliance with applicable mandates

Overall the CIS/CS program continues to be effective. However, there is concern about maintaining forward progress and ongoing improvement with the reduction to 1.4 full-time faculty members. The highest priority for the discipline is to replace the full-time faculty member lost in 2009. One of the continuing strengths of the discipline is the collaboration and mutual respect between the FT faculty, PT Faculty and lab-tech tutors. Ongoing collaborations includes regular conversations regarding student success, sharing of information and training on new technologies and instructional methodologies, as well as sharing the responsibilities for program review, planning and SLOs. CIS/CS is a discipline containing a broad range of classes (introduction to computers, programming, web design, Cisco networking, graphics design, hardware etc.). With three full-time faculty members the discipline, while still challenging, could remain current with emerging research and techniques for all courses in the program – an impossible task for the current 1.4 full-time CIS/CS faculty members.

Representativeness of Population Served

Populations served was addressed in question 1c. The CIS/CS faculty are committed to increasing the number of females in the program. We have both full-time and part-time female faculty members teaching both CIS and CS courses. These women serve as role models for other women who enroll in our courses and programs. We will continue to review, revise and market our courses and programs in an ongoing effort to attract additional women.

In an effort to increase the number of students to study computing, the CIS/CS faculty members also regularly participate in various outreach events. As a part of outreach efforts to local high schools, the CIS full-time faculty implemented summer computer science workshops for local high school students and teachers in summers 2012 and 2013. The workshops introduced the participants to computer science through various hands-on activities and presentations. In the past, our faculty members also participated in events such as High School Visitation Day, College FamilyFest, and Promise Scholars program.

Alternative Modes and Schedules of Delivery

Alternative modes and schedules of delivery was addressed in question 1e - We are carefully monitoring the attrition and success rates in the online and hybrid CIS 101 classes. In each semester for the past two years, we have offered two sections of online CIS 101. These courses are the first to fill and we believe may be having a negative impact on the enrollment in our evening 101 classes. The attrition rate for the online classes is slightly higher than in the face to face classes, but the overall success rate is also higher. We believe this is because students think an online class is going to be easier, however after two or three weeks they realize the class is actually more difficult than expected and so they drop. Unlike the face-to-face classes, the online students must possess independent time management and problem-solving skills and a higher level of technical savvy, which may explain the higher success rate for those who remain in the

class. This spring we plan to offer two sections of CIS 101 online and two sections as a hybrid. All sections of CIS 101 will be compared at the end of the spring 2015 term to assess the viability of the online and hybrid 101 classes.

Partnerships (internal and external)

The CIS/CS discipline maintains partnerships with our sister college (SBVC). The CIS department chairs at SBVC and CHC met this fall to discuss alignment of our courses. We also have established strong partnerships with our local feeder high schools. We have identified courses offered at the local high schools and have established articulation agreements for several of the High School courses. The CIS faculty members assist with articulation agreements and promote articulation pathways to local high school students. The discipline also holds an annual advisory committee meeting where business and educational partners are provided an opportunity to provide ideas and suggestions for course sequencing and workplace knowledge and skills. As has already been mentioned, new courses and programs have been added as a result of these annual advisory committee meetings.

An important internal partnership is between the the CIS lab techs and the CIS faculty. The lab techs provide support to faculty with technical requests free of charge. This is a highly valued service and as such should continue to be funded at or above current funding levels. Another important internal partner is the STEM Pathways grant team, which has supported the development of the new computer science program and various outreach events and will provide funds to support supplemental instruction/tutoring in Computer Science.

Innovation and Implementation of Best Practices

As has been previously stated the field requires instructors to remain innovative and responsive. Innovations like cloud storage, server side services, wireless networking, mobile app development, hardware and software security, and identity theft are examples of recent trends and innovations worthy of program consideration. The current shift toward cloud computing may be the next major wave of change removing the tether to classroom-based PCs to a more efficient use of resources via the implementation of virtual machines.

Our discipline has successfully acquired a number of grants to drive positive changes in our program. For example, the high school workshops discussed earlier in this question were sponsored by the Computer Science Collaboration Project, Google CS4HS initiative, and the HSI-STEM Pathways grant. In 2014, the CIS faculty members worked on a mini-grant project funded by the ICT/Digital Media Career and Technical Education Career Pathways (SB 1070) funds. This project aims to strengthen employability of students through clear ICT/Digital Media pathways from secondary, post-secondary, to the workplace. We have also recently submitted a proposal to obtain CTE Enhancement funds to support developing the digital media program and investigating the area of logistics technology. Moreover, the discipline requests Perkins funds every year to support our CTE students and courses.

Implementation of best practices includes the standardization of the CIS 101 curriculum including course materials, quizzes and exams, SLOs, the use of Blackboard, and SAM. SAM (Skills Assessment Manager) is a proficiency-based assessment and training environment for Microsoft Office, focusing on outcomes. Class coordination promotes student collaboration and supports consistent evaluation of course SLOs. Another best practice is the discipline-wide use of Blackboard. All CIS instructors use Blackboard for all courses, which has improved student access to course materials, assignments and instructor support. Additional best practices include: instructor driven updates for classroom software and hardware and the use of lab-tech tutors for the support of student learning.

Efficiency in Operations

The prior program review brought to light a need to reevaluate the A.S. degree options and program certificates in an effort to increase efficiency. Four years ago, the discipline offered four areas of emphasis and nine difference certificates. We have worked hard to add efficiency to the program and now offer three areas of emphasis for the CIS Associate of Science Degree: Programming, Web Design and Computer Assisted Graphics Design and five certificates. Additionally, we have shifted the programming emphasis to Computer Science and have developed both degrees and certificates for CS with a focus on transfer.

Efficiency in Resource Use

Another area of strength is the full-time and part-time lab tech/tutors. The lab tech/tutors are responsible for the ongoing and routine maintenance of the classroom-based PCs. They are responsible for making sure all necessary hardware and software modifications are completed in a timely fashion to provide the best possible technical environment for both teaching and learning. Additionally, the lab techs manage the open lab hours, providing access to the technical resources and support students need to complete all assigned labs, assignments, exams, etc. Another good example of efficiency in resource use was the relocation of the CIS 130 hardware equipment and lab from LADM 217 & 218 to LADM 220 & 223. While this change significantly reduced the workspace for the CIS 130 students, the reduction in space was mitigated through the use of flats screen monitors and the reorganization of equipment storage in LADM 220.

Staffing

This is addressed in 1a - What is also working well is that instructors are assigned to courses based on their expressed interests and identified strengths.

Participation in Shared Governance

The faculty members of the CIS discipline have a long history of active participation in shared governance. Our department meetings are held every month and are well attended by our adjunct faculty members, whose inputs are sought in various discipline matters. One of the full-time faculty members is heavily involved in shared governance and is currently serving as the President of the Academic Senate, is a member of the Crafton Council, the Education Master Plan Committee, the CHC budget committee, the district budget committee and the District Assembly. The other full-time faculty member serves as the Department Chair and is also a member of the Curriculum Committee and the Educational Technology Committee.

Professional Development and Training

The nature of the CIS discipline is one of constant change. This presents an ongoing challenge to instructors. There is never any down time. The industry can change dramatically in as little as 18 months. To remain current the full-time faculty members must engage in a number of professional development activities including: blackboard training, online classes, reading professional and technical journals, web-based research, investing in new hardware and software, working networking shows, attending annual conferences and engaging in regular dialog with other professionals in the field. Staff development funds are needed to support attendance at technical conferences as this is one of the best ways to acquire information on new and emerging trends in technology. Perkins funds have been a major funding source for professional development expenses.

Compliance with Applicable Mandates

Cisco requirements were discussed in question 2d. Requirements of four-year institutions were discussed in question 2c. Other than these requirements, there are no applicable compliance mandates.

8. Vision

Updating this Question is <u>Optional</u> on the Annual Plan!

a. Tell us your unit's vision: Where would you like your program to be four years from now? Dream big while considering any upcoming changes (e.g.: new buildings, labs, growth, changes in the discipline etc.).

b. Alignment with the college Vision: **Rubric Item** ([Vision Alignment](#)): The Vision of Crafton Hills College is to be the college of choice for students who seek deep learning, personal growth, a supportive community, and a beautiful collegiate setting. **In what ways does your program advance and align with the vision of the college?**

A. VISION

The Vision of the CHC CIS/CS Discipline is to be the college of choice for students who want to acquire the knowledge and skills needed to transfer to a four-year institution with a CIS/CS degree and/or to secure an IT job as the result of acquiring the most current IT knowledge and skills. In order to achieve this we must:

- Grow our courses offerings
  - We intend to attract more students to our program through outreach and marketing. We want to increase the number of courses that we offer each semester, as well as add new courses in order to meet the demands of the workforce. We also want to increase our online / hybrid course offerings to meet the needs of different students.
  - Specifically for the CS program, we want to include more sections of introductory CSCI classes so that the advanced courses maintain a student population of 25 or more students.
  - To grow our program, we must have at least three full-time faculty members.
- Provide a robust digital media program, focusing on identified high-need career and transfer pathways
  - Within four years from now, we expect to have a full-time faculty member who specializes in digital media, as well as A.S. degrees and certificates that are well aligned with transfer institutions and the industry, respectively.
- Increase transfer rate and the completion of AS-T degrees
  - We aim to be the program of choice for transfer-oriented students majoring in CIS/CS. By having clear transfer pathways between our program and transfer institutions, students will be able to establish their transfer plans and complete their coursework within a reasonable time frame.
- Offer courses in high growth areas, including software development, networking, and database administration
  - We plan to add new courses in network management and system administration (wireless, security, server courses), as well as courses in mobile app development and systems analysis. We also want to regularly offer our database course, which we have not been able to offered for the past number of years due to budget constraints.
- Promote student success

- o Our faculty members focus on supporting students in achieving their educational, career, and personal goals. Faculty members will continue to discuss how to improve student learning and how to help students transfer and enter the workforce. Faculty members will continue to learn about best teaching practices and resources available for helping students.

B. Alignment with the College's Mission and Vision

The CIS/CS programs are dedicated to the mission of advancing the educational, career, and personal success of our diverse campus community through engagement and learning. The CIS/CS students are actively engaged in the learning process. Knowledge and skills are developed through group discussions, skills-based projects, labs and hands-on tutorials. Recognizing the diversity of learning styles, the CIS/CS department has modified the course delivery options, to include hybrid and fully online courses as well as traditional face-to-face courses. The CIS/CS faculty members value academic excellence and the advancement of each individual as evidenced by our efforts to stay current, to improve student learning, and to offer students the courses they need in order to achieve their goals by providing new courses, certificates, and degrees that meet current and emerging workplace demands.

The CIS/CS faculty will continue to improve and enhance our curriculum in order to be recognized as the best program of choice for CIS/CS students who seek deep learning, personal growth, and a supportive faculty. The CIS/CS discipline will continue to examine the current course offerings and research emerging trends in technology and teaching to determine which CIS/CS courses programs and services best meet the needs of both the transfer-focused and career-oriented students.

Mission:The mission of Crafton Hills College is to advance the educational, career, and personal success of our diverse campus community through engagement and learning.
Vision: Crafton Hills College will be the college of choice for students who seek deep learning, personal growth, a supportive community, and a beautiful collegiate setting.

Crafton Hills College values academic excellence, inclusiveness, creativity, and the advancement of each individual.

9. Progress on Prior Goals

Updating this Question is Required on the Annual Plan!
Briefly summarize the progress your unit has made in meeting the goals and objectives identified in your last Four-Year Action Plan.

- **1 - Goal - Increase student success by providing a well-rounded, effective CIS/CS program**
  Priority Rank:
  1
  Objectives:
  - o **1.1 - Objective - All courses will be taught in a high quality technically current environment.**
    Priority Rank:
    3
    Original Start Date:
    08/15/2014
    Original End Date:

09/01/2018
Revised Start Date:
08/15/2014
Revised End Date:
09/01/2018
Responsible Person:
CIS Department Chair
Strategic Direction:
1. Promote Student Success
Impact Type:
Department
Institutional Learning Outcome:
-- Pick One --
Resource Requests:

- **1.1.r1 - New CIS Building**
  Description
  In order to offer high-quality instruction in current and emerging technologies, the discipline requires a new high-tech teaching and learning facility that is specifically engineered for technology instruction.
  As such, we are requesting a new building dedicated to CIS. Additionally, the building could provide technically enhanced instructional space for such business courses as accounting, business law, marketing, and entrepreneurship.
  Rationale
  Emerging technologies and the rapid pace at which technology changes require the discipline to reinvent in a regular basis and to have well-engineered instructional space to meet the demands of the instructional workspace.
  Resource Type:
  One-time
  Expenditure Category:
  New Buildings (6210)
  Funded:
  No
  Funding Source:
  First Year Cost/Savings:
  $10,000,000.00/$0.00

- **1.1.r2 - Replacement of all CIS lab PCs**
  Description
  In order to maintain a quality learning environment, the computer hardware should be upgraded on a regular cycle.
  Rationale
  In order to maintain a quality learning environment, the computer hardware should be upgraded on a three-year cycle. The CHC IT plan calls for the replacement of the CIS lab computers every four years. The CIS facilities will be under renovation during the 2015 - 2017, and new

equipments will be in place in the new facilities, at which point we will reinitiate the replacement cycle.
Resource Type:
Ongoing
Expenditure Category:
Computer & Information Technology Equipment (6420)
Funded:
No
Funding Source:
First Year Cost/Savings:
$51,000.00/$0.00

Actions/Activities:

- **1.1.a1 - Upgrade PCs in all CIS labs as per the established replacement cycle**
  Start Date:
  06/01/2014
  End Date:
  07/29/2018
  Responsible Person:
  CHS IT Department
  Status Code:
  Work is Completed and Ongoing
  Progress Description:
  .
  Measurements/Documentation of Progress:
  .

o **1.2 - Objective - At least 75% of FTE instructional load in our program will be taught by full-time faculty.**
Priority Rank:
1
Original Start Date:
02/01/2016
Original End Date:
06/01/2017
Revised Start Date:
02/01/2016
Revised End Date:
06/01/2017
Responsible Person:
CIS Faculty
Strategic Direction:
1. Promote Student Success
Impact Type:
Department
Institutional Learning Outcome:
-- Pick One --

Status Code:
Work is Planned but not yet firmly scheduled
Progress Description:
.
Resource Requests:

- ▪ **1.2.r1 - CIS Full-time Faculty**
  Description
  Hire a new full-time faculty member to maintain the target ratio and to replace the faculty lost due to reassignment.
  Rationale
  Hire a new full-time faculty member to maintain the target ratio and to replace the faculty lost due to reassignment.
  Resource Type:
  Ongoing
  Expenditure Category:
  Contract Classroom Inst. (1100)
  Funded:
  No
  Funding Source:
  First Year Cost/Savings:
  $80,000.00/$0.00
  Second Year Cost/Savings:
  $82,000.00/$0.00
  Third Year Cost/Savings:
  $84,000.00/$0.00

- o **1.3 - Objective - Upgrade essential software applications and hardware instructional tools to promote transfer and workforce preparedness**
  In order to retain and attract students and prepare them to enter the workforce and/or transfer to four-year programs and continue to provide a quality relevant program the discipline must keep all instructional software and hardware up to date (3 year replacement cycle).
  Priority Rank:
  4
  Original Start Date:
  08/15/2014
  Original End Date:
  08/15/2018
  Revised Start Date:
  08/15/2014
  Revised End Date:
  08/15/2018
  Responsible Person:
  CIS Department Chair
  Strategic Direction:
  1. Promote Student Success
  Impact Type:

Department
Institutional Learning Outcome:
-- Pick One --
Resource Requests:

- **1.3.r1 - Software Acquisition**
  Description
  Upgrade the following software titles and suites follows:
    - NetOp: $1300
    - MSDNAA: $1000
    - Adobe Creative Suite: $23,000
    - Autodesk Entertainment Creation suite: $10,000

  Rationale
  In order to promote transfer and workforce preparedness, essential software applications and hardware instructional tools must be upgraded as neccessary.
  Resource Type:
  Ongoing
  Expenditure Category:
  Software (4430)
  Funded:
  No
  Funding Source:
  First Year Cost/Savings:
  $35,300.00/$0.00
  Third Year Cost/Savings:
  $35,300.00/$0.00

- **1.3.r2 - Hardware Class Instructional Supplies**
  Description
    - qty -4- Intel barebones kits: $600ea = $2,400
    - qty -4- Intel barebones kits: $800ea = $3,200
    - qty -4- barebones laptop kit: $900ea = $3600
    - qty -2- Laser networkable printer: $300ea = $600
    - qty -4- Wireless router: $80ea = $320
    - qty -4- LAN/WAN router: $80ea = $320
    - qty -1- variable voltage control: $650.00
    - qty -1- isolation transformer: $400
    - qty -3- NAS external drives: $500ea = $1,500
    - qty -4- Wireless AP: $90 each = $360.00
    - qty -8- Wireless access card: $50ea = $400.00
    - qty -8- Multifunction meter with temp measure: $200ea = $1,600.00

  Rationale
  The hardware class instructional supplies need to be upgraded regularly.
  Resource Type:
  One-time
  Expenditure Category:

Instructional Supplies (4300)
Funded:
No
Funding Source:
First Year Cost/Savings:
$15,850.00/$0.00
Third Year Cost/Savings:
$4,000.00/$0.00

Actions/Activities:

- **1.3.a1 - Upgrade and acquire necessary software programs**
  Upgrade the following software titles and suites follows:
    - NetOp: $1300
    - MSDNAA: $1000
    - Adobe Creative Suite: $23,000
    - Autodesk Entertainment Creation suite: $10,000

  Start Date:
  08/01/2014
  End Date:
  08/01/2018
  Responsible Person:
  CIS Fulltime Lab-Tech
  Status Code:
  Work is Completed and Ongoing
  Progress Description:
  .

  Measurements/Documentation of Progress:
  .

- **1.3.a2 - Purchase Hardware Class Instructional Supplies**
  Start Date:
  08/01/2014
  End Date:
  07/29/2018
  Responsible Person:
  Lab-tech
  Status Code:
  Work is Completed and Ongoing
  Progress Description:
  .

  Measurements/Documentation of Progress:
  .

- **1.4 - Objective - Increase student success by providing daily access to lab tech tutors**
  The lab tutor/techs (short term hourly) positions are necessary to provide support to the students outside of the classroom and support to the faculty for software and hardware needs as they arise.
  Priority Rank:

5

Original Start Date:
08/01/2014
Original End Date:
08/01/2018
Revised Start Date:
08/01/2014
Revised End Date:
08/01/2018
Responsible Person:
CIS Department Chair
Strategic Direction:
1. Promote Student Success
Impact Type:
Department
Institutional Learning Outcome:
-- Pick One --

Resource Requests:
- **1.4.r1 - Funds to hire Part-time lab techs**
  Description
  3-15 Hourly lab tutors/techs
  Rationale
  Part-time lab techs are needed to maintain regular open lab hours and provide technical assistance to students.
  Resource Type:
  Ongoing
  Expenditure Category:
  Part-Time / Overtime / Student (2380)
  Funded:
  No
  Funding Source:
  First Year Cost/Savings:
  $10,000.00/$0.00
  Second Year Cost/Savings:
  $10,000.00/$0.00
  Third Year Cost/Savings:
  $10,000.00/$0.00

Actions/Activities:
- **1.4.a1 - Hire Part-time Lab Techs**
  Interview and hire part-time lab tech for each academic year.
  Start Date:
  08/08/2014
  End Date:
  08/01/2018
  Responsible Person:
  CIS Lab Tech & Division Dean

Status Code:
Work is Completed and Ongoing
Progress Description:
.
Measurements/Documentation of Progress:
.

- **2 - Goal - Become the premier CIS/CS program in the Inland Empire**

Priority Rank:
2
Objectives:
- **2.1 - Objective - CIS/CS instructors will maintain professional currency**
Priority Rank:
6
Original Start Date:
08/01/2014
Original End Date:
08/01/2018
Revised Start Date:
08/01/2014
Revised End Date:
08/01/2018
Responsible Person:
CIS Instructors
Strategic Direction:
3. Develop Teaching and Learning Practices
Impact Type:
Department
Institutional Learning Outcome:
-- Pick One --
Resource Requests:
  - **2.1.r1 - Funds for workshops and conferences**
Description
Rationale
Necessary to maintain professional currency.
Resource Type:
Ongoing
Expenditure Category:
Conference and Travel (5200)
Funded:
No
Funding Source:
First Year Cost/Savings:
$2,500.00/$0.00
Second Year Cost/Savings:

$3,000.00/$0.00
Third Year Cost/Savings:
$3,500.00/$0.00
Actions/Activities:
  ▪ **2.1.a1 - Attend technical and/or education workshops and conferences**
    Start Date:
    08/01/2014
    End Date:
    08/01/2018
    Responsible Person:
    CIS Instructors
    Status Code:
    Work is Completed and Ongoing
    Progress Description:
    .
    Measurements/Documentation of Progress:
    .

○ **2.2 - Objective - Provide transfer and workforce relevant CIS/CS courses, degrees, and certificates in multiple modalities**
  Review, revise and update all CIS degrees and certificates to increase efficiency, transfer rate and workforce relevancy.

  Priority Rank:
  9
  Original Start Date:
  08/01/2014
  Original End Date:
  08/01/2018
  Revised Start Date:
  08/01/2014
  Revised End Date:
  08/01/2018
  Responsible Person:
  CIS Faculty
  Strategic Direction:
  1. Promote Student Success
  Impact Type:
  Department
  Institutional Learning Outcome:
  -- Pick One --
  Actions/Activities:
    ▪ **2.2.a1 - Revise CIS/CS degrees and certificate as needed**
      ▪ Review and revise current degrees and certificates as needed
      ▪ Gain discipline wide support for revisions
    Start Date:
    08/01/2004

End Date:
08/01/2018
Responsible Person:
CIS Department Chair
Status Code:
Work is Underway
Progress Description:
.
Measurements/Documentation of Progress:
.

- **2.2.a2 - Plan for the inclusion of the transfer A.S. in IT based on CCC IT Model Curriculum**
Status Code:
Objective was Removed
Progress Description:
.
Measurements/Documentation of Progress:
.

- **2.2.a3 - Develop new courses, certificates, and/or degrees in high-growth areas.**
Status Code:
Work is Underway
Progress Description:
.
Measurements/Documentation of Progress:
.

- **2.2.a4 - Continue to hold annual advisory meetings with industry and education representatives**
Status Code:
Work is Completed and Ongoing
Progress Description:
.
Measurements/Documentation of Progress:
.

- **2.3 - Objective - Provide student internship and mentoring opportunities in CIS**
Priority Rank:
12
Original Start Date:
10/01/2014
Original End Date:
10/01/2018
Revised Start Date:
10/01/2014
Revised End Date:
10/01/2018

Responsible Person:
CIS Faculty
Strategic Direction:
1. Promote Student Success
Impact Type:
Department
Institutional Learning Outcome:
-- Pick One --
Actions/Activities:
- **2.3.a1 - Establishing internship and mentoring opportunities**
  Status Code:
  Work is Underway
  Progress Description:
  .
  Measurements/Documentation of Progress:
  .
- **2.3.a2 - Offer internship courses**
  Status Code:
  Work is Planned but not yet firmly scheduled
  Progress Description:
  .
  Measurements/Documentation of Progress:
  .
- **2.4 - Objective - Increase the number of students in our program as well as the diversity of our program student body.**
  Priority Rank:
  16
  Original Start Date:
  10/01/2014
  Original End Date:
  08/31/2018
  Revised Start Date:
  10/01/2014
  Revised End Date:
  08/31/2018
  Responsible Person:
  CIS Faculty
  Strategic Direction:
  2. Build Campus Community
  Impact Type:
  Department
  Institutional Learning Outcome:
  -- Pick One --
  Actions/Activities:
  - **2.4.a1 - Update, develop and distribute marketing materials targeting different students**

Status Code:
Work is Completed and Ongoing
Progress Description:
.
Measurements/Documentation of Progress:
.

- **2.4.a2 - Participate in outreach events**
Status Code:
Work is Completed and Ongoing
Progress Description:
.
Measurements/Documentation of Progress:
.

- **3 - Goal - Develop and implement a industry-relevant multimedia/graphic design program.**
Priority Rank:
3
Objectives:
  - **3.1 - Objective - Secure Full-time expertise for the multimedia/graphic design program**
Priority Rank:
2
Original Start Date:
08/01/2014
Original End Date:
08/15/2018
Revised Start Date:
08/01/2014
Revised End Date:
08/15/2018
Responsible Person:
CIS Department Chair
Strategic Direction:
1. Promote Student Success
Impact Type:
Site
Institutional Learning Outcome:
-- Pick One --
Resource Requests:
    - **3.1.r1 - Hire a Full-time multimedia/graphic design Faculty Member**
Description
Rationale
The new full-time multimedia/graphic design faculty member would be responsible for managing, growing and updating as required the program courses, certificates and degree. The disicipline is currently lacking a full-time member with expertise in this field, which has been indentified as a

rapidly expanding high paying career option.

Resource Type:
Ongoing
Expenditure Category:
Contract Classroom Inst. (1100)
Funded:
No
Funding Source:
First Year Cost/Savings:
$75,000.00/$0.00
Second Year Cost/Savings:
$75,000.00/$0.00
Third Year Cost/Savings:
$75,000.00/$0.00

Actions/Activities:
- **3.1.a1 - Hire new full-time faculty member**
  - Obtain approval for hiring
  - Develop a job description
  - Post job opening
  - Interview
  - Hire

Responsible Person:
CIS Department Chair
Status Code:
Work is Planned but not yet firmly scheduled
Progress Description:
.
Measurements/Documentation of Progress:
.

- **3.2 - Objective - Develop a fully-transferable multimedia/graphic design degree**
  Priority Rank:
  11
  Original Start Date:
  09/01/2014
  Original End Date:
  09/01/2018
  Revised Start Date:
  09/01/2014
  Revised End Date:
  09/01/2018
  Responsible Person:
  CIS Full-time Faculty
  Strategic Direction:
  7. Develop Programs and Services

Impact Type:
Department
Institutional Learning Outcome:
-- Pick One --
Actions/Activities:

- **3.2.a1 - Develop New Courses**
  Plan and develop new courses in areas that are identified by the digital media expert and/or full-time instructor.
  Start Date:
  09/01/2014
  End Date:
  09/01/2018
  Responsible Person:
  CIS Department Chair
  Status Code:
  Work is Planned but not yet firmly scheduled
  Progress Description:
  .
  Measurements/Documentation of Progress:
  .

- **3.2.a2 - Develop transfer degree in multimedia/graphic design**
  Status Code:
  Work is Planned but not yet firmly scheduled
  Progress Description:
  .
  Measurements/Documentation of Progress:
  .

- **3.2.a3 - Align program courses, degrees, and certificates to industry certifications and demands**
  Status Code:
  Work is Planned but not yet firmly scheduled
  Progress Description:
  .
  Measurements/Documentation of Progress:
  .

10. Four-Year Action Plan (Goals, Objectives, Resources, and Actions)

Updating this Question is <u>Required</u> on the Annual Plan!
Rubric Item: Reflect on your responses to all the previous questions. Complete the Four-Year Action Plan, entering the specific program goals (goal rubric) and objectives (objective rubric) you have formulated to maintain or enhance your strengths, or to address identified weaknesses. **In writing your objectives and developing your resource requests, take into account student learning and program assessment results**. Assign an overall priority to each goal and each objective. In addition, enter any actions and/or resources required to achieve each objective. (Click here to see a definition of goals, objectives, actions, and how they work together.)

- **1 - Goal - Increase student success by providing a well-rounded, effective CIS/CS program**
  Priority Rank:
  1
  Objectives:
  - **1.1 - Objective - All courses will be taught in a high quality technically current environment.**
    Priority Rank:
    3
    Start Date:
    08/15/2014
    End Date:
    06/30/2019
    Responsible Person:
    CIS Department Chair
    Strategic Direction:
    1. Promote Student Success
    Impact Type:
    Department
    Institutional Learning Outcome:
    Not Applicable
    Resource Requests:
    - **1.1.r1 - New CIS Building**
      Description
      In order to offer high-quality instruction in current and emerging technologies, the discipline requires a new high-tech teaching and learning facility that is specifically engineered for technology instruction.
      As such, we are requesting a new building dedicated to CIS. Additionally, the building could provide technically enhanced instructional space for such business courses as accounting, business law, marketing, and entrepreneurship. It will also include a makerspace.
      Rationale
      Emerging technologies and the rapid pace at which technology changes require the discipline to reinvent in a regular basis and to have well-engineered instructional space to meet the demands of the instructional workspace.
      Resource Type:
      One-time
      Expenditure Category:
      New Buildings (6210)
      First Year Cost/Savings:
      $10,000,000.00/$0.00
    - **1.1.r2 - Replacement of all CIS lab PCs**
      Description
      In order to maintain a quality learning environment, the computer hardware should be upgraded on a regular cycle.

Rationale
In order to maintain a quality learning environment, the computer hardware should be upgraded on a three-year cycle. The CHC IT plan calls for the replacement of the CIS lab computers every four years. The CIS facilities will be under renovation during the 2015 - 2017, and new equipments will be in place in the new facilities, at which point we will reinitiate the replacement cycle.
Resource Type:
Ongoing
Expenditure Category:
Computer & Information Technology Equipment (6420)
First Year Cost/Savings:
$51,000.00/$0.00

- **1.1.r3 - Non-instructional Supplies**
  Description
  Rationale
  Toner $1000
  Paper $100
  Assorted Supplies $200
  Resource Type:
  Ongoing
  Expenditure Category:
  Non-Instructional Supplies (4500)
  First Year Cost/Savings:
  $1,300.00/$0.00
  Second Year Cost/Savings:
  $1,300.00/$0.00
  Third Year Cost/Savings:
  $1,300.00/$0.00

Actions/Activities:

- **1.1.a1 - Upgrade PCs in all CIS labs as per the established replacement cycle**
  Start Date:
  06/01/2014
  End Date:
  06/30/2018
  Responsible Person:
  CHC IT Department

o **1.2 - Objective - At least 75% of FTE instructional load in our program will be taught by full-time faculty.**
Priority Rank:
1
Start Date:
02/01/2016
End Date:
06/30/2019

Responsible Person:
CIS Faculty
Strategic Direction:
1. Promote Student Success
Impact Type:
Department
Institutional Learning Outcome:
Not Applicable
Resource Requests:
- ▪ **1.2.r1 - CIS Full-time Faculty**
  Description
  Hire a new full-time faculty member to maintain the target ratio and to replace the faculty lost due to reassignment.
  Rationale
  Hire a new full-time faculty member to maintain the target ratio and to replace the faculty lost due to reassignment.
  Resource Type:
  Ongoing
  Expenditure Category:
  Contract Classroom Inst. (1100)
  First Year Cost/Savings:
  $80,000.00/$0.00
  Second Year Cost/Savings:
  $82,000.00/$0.00
  Third Year Cost/Savings:
  $84,000.00/$0.00
- o **1.3 - Objective - Upgrade essential software applications and hardware instructional tools to promote transfer and workforce preparedness**
  In order to retain and attract students and prepare them to enter the workforce and/or transfer to four-year programs and continue to provide a quality relevant program the discipline must keep all instructional software and hardware up to date (3 year replacement cycle).
  Priority Rank:
  4
  Start Date:
  08/15/2014
  End Date:
  08/31/2019
  Responsible Person:
  CIS Department Chair
  Strategic Direction:
  1. Promote Student Success
  Impact Type:
  Department
  Institutional Learning Outcome:
  Not Applicable

Resource Requests:

- **1.3.r1 - Software Acquisition**
  Description
  Upgrade the following software titles and suites follows:
  - NetOp: $1300
  - MSDNAA: free with school licensing
  - Adobe Creative Suite: $23,000
  - Autodesk Entertainment Creation suite: currently free
  - VMWare: $300

  Rationale
  In order to promote transfer and workforce preparedness, essential software applications and hardware instructional tools must be upgraded as neccessary.
  Resource Type:
  Ongoing
  Expenditure Category:
  Software (4430)
  First Year Cost/Savings:
  $25,000.00/$0.00
  Third Year Cost/Savings:
  $25,000.00/$0.00

- **1.3.r2 - Hardware Class Instructional Supplies**
  Description
  - Intel barebones kits
  - barebones laptop kit
  - Laser networkable printer
  - Wireless router
  - LAN/WAN router
  - variable voltage control
  - isolation transformer
  - NAS external drives
  - Wireless AP
  - Wireless access card
  - Multifunction meter with temp measure

  Rationale
  The hardware class instructional supplies need to be upgraded regularly.
  Resource Type:
  Ongoing
  Expenditure Category:
  Instructional Supplies (4300)
  First Year Cost/Savings:
  $1,000.00/$0.00
  Second Year Cost/Savings:
  $1,000.00/$0.00
  Third Year Cost/Savings:
  $1,000.00/$0.00

- **1.3.r3 - Cisco Routers and Switches**
  Description
  Routers and switches needed for CIS 140-143 (Cisco Networking) course labs and related hands-on activities.
  Rationale
  The current equipment was purchased 15 years ago and is approaching end of life. The equipment needs to be to meet industry standards. A regular replacement cycle is needed to maintain the currency of the equipoment.
  Resource Type:
  Ongoing
  Expenditure Category:
  Computer & Information Technology Equipment (6420)
  First Year Cost/Savings:
  $10,000.00/$0.00
  Second Year Cost/Savings:
  $10,000.00/$0.00
  Third Year Cost/Savings:
  $10,000.00/$0.00

Actions/Activities:
- **1.3.a1 - Upgrade and acquire necessary software programs**
  Upgrade the following software titles and suites follows:
  - NetOp
  - MSDNAA
  - Adobe Creative Suite
  - Autodesk Entertainment Creation suite
  - VMWare
  - Keyboarding software

  Start Date:
  08/01/2014
  End Date:
  08/31/2019
  Responsible Person:
  CIS Fulltime Lab-Tech
- **1.3.a2 - Purchase Hardware Class Instructional Supplies**
  Start Date:
  08/01/2014
  End Date:
  07/31/2019
  Responsible Person:
  Lab-tech

o **1.4 - Objective - Increase student success by providing daily access to lab tech tutors**
The lab tutor/techs (short term hourly) positions are necessary to provide support to the students outside of the classroom and support to the faculty for software and hardware needs as they arise.

Priority Rank:
5
Start Date:
08/01/2014
End Date:
08/31/2019
Responsible Person:
CIS Department Chair
Strategic Direction:
1. Promote Student Success
Impact Type:
Department
Institutional Learning Outcome:
Not Applicable
Resource Requests:
- **1.4.r1 - Funds to hire Part-time lab techs**
  Description
  3-15 Hourly lab tutors/techs
  Rationale
  Part-time lab techs are needed to maintain regular open lab hours and provide technical assistance to students.
  Resource Type:
  Ongoing
  Expenditure Category:
  Part-Time / Overtime / Student (2380)
  First Year Cost/Savings:
  $10,000.00/$0.00
  Second Year Cost/Savings:
  $10,000.00/$0.00
  Third Year Cost/Savings:
  $10,000.00/$0.00
Actions/Activities:
- **1.4.a1 - Hire Part-time Lab Techs**
  Interview and hire part-time lab tech for each academic year.
  Start Date:
  08/08/2014
  End Date:
  08/31/2019
  Responsible Person:
  CIS Lab Tech & Division Dean

- **2 - Goal - Become the premier CIS/CS program in the Inland Empire**

Priority Rank:
2
Objectives:

- **2.1 - Objective - CIS/CS instructors will maintain professional currency**
  Priority Rank:
  6
  Start Date:
  08/01/2014
  End Date:
  08/31/2019
  Responsible Person:
  CIS Instructors
  Strategic Direction:
  3. Develop Teaching and Learning Practices
  Impact Type:
  Department
  Institutional Learning Outcome:
  Not Applicable
  Resource Requests:
    - **2.1.r1 - Funds for workshops and conferences**
      Description
      Rationale
      Necessary to maintain professional currency.
      Resource Type:
      Ongoing
      Expenditure Category:
      Conference and Travel (5200)
      First Year Cost/Savings:
      $3,500.00/$0.00
      Second Year Cost/Savings:
      $3,500.00/$0.00
      Third Year Cost/Savings:
      $3,500.00/$0.00
  Actions/Activities:
    - **2.1.a1 - Attend technical and/or education workshops and conferences**
      Start Date:
      08/01/2014
      End Date:
      08/31/2019
      Responsible Person:
      CIS Instructors
- **2.2 - Objective - Provide transfer and workforce relevant CIS/CS courses, degrees, and certificates in multiple modalities**
  Review, revise and update all CIS degrees and certificates to increase efficiency, transfer rate and workforce relevancy.

  Priority Rank:
  9
  Start Date:

08/01/2014
End Date:
08/31/2019
Responsible Person:
CIS Faculty
Strategic Direction:
1. Promote Student Success
Impact Type:
Department
Institutional Learning Outcome:
Not Applicable
Actions/Activities:
- **2.2.a1 - Revise CIS/CS degrees and certificate as needed**
  - Review and revise current degrees and certificates as needed
  - Gain discipline wide support for revisions

  Start Date:
  08/01/2004
  End Date:
  08/31/2019
  Responsible Person:
  CIS Department Chair
- **2.2.a2 - Develop new courses, certificates, and/or degrees in high-growth areas.**
- **2.2.a3 - Continue to hold annual advisory meetings with industry and education representatives**

- **2.3 - Objective - Provide student internship and mentoring opportunities in CIS**
  Priority Rank:
  11
  Start Date:
  10/01/2014
  End Date:
  08/31/2019
  Responsible Person:
  CIS Faculty
  Strategic Direction:
  1. Promote Student Success
  Impact Type:
  Department
  Institutional Learning Outcome:
  Not Applicable
  Resource Requests:
  - **2.3.r1 - Provide funding for a professional expert to coordinate internship/mentoring opportunities for students**
    Description
    Rationale

A professional expert will identify and coordinate internship opportunities for CIS students.
Resource Type:
Ongoing
Expenditure Category:
Professional Expert - Non FTE (2389)
First Year Cost/Savings:
$8,000.00/$0.00
Second Year Cost/Savings:
$8,000.00/$0.00
Third Year Cost/Savings:
$8,000.00/$0.00

Actions/Activities:
- **2.3.a1 - Establishing internship and mentoring opportunities**
- **2.3.a2 - Offer internship courses**

o **2.4 - Objective - Increase the number of students in our program as well as the diversity of our program student body.**
Priority Rank:
17
Start Date:
10/01/2014
End Date:
08/31/2019
Responsible Person:
CIS Faculty
Strategic Direction:
2. Build Campus Community
Impact Type:
Department
Institutional Learning Outcome:
Not Applicable
Actions/Activities:
- **2.4.a1 - Update, develop and distribute marketing materials targeting different students**
- **2.4.a2 - Participate in outreach events**

- **3 - Goal - Develop and implement a industry-relevant multimedia/graphic design program.**
Priority Rank:
3
Objectives:
o **3.1 - Objective - Secure Full-time expertise for the multimedia/graphic design program**
Priority Rank:
2
Start Date:
08/01/2014

End Date:
08/31/2019
Responsible Person:
CIS Department Chair
Strategic Direction:
1. Promote Student Success
Impact Type:
Site
Institutional Learning Outcome:
Not Applicable
Resource Requests:
- ▪ **3.1.r1 - Hire a Full-time multimedia/graphic design Faculty Member**
  Description
  Rationale
  The new full-time multimedia/graphic design faculty member would be responsible for managing, growing and updating as required the program courses, certificates and degree. The disicipline is currently lacking a full-time member with expertise in this field, which has been indentified as a rapidly expanding high paying career option.

  Resource Type:
  Ongoing
  Expenditure Category:
  Contract Classroom Inst. (1100)
  First Year Cost/Savings:
  $75,000.00/$0.00
  Second Year Cost/Savings:
  $75,000.00/$0.00
  Third Year Cost/Savings:
  $75,000.00/$0.00

Actions/Activities:
- ▪ **3.1.a1 - Hire new full-time faculty member**
  - ▪ Obtain approval for hiring
  - ▪ Develop a job description
  - ▪ Post job opening
  - ▪ Interview
  - ▪ Hire
  Responsible Person:
  CIS Department Chair
- ○ **3.2 - Objective - Develop a fully-transferable multimedia/graphic design degree**
  Priority Rank:
  12
  Start Date:
  09/01/2014
  End Date:

08/31/2019
Responsible Person:
CIS Full-time Faculty
Strategic Direction:
7. Develop Programs and Services
Impact Type:
Department
Institutional Learning Outcome:
Not Applicable
Actions/Activities:
- **3.2.a1 - Develop New Courses**
  Plan and develop new courses in areas that are identified by the digital media expert and/or full-time instructor.
  Start Date:
  09/01/2014
  End Date:
  08/31/2019
  Responsible Person:
  CIS Department Chair
- **3.2.a2 - Develop transfer degree in multimedia/graphic design**
- **3.2.a3 - Align program courses, degrees, and certificates to industry certifications and demands**

o **3.3 - Objective - Continue to develop the makerspace project, which was initially funded by the strong workforce grant.**
Priority Rank:
16
Start Date:
06/01/2018
End Date:
07/31/2019
Responsible Person:
Makerspace consultant, CIS faculty and staff
Strategic Direction:
1. Promote Student Success
Impact Type:
Site
Institutional Learning Outcome:
Not Applicable
Resource Requests:
- **3.3.r1 - Provide funding for a consultant/coordinator of the makerspace project**
  Description
  Rationale
  A digital media expert is needed to oversee and develop the makerspace.
  Resource Type:
  Ongoing

Expenditure Category:
Professonal Expert - Non FTE (2389)
First Year Cost/Savings:
$35,000.00/$0.00
Second Year Cost/Savings:
$35,000.00/$0.00
Third Year Cost/Savings:
$35,000.00/$0.00

- **3.3.r2 - Purchase supplies and equipment for the makerspace project**
  Description
  Rationale
  Equipment, software, and supplies for emerging technologies, such as 3D printers and virtual reality headsets.
  Resource Type:
  Ongoing
  Expenditure Category:
  Computer & Information Technology Equipment (6420)
  First Year Cost/Savings:
  $10,000.00/$0.00
  Second Year Cost/Savings:
  $8,000.00/$0.00
  Third Year Cost/Savings:
  $8,000.00/$0.00

- **3.3.r3 - Part-time Makerspace Staff**
  Description
  Rationale
  Part-time staff is needed to oversee the space during its open hours.
  Resource Type:
  Ongoing
  Expenditure Category:
  Part-Time / Overtime / Student (2380)
  First Year Cost/Savings:
  $10,000.00/$0.00
  Second Year Cost/Savings:
  $10,000.00/$0.00
  Third Year Cost/Savings:
  $10,000.00/$0.00

Actions/Activities:

- **3.3.a1 - Secure and develop a space for the project**

11. Comments

This space is provided for participants and managers to make additional comments. Comments are not required.
There are no comments for this plan.

12. Supporting Documents

This question is for attaching supplemental materials. Supporting documents are not required.

- [CIS-CSCI Course Matrix 141003.xlsx](#)
- [07 Perkins SummPerformDetailReportbyCollegeTOP2.pdf](#)
- [CIS Degrees and Certificates for past 5 years.pdf](#)
- [articulated course listing.pdf](#)
- [CIS job market data in the local region 2013.pdf](#)