

# Plans for Computer Information Systems >> 2014 - 2015 Computer Information Systems CHC Instructional Program Review 2014-2015

This page is suitable for printing. Just use the print option in your browser or you can [print this page](#).

**Name :**

2014 - 2015 Computer Information Systems CHC Instructional Program Review 2014-2015

**Principal Preparer :**

Denise Allen and Margaret Yau

**Progress Report Preparer :**

Denise Allen and Margaret Yau

**Version:** 50

**Group:** 2014 - 2015

**Type:** CHC Instructional Program Review 2014-2015

**Last Modified On:** 11/6/2014 11:03:28 AM

**Last Modified By:** Benjamin Gamboa

**State:** Submitted (**Finalized**)

**State By:** Benjamin Gamboa

## Instructions

Please respond to the following questions. Please consult the [Integrated Planning and Program Review Handbook](#) for detailed instructions.

### 1. Description of Program

1. Assume the reader doesn't know anything about your program. Please describe your program, including the following:

- a. Organization (including staffing and structure)
- b. Mission, or primary purpose
- c. Whom you serve (including demographics) - Click [HERE](#) to view program and college demographics.
- d. What kind of services you provide
- e. How you provide them (including alternative modes and schedules of delivery: e.g.: online, hybrid, early morning, evening services)
- f. **Rubric Item:** Describe how your curriculum is up-to-date and [Needs-Based](#). Base the description on surveys, environmental scan 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.
- g. **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](#).

## **2. External Factors with Significant Impact**

2. 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:

<b>Occupational Title</b>	<b>2010 Annual Average</b>	<b>2012 Annual Average</b>	<b>Employment Change</b>	<b>2010 to 2020 Percent</b>
---------------------------	----------------------------	----------------------------	--------------------------	-----------------------------

	<b>Employment</b>	<b>Employment</b>		<b>Change</b>
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.

### 3. Outcomes Assessment Reporting

Outcomes Assessment Reporting – **Rubric Item:** [Student Learning Outcomes](#). Please use the following tool to report each course or program that was assessed this year, the type of outcome assessed, and the ILO the outcome maps to. In addition, also provide

the [Five Column Assessment](#) information in the spaces provided: learning outcomes statement, means of assessment, criteria for success, summary of evidence, and the use of results. If you prefer, the Five Column Assessment information can be attached as a separate document. Additionally, other supporting documents that you wish to include can also be attached to the outcome.

- CIS 143
- **Statement:** Configure a Basic Frame Relay permanent virtual circuit (PVC), on a router serial interface with static routing.

**Measurement:** A 4 Point Rubric - to score a PKT-based hands on task.3 – Both side of the circuit are configured with Frame Relay IETF. Both routers have the correct static routes configured with the next hop ip argument. Pings between PC1 and PC2 are successful.2 – The serial interfaces on R1 and R2 are correctly configured with frame-relay. The ietf option may be missing. The static route on R1 and the static route on R2 are configured however they contain configuration errors and/or are entered as default-routes.1 – The serial interfaces on R1 and R2 are correctly configured with frame-relay. The ietf option may be missing. One or both of the static routes on R1 and R2 are missing. Pings between PC1 and PC2 are not successful.0 – The serial interfaces on R1 and R2 are not configured with frame-relay ietf. The static route on R1 and the static route on R2 are missing. Pings between PC1 and PC2 are not successful

**Benchmark:** A score of 2 or 3 on the assessment

**Evidence:** 15 of the 15, or 100% of the students in the Spring 2014 CIS 143 class scored a 3 on this outcome.

**Implications:** An increased emphasis on static routes resulted in the successful completion of all required tasks, student understanding of this concept has been validated.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** CriticalThinking

- **Statement:** Upon successful completion of CCNA 4, students will be able to configure DHCP on a Cisco router

**Measurement:** A 4 Point Rubric - to assess a PKT-based hands on task.3 – The router has a DHCP pool defined for the supported network. The default gateway is correctly configured for the LAN. The excluded addresses are defined. The fast Ethernet port has been assigned an ip address from the address range assigned to the LAN.2 – The router has the correct DHCP pool defined for the supported network. Either the default gateway or the excluded ip addresses are incorrect or missing. The fast Ethernet port has been assigned an ip address from the address range assigned to the LAN.1 – The router has the correct DHCP pool defined for the supported network. however the excluded addresses are not defined and the default gateway addresses is missing. The fast Ethernet port address is missing or has an incorrect ip address for the LAN.0 – DHCP has not been configured. Interface addressing is missing

**Benchmark:** A score of 3 on the assessment

**Evidence:** 15 of the 15, or 100% of the Spring 2014 CIS 143 students scored a 3 on this outcome.

**Implications:** 100% of the students were able to complete all required tasks. No additional instruction on the configuration of DHCP is required.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo



**ILO Type:** CriticalThinking

- **Statement:** Upon successful completion of CCNA 4, students will be able to configure NAT on a Cisco router

**Measurement:** A 4 Point Rubric - to assess a PKT-based hands on task.3 – A standard ACL has been creating defining the addresses to be translated. The ACL has been applied to Outside interface on the border router. The router interfaces have been configured as either inside or outside. The nat pool has been configured with the correct address for translation. The NAT statement correctly matches the ACL to the NAT pool.2 – The required ACL is missing and has not been applied to the outside interface. The router interfaces have been configured as either inside or outside. The nat pool has been configured with the correct address for translation. The NAT statement correctly matches the ACL to the NAT pool.1 – The required ACL is missing and has not been applied to the outside interface. The router interfaces are not configured as either inside or outside. The nat pool has been configured with the wrong addresses for translation. The NAT statement has been correctly configured.0 – The required ACL is missing. There is no ACL on the outside interface. The router interfaces have not been configured as either inside or outside. There is no NAT pool defined. The NAT statement is missing

**Benchmark:** A 2 or better on the assessment item.

**Evidence:** 14 of the 15, or 93.3% of the students in the Spring 2014 CIS 143 class scored a 3 on this outcome1 of the 15, or 6.7% of the students in the Spring 2014 CIS 143 class scored a 2 on this outcome. While the ACL will not work with any of the errors as described in the Rubric score of 2, all errors are minor and would be easy to revise.

**Implications:** Given that a majority of students were able to complete this outcome with a 2 or better, no re-teaching or curriculum modifications are required.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** CriticalThinking

- **Statement:** Upon successful completion of CCNA 4, students will be able to configure PPP encapsulation with CHAP authentication

**Measurement:** A 4 Point Rubric - to score the PKA-based hands on task.3 – Both side of the circuit are configured with PPP encapsulation with CHAP authentication. The username and password configuration is correct on both ends of the link2 – PPP encapsulation has been configured on both ends of the connecting serial interfaces. CHAP authentication been setup. The usernames and passwords have not been configured on one side and or the wrong usernames and passwords were setup up on one or both ends of the WAN link.1 – PPP encapsulation has been configured on both ends of the connecting serial interfaces. CHAP authentication has not been setup. The usernames and passwords have not been configured on one or both sides 0 – The serial interfaces have not been configured for PPP. Usernames and passwords have not been configured on either router

**Benchmark:** A score of 3

**Evidence:** 15 of the 15, or 100% of the students scored a 3 on this assessment task.

**Implications:** All students were able to complete this task with 100% accuracy. No intervention or remediation is required

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** CriticalThinking

- CIS 142
  - **Statement:** Upon successful completion of CCNA 3, students will be able to develop a network design that includes both LAN and WAN technologies to meet specified user requirements.
 

**Measurement:** 4 Point Rubric3 – The student was able to develop a complete network design including both LAN and WAN technologies that meets the specified requirements.2 – The student was able to develop a network design including both LAN and WAN technologies however one of the specified requirements was not included in their design1 – The student was able to develop a network design including both LAN and WAN technologies however two or three of the specified requirements were not included in the design0 – The network design did not meet a majority of the LAN and WAN requirements as specified.

**Benchmark:** A score of two or better on the task.

**Evidence:** For the Spring 2014 CIS 143 class all 15 or 100% of the students successfully completed this network design task

**Implications:** No reteaching is required

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** CriticalThinking
  - **Statement:** Upon successful completion of CCNA 3, students will be able to Plan and implement a VLSM IP addressing scheme for a specified network topology
 

**Measurement:** 4 point rubric - 3 – An appropriate VLSM addressing scheme has been developed. The students have demonstrated the allocation thorough the use of a 256 block(s). The block(s) are properly split and the addresses are assigned to networks. The student has developed an address allocation list/table.2 – An appropriate VLSM addressing scheme has been developed. The students have demonstrated the allocation thorough the use of a 256 block(s). The block(s) are properly split and the addresses are assigned to networks. The student has developed an address allocation list/table however some networks are missing addressing (WAN links for example) and/or have the incorrect mask values applied.1 – A VLSM addressing scheme has been developed. The students have demonstrated the allocation thorough the use of a 256 block(s). The network addresses have not been assigned to the topology networks.0 – Address scheme is not completed. No evidence of any ability to complete the assigned task

**Benchmark:** A score of 2 or better on the assessment task.

**Evidence:** 12 out of the 15 or 80% of the students in the Spring 2014 CIS 142 class scored a 3 on this item.2 out of the 15 or 13.3% of the students in the Spring 2014 CIS 142 class scored a 2 on this item1 out of the 15 or 6.7% of the students in the Spring 2014 CIS 142 class scored a 1 on this item

**Implications:** The results of this assessment indicate achievement of the SLO. The three students who scored below a 3 submitted incomplete addressing plans and have since completed all tasks and resubmitted the completed plans. Additional instruction on subnetting will be included in the Spring 2015 term.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** CriticalThinking
  - **Statement:** Upon successful completion of CCNA 4, students will be able to Select and configure one or more classless dynamic routing protocols (RIPv2, EIGRP and/or single-area OSPF) for a given network topology.

**Measurement:** 4 Point Rubric3 – Single area OSPF has been configured on both routers. The correct network statements have been entered on both routers.2 – Single area OSPF has been configured on both routers. One of the two network statements on the routers have been entered incorrectly.1 – Single area OSPF may be configured on one of the routers, but not both. The network statements entered on one or both routers contain errors.0 – Single area OSPF has not been configured on either router.

**Benchmark:** A score of 2 or better on the assessment task.

**Evidence:** All 15 or 100% of the students in the Spring 142 class scored a 3 on this assessment

**Implications:** All students were able to complete this task. No reteaching or changes to the instructional program are needed.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** CriticalThinking

- **Statement:** Upon successful completion of CCNA 4, students will be to create and apply standard ACLs to permit or deny IP traffic

**Measurement:** A 4 point Rubric3 – A standard ACL has been configure on Router 2 according to the specified user requirements and has been applied inbound on the Serial 0/0/0 interface2 – A standard ACL has been configure on Router 2 according to the specified user requirements but it has not been applied inbound on the Serial 0/0/0 interface1 – A standard ACL has been configure on Router 2 but it does not satisfy the user requirements and may or may not have applied inbound on the Serial 0/0/0 interface0 – An ACL may or may not be present. If one is present it does not match the user requirements and has not been applied to the serial interface

**Benchmark:** A score of 2 or better on the assessment.

**Evidence:** 13 of the 15 or 86.6% of the students in the Spring 2014 CIS 143 class were able to complete this task with a score of 3.1 of the 15 or 6.7% of the students in the Spring 2014 CIS 143 class completed this task with a score of 2.1 of the 15 or 6.7% of the students in the Spring 2014 CIS 143 class completed this task with a score of 1.

**Implications:** Only two of the 15 students in the class was able to complete this task as assigned. One of the two students achieved a 2 on the assessment which meets the criteria for success. The other student scored a 1 as the ACL contained a syntax error and was not applied to the the interface. Given that a clear majority of the students completed the task no reteaching is required.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** CriticalThinking

- CSCI-120

- **Statement:** Student will design, implement, test, and debug programs in an object-oriented programming language.

**Measurement:** In the final group project, students worked in teams to design object-oriented programs in C++ to solve a problem of their choice with sufficient complexity. Students engaged in the design, implementation, and testing of their object-oriented programs.

**Benchmark:** 80% of students were able to successfully create their object-oriented programs (with at least 3 classes) in C++. A student is considered to be successful in

this assessment if he or she scores 75% or higher in the design and implementation of C++ object-oriented program.

**Evidence:** 10 out of 12 students (83%) performed satisfactorily by scoring a 75% or more in the assessment. The two students who did not perform satisfactorily in this assessment was the only students who did not complete the assessment.

**Implications:** In this assessment, students demonstrated that they were able to successfully design, implement, and test C++ object-oriented programs in order to solve a problem. In order to ensure all students complete the assessment, additional checkpoint will be added during the project assignment time frame to keep students on track in completing the assessment.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** CriticalThinking

- CIS 101

- **Statement:** Students will be able to create, modify, and save a Microsoft Excel workbook, including inserting formulas, applying styles, and creating charts.

**Measurement:** Students were required to complete a multi-task skills based MS Excel exam. Individual scores were compiled and reported as a percentage of skills successfully completed out of the total number of skills attempted. Individual scores from each course section were combined and reported out as a single class section percentage. All section scores were combined as a single course-wide percentage.

**Benchmark:** Students will meet rubric level 3 or higher in at least 70% of the tasks. Rubric Level Description 1 No demonstrated achievement (0% - 49%) 2 Minimal evidence of achievement – below expectations (50% - 70%) 3 Adequate evidence of achievement – met stated outcome or expectations (70% - 89%) 4 Significant evidence of achievement – surpassed stated outcome, mastery or near mastery of learning expectations ( $\geq 90\%$ )

**Evidence:** Rubric level 1 = 6 (15%) Rubric level 2 = 6 (15%) Rubric level 3 = 14 (35%) Rubric level 4 = 18 (45%) Students met rubric levels 3 or high in at least 70% of the tasks.

**Implications:** The criterion for success was just met. The results show that students demonstrate satisfactory skills in using MS Excel. However, there are a number of tasks with which students struggle, such as using goal seek, using absolute cell reference, inserting functions, and formatting charts. The faculty members will spend additional effort in explaining the concepts and skills related to these tasks.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** InformationLiteracy

**Evidence Files:**

- [CIS101-excel-data-sp14.pdf](#)

- **Statement:** Students will be able to create, modify, and save a Microsoft Word document, including formatting and modifying text and paragraphs, inserting graphics and bulleted lists, creating a bibliography and inserting a research source.

**Measurement:** Students were required to complete a multi-task skills based MS Word exam. Individual scores were compiled and reported as a percentage of skills successfully completed out of the total number of skills attempted. Individual scores from each course section were combined and reported out as a single class section percentage. All section scores were combined as a single course-wide percentage.

**Benchmark:** Students will meet rubric level 3 or higher in at least 70% of the tasks.1 No demonstrated achievement (0% - 50%)2 Minimal evidence of achievement – below expectations (50% - 70%)3 Adequate evidence of achievement – met stated outcome or expectations (70% - 89%)4 Significant evidence of achievement – surpassed stated outcome, mastery or near mastery of learning expectations ( $\geq 90\%$ )

**Evidence:** Rubric level 1 = 1 (3%)Rubric level 2 = 1 (3%)Rubric level 3 = 20 (50%)Rubric level 4 = 18 (45%)Students met rubric levels 3 or high in at least 95% of the tasks.

**Implications:** The results show that students demonstrate satisfactory skills in using MS Word. The faculty noticed that the two tasks with which students most struggled are creating a tab stop and creating a hanging indent. The faculty members will spend additional effort in explaining the concepts and skills related to these two tasks.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** InformationLiteracy

**Evidence Files:**

- [CIS101-word-data-sp14.pdf](#)

- CIS-165

- **Statement:** Create and apply basic textures using UV maps.

**Measurement:** Students will apply maps and textures to a provided set of models in an in-class project. A four-point rubric will be applied as follows: 0 - Student demonstrates a lack of skill or understanding. 1 - Student demonstrates moderate skill with major deficiencies. 2 - Student demonstrates strong skills with minor deficiencies. 3 - Student demonstrates strong skills.

**Benchmark:** 70% of students will be rated at 2 or higher based the above rubric.

**Evidence:** 94% of students scored 2 or higher overall.

**Implications:** Students demonstrated overall strong skills, and the department is satisfied with the results.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** Unknown

- **Statement:** Create simple animation using keyframe techniques.

**Measurement:** Students will animate a basic character model provided to them in an in-class project. A four-point rubric will be applied as follows: 0 - Student demonstrates a lack of skill or understanding. 1 - Student demonstrates moderate skill with major deficiencies. 2 - Student demonstrates strong skills with minor deficiencies. 3 - Student demonstrates strong skills.

**Benchmark:** 70% of students will be rated at 2 or higher based the above rubric.

**Evidence:** 92% of students scored 2 or higher overall.

**Implications:** Students demonstrated overall strong skills, and the department is satisfied with the results.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** Unknown

- **Statement:** Model basic polygonal and NURBs objects.

**Measurement:** Students will model a basic game room with a specific set of criteria in-class. A four-point rubric will be applied as follows: 0 - Student demonstrates a lack of

skill or understanding. 1 - Student demonstrates moderate skill with major deficiencies. 2 - Student demonstrates strong skills with minor deficiencies. 3 - Student demonstrates strong skills.

**Benchmark:** 70% of students will be rated at 2 or higher based the above rubric.

**Evidence:** 83% of students scored 2 or higher overall.

**Implications:** Students demonstrated overall strong skills, and the department is satisfied with the results.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** Unknown

**Evidence Files:**

- [undefined](#)
- [undefined](#)
- [undefined](#)
- [undefined](#)
- [undefined](#)

- CIS-111

- **Statement:** Students can use the approved storyboard design to create a web site to meet the user's needs and post and validate completed web site.

**Measurement:** As a part of their final web design group projects, students worked in teams to design web sites for their intended users. Each team of students was asked to develop a web site based on an approved storyboard design, as well as to validate and post their completed web site.

**Benchmark:** 80% of student in the class were able to develop, validate, and post satisfactory web sites based on their storyboards. A web site is considered satisfactory if it receives a score of 75% (the score is based on HTML5 validation, valid hyperlinks, link to external CSS, documentation, and content).

**Evidence:** 24 out of 27 student teams (89%) received satisfactory scores in completed the activities of developing, validating, and posting their completed web sites.

**Implications:** The results show that students demonstrate satisfactory knowledge and skills in developing, validating, and posting their web sites. Lecture and class activities on these web design skills were effective.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** CriticalThinking

- CIS-163

- **Statement:** Successfully correct and enhance existing raster-based imagery.

**Measurement:** In-class timed project in which students create a montage with a series of digital images. A four-point rubric will be applied as follows: 0 - Student demonstrates a lack of skill or understanding. 1 - Student demonstrates moderate skill with major deficiencies. 2 - Student demonstrates strong skills with minor deficiencies. 3 - Student demonstrates strong skills.

**Benchmark:** 70% of students will be rated at 2 or higher based the above rubric.

**Evidence:** 79% of students scored 2 or higher overall.

**Implications:** Students demonstrated overall strong skills, and the department is satisfied with the results.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** Unknown

- **Statement:** Successfully create original artwork and designs for use in screen and print publications.

**Measurement:** Students create an original design for the Crafton Hills College course schedule. A four-point rubric will be applied as follows: 0 - Student demonstrates a lack of skill or understanding. 1 - Student demonstrates moderate skill with major deficiencies. 2 - Student demonstrates strong skills with minor deficiencies. 3 - Student demonstrates strong skills.

**Benchmark:** 70% of students will be rated at 2 or higher based the above rubric.

**Evidence:** 84% of students scored 2 or higher overall.

**Implications:** Students demonstrated overall strong skills, and the department is satisfied with the results.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** Unknown

- CSCI 110

- **Statement:** Student will analyze problems and design algorithms in pseudocode and in a high-level language.

**Measurement:** In the final group project, students worked in teams to design C++ programs to solve a problem of their choice with sufficient complexity. Students designed algorithms in both pseudocode and C++.

**Benchmark:** 80% of students were able to successfully write pseudocode for their programs and create their programs in C++. A student is considered to be successful in this assessment if he or she scores 75% or higher in the pseudocode and implementation of C++ program.

**Evidence:** 19 out of 20 students (95%) performed satisfactorily by scoring a 75% or more in the assessment. The one student who did not perform satisfactorily in this assessment was the only student who did not complete the assessment.

**Implications:** In this assessment, students demonstrated that they were able to successfully create pseudocode and C++ programs in order to solve a problem.

**Is Completed:** Yes

**Is Assessed:** Yes

**Outcome Type:** Slo

**ILO Type:** CriticalThinking

## 4. Progress on SLOs

**Rubric Item:** [Student Learning Outcomes](#)

- a. Please summarize the progress your unit has made on program and/or course level SLO measures you have applied since your last program review.
- b. Please describe any program/course and/or instructional improvements made by your unit as a result of the outcomes assessment process.
- c. What is your plan for continuously completing the assessment cycle?
- d. If your program has SAOs, please discuss here.

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

Student Learning Outcomes have been developed for all of the CIS/CS courses. The part-time and the full-time faculty members have assessed Student Learning Outcome

in all of the courses we have offered since the last program review. However, the assessed SLOs, rubrics and related results and instructional improvements have not been published in a standardized manner. Many of the CIS/CS courses are only taught by part-time instructors and the results of these SLOs assessments are currently on file with the instructor. The 1.4 full-time faculty members have discussed the reporting options for SLOs and have agreed to use the PPR tool as the method in which SLOs and the associated results, improvements, etc. will be published. The part-time faculty members have been granted access to the tool and will be shown how to input their SLO results. Finally, since the union negotiated compensation for both full-time and part-time faculty, the development, assessment, and reporting of outcomes should improve.

### **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: The additional of practice exams for both hands-on skills and concepts, a greater emphasis on hardware components and their related function, and a greater emphasis on software, hardware and information/data security. The instruction and assessment for CIS 101, for which multiple sections taught by different instructors are offered, was modified based on discussion among the instructors. The instructors of CIS 101 reviewed test results and decided to implement a hands-on Excel instructional activity to help reinforce concepts with which a significant number of students struggle. In addition, practice exams were created for CIS 101 to help students prepare for the hands-on assessments.

### **C. Plan for continuously completing the assessment cycle**

As had already been stated, CIS/CS courses and related instruction changes at a rapid pace. In fact, it is not unusual for a course to be revised every three to four years to keep pace with the latest IT trends and application updates. This presents a challenge if SLOs are only assessed once per course every four years. Especially given that the SLOs may need to be revised, when the course is updated to reflect the latest trends in IT knowledge and skills. As such, a best practice for CIS/CS courses may be to develop and assess SLOs at least once per academic year to see if changes in instructional content or approach for essential course skills is deemed necessary for the next iteration of the course.

In fall of 2014, SLOs will be assessed in the following CIS/CSCI courses: CIS 111, 113, 130, 140, 141, 161, 180, 182, 184 and CSCI 110, 120, and 240. The discipline will discuss the results in the spring of 2015, make recommendations, and implement instructional revisions as required in the Fall of 2015 in order to improve student learning as needed.

SLOs will be reviewed, revised as needed and assessed in the following CIS/CSCI courses if they are actually offered during the Spring 2015 term including: CIS 101, 104, 117, 142, 143, 162, 163, 165, 166, 173 and CSCI 200 and 230. The assessment results and analysis thereof will be input using the SLOs data and results entry tool embedded in the PPR.

## **5. Quantitative and Qualitative Results**

5. Please provide...

- a. A list of any quantitative or qualitative measures not provided in question 5 that you have chosen to gauge your program's effectiveness (e.g.: transfers, degrees, certificates, satisfaction, student contacts, student headcount, Perkin's data, etc.)



- b. A summary of the results of these measures
- c. What did you learn from your evaluation of these measures, and what improvements have you implemented or do you plan to implement as a result of your analysis of these measures?

### **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 received 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 advocate 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 Improvements**

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.

## 6. Performance on Data Items

Please discuss your program's performance on each program specific data item as provided by the Office of Research and Planning. If you have already discussed your programs performance on one or more these components then refer to that response here, rather than repeating it.

a. Instructional Program Health Evaluation Rubric (The rubric is available in Blackboard, on the OIERP Web Site, and in the PPR Handbook.)

i) **Rubric Item:** Use the data provided by the OIERP to set a [Course Completion Rate](#) (formally retention) target and provide an explanation for the

target that has been set. **Click [HERE](#) to access your program specific data.**

ii) **Rubric Item:** Use the data provided by the OIERP 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 the data provided by the OIERP 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 [HERE](#) to access your program specific data.**

### **I. Course Completion Rate**

The CIS course completion rate for 2013-14 is 92% (905 total / 987 GOR). This has increased from 86% since our last program review. The CSCI course completion rate for 2013-14 is 90% (44 total / 49 GOR). The target for course completion rate for our program is set to 88%, which is in line with the Crafton completion rate target and the increasing trends for the last four years.

### **II. Course Success Rate**

The course success rate for CIS courses is currently at 67% and has remained at a similar level as our last program review. The course success rate for CSCI is 73.5%. 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 73.4%.

### **III. FT/PT Faculty Ratio**

The FT/PT faculty ratio for the CIS courses has decreased from 40% to 34% over the past 5 years. The CSCI FT/PT ratio is 54%. Currently the discipline has 1.4 full-time faculty members in a program that requires multiple areas of expertise. As has already been stated, the discipline 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 a 66% ratio. 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 is currently at 391, and the WSCH/FTEP ratio for CSCI courses is at 305. The discipline has set a target WSCH/FEF ratio of 400. This would equate to approximately 25-30 students per class which seems doable as LADM 220 and 216 can accommodate 30 students and LADM 101 can accommodate 35. 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 been able to do because of the budget cuts.

## **V. Fill Rate**

The 2013-14 fill rate in CIS courses is 81%, and the fill rate in CSCI courses is 58%. The fill rate of 81% in 2013-14 is significantly lower than the previous year rate of 90% because the course caps have not been set to match historical trends but instead are set to the room sizes. For example, the historical trend for CIS 116 is 12 - 18 students, but the course cap was set to 30 in 2013-14. The fill rate in the CSCI courses is significantly lower than the target of 80% because the new CSCI courses were first introduced in 2013-14--we expect the fill rate to increase as more students learn about the CSCI program.

## **7. Evaluation**

Based upon and not repeating the descriptions you provided in Question 1 and the responses provided in Questions 2-6, please provide an analysis of what is going well and why and what is not going well and why, in the following areas:

- Representativeness of population served
- Alternative modes and schedules of delivery (e.g.: online, hybrid, early morning, evening services)
- Partnerships (internal and external)
- Innovation and Implementation of best practices
- Efficiency in operations
- 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 and Mission**

a. Tell us your 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. **Rubric Item (Alignment): In what ways does** your [mission](#) and [vision](#) align with and contribute to the college's mission and vision, as specified in the CHC Educational Master Plan?

### **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 offer for the past number of years due to budget constraints.
- Promote student success
- 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**

Briefly summarize the progress your unit has made in meeting the goals and objectives identified in your last Four-Year Action Plan.

- **1 - Goal - Continue to offer a well-rounded, effective CIS program**

**Priority Rank:**

1

**Objectives:**

- **1.1 - Objective - All courses will be taught in a high quality technically current Environment**



**Priority Rank:**

1

**Original Start Date:**

11/09/2010

**Original End Date:**

09/01/2014

**Revised Start Date:**

11/09/2010

**Revised End Date:**

09/01/2014

**Responsible Person:**

CIS Department Chair

**Strategic Direction:**

None

**Impact Type:**

-- Pick One --

**Resource Requests:**

- **1.1.r1 - Replacement of all CIS lab PCs**

**Description**

In order to maintain a quality learning environment, the computer hardware should be upgrade on a three-year cycle. The CHC IT plan calls for the replacement of the CIS lab computers every four years. One of our labs should have been upgraded this fall, the other two labs are due for replacement at the end of the current academic year. SAME AS 3.1.1 resource request.

**Rationale****Resource Type:**

Ongoing

**Expenditure Category:**

Equipment

**Funded:**

Yes

**Funding Source:**

District IT hardware replacement

**First Year Cost/Savings:**

\$51,000.00/\$0.00

- **1.1.r2 - Lighting Modification**

**Description**

The lighting in the LADM 101, 216 and 220 labs needs to be modified to support quality instruction. The lights in LADM 101 do not turn on and off completely, this needs to be fixed to support proper lighting for teaching and learning. The classroom lights in LADM 216 & 220 need to be rewired on two switches so that the front of the room lights can be shut off while the back two rows of lights remain on.

**Rationale**

With all lights on, the video projected images is washed out and is difficult for students to see. With all lights off the students are unable to read the instructions and view images in their course textbooks.

**Resource Type:**

One-time

**Expenditure Category:**

Facilities

**Funded:**

Yes

**Funding Source:**

CHC maintenance

**First Year Cost/Savings:**

\$5,000.00/\$0.00

**Actions/Activities:**▪ **1.1.a1 - Upgrade PCs in all CIS labs**

In order to maintain a quality learning environment, the computer hardware should be upgrade on a three-year cycle. The CHC IT plan calls for the replacement of the CIS lab computers every four years. One of our labs should have been upgraded this fall, the other two labs are due for replacement at the end of the current academic year.

**Start Date:**

06/01/2011

**End Date:**

07/29/2011

**Responsible Person:**

CHS IT Department

**Status Code:**

Work is Completed and Ongoing

**Progress Description:****Measurements/Documentation of Progress:**▪ **1.1.a2 - Modify/Replace Lights**

The lighting in the LADM 101, 216 and 220 labs needs to be modified to support quality instruction. The lights in LADM 101 do not turn on and off completely, this needs to be fixed to support proper lighting for teaching and learning. The classroom lights in LADM 216 & 220 need to be rewired on two switches so that the front of the room lights can be shut off while the back two rows of lights remain on. With all lights on, the video projected images is washed out and is difficult for students to see. With all lights off the students are unable to read the instructions and view images in their course textbooks.

**Start Date:**

11/09/2010

**End Date:**

06/01/2011

**Responsible Person:**

CHC Maintenance

**Status Code:**

Objective was Removed

**Progress Description:****Measurements/Documentation of Progress:**○ **1.2 - 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:**

2

**Original Start Date:**

08/15/2011

**Original End Date:**

08/15/2013

**Revised Start Date:**

08/15/2011

**Revised End Date:**

08/15/2013

**Responsible Person:**

CIS Department Chair

**Strategic Direction:**

None

**Impact Type:**

-- Pick One --

**Resource Requests:**▪ **1.2.r1 - Software Acquisition****Description**

- Annual NetLabs Support - \$2500 (summer 2011)
- NetOp Upgrade - \$1300 (summer 2013)
- Ghost Upgrade - \$1700 (summer 2013)
- MSDNAA Renewal - \$1000 (summer 2013)

**Rationale**

To maintain remote access to routers and switches

**Resource Type:**

Ongoing

**Expenditure Category:**

Software

**Funded:**

Yes

**Funding Source:**

District IT fund and Perkins

**First Year Cost/Savings:**

\$2,500.00/\$0.00

**Second Year Cost/Savings:**

\$2,500.00/\$0.00

**Third Year Cost/Savings:**

\$6,500.00/\$0.00

▪ **1.2.r2 - Hardware Class Instructional Supplies****Description**

- qty -4- Intel Core Duo barebones kits: \$600ea = \$2,400
- qty -4- Intel Core Quad barebones kits: \$800ea = \$3,200
- qty -4- barebones laptop kit: \$900ea = \$3600
- qty -2- Inkjet networkable printer: \$250ea = \$500
- qty -2- Laser networkable printer: \$300ea = \$600
- qty -4- Linksys router: \$80ea = \$320
- qty -4- D-Link 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: \$90each = \$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 are out of date and need to be upgraded.

**Resource Type:**

One-time

**Expenditure Category:**

Equipment

**Funded:**

Yes

**Funding Source:**

Perkins

**First Year Cost/Savings:**

\$15,850.00/\$0.00

**Third Year Cost/Savings:**

\$4,000.00/\$0.00

**Actions/Activities:**

▪ **1.2.a1 - Software Acquisition**

Upgrade the following software titles and suites follows:

- NetLabs: \$2400 (every year),
- NetOp: \$1300, Ghost: \$1700,
- MSDNAA: \$1000 (Summer 2013).
- Adobe Creative Suite Design Premium 5: \$23,000 (Summer 2011)
- Autodesk Entertainment Creation suite: \$23,000 (Summer 2011).

**Start Date:**

08/01/2011

**End Date:**

08/01/2013

**Responsible Person:**

CIS Fulltime Lab-Tech

**Status Code:**

Work is Completed and Ongoing

**Progress Description:**

**Measurements/Documentation of Progress:**

▪ **1.2.a2 - Purchase Hardware Class Instructional Supplies**

- qty -4- Intel Core Duo barebones kits: \$600ea = \$2,400
- qty -4- Intel Core Quad barebones kits: \$800ea = \$3,200
- qty -4- barebones laptop kit: \$900ea = \$,3600
- qty -2- Inkjet networkable printer: \$250ea = \$500
- qty -2- Laser networkable printer: \$300ea = \$600
- qty -4- Linksys router: \$80ea = \$320
- qty -4- D-Link 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: \$90each = \$360.00
- qty -8- Wireless access card: \$50ea = \$400.00
- qty -8- Multifunction meter with temp measure: \$200ea = \$1,600.00

**Start Date:**

03/01/2011

**End Date:**

07/29/2011

**Responsible Person:**

Lab-tech

**Status Code:**

Work is Completed and Ongoing

**Progress Description:****Measurements/Documentation of Progress:**

- **1.3 - 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:**

1

**Original Start Date:**

08/01/2011

**Original End Date:**

08/01/2014

**Revised Start Date:**

08/01/2011

**Revised End Date:**

08/01/2014

**Responsible Person:**

CIS Department Chair

**Strategic Direction:**

None

**Impact Type:**

-- Pick One --

**Resource Requests:**

- **1.3.r1 - Hire Part-time lab techs**

**Description**

3-15 Hour lab tutors/techs

**Rationale****Resource Type:**

Ongoing

**Expenditure Category:**

Personnel

**Funded:**

Yes

**Funding Source:**

Perkins

**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 - Hire Part-time Lab Techs**

Interview and hire part-time lab tech for each academic year.

**Start Date:**

08/08/2011

**End Date:**

08/01/2014

**Responsible Person:**

CIS Department Chair

**Status Code:**

Work is Completed and Ongoing

**Progress Description:**

**Measurements/Documentation of Progress:**

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

**Priority Rank:**

2

**Objectives:**

- **2.1 - Objective - CIS instructors will maintain professional currency**

**Priority Rank:**

1

**Original Start Date:**

03/01/2011

**Original End Date:**

08/01/2013

**Revised Start Date:**

03/01/2011

**Revised End Date:**

08/01/2013

**Responsible Person:**

CIS Instructors

**Strategic Direction:**

None

**Impact Type:**

-- Pick One --

**Resource Requests:**

- **2.1.r1 - Provide money to attend workshops and conferences**

**Description**

**Rationale**

Necessary to maintain professional currency.

**Resource Type:**

Ongoing

**Expenditure Category:**

Other

**Funded:**

Yes

**Funding Source:**

Perkins

**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 workshops and conferences**

**Start Date:**

03/01/2011

**End Date:**

08/01/2013

**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 degrees and Certificate**

Review, revise and update all CIS degrees and certificates to increase efficiency, transfer rate and workforce relevancy.

**Priority Rank:**

2

**Original Start Date:**

02/01/2011

**Original End Date:**

10/01/2011

**Revised Start Date:**

02/01/2011

**Revised End Date:**

10/01/2011

**Responsible Person:**

CIS Faculty

**Strategic Direction:**

None

**Impact Type:**

-- Pick One --

**Actions/Activities:**

- **2.2.a1 - Revise CIS degrees and Certificate**
- Review all current degrees and certificates
- Gain discipline wide support for revisions
- Submit for inclusion in fall 2012 catalog

**Responsible Person:**

CIS Department Chair

**Status Code:**

Work is Completed

**Progress Description:**

**Measurements/Documentation of Progress:**

- **2.3 - Objective - Provide internship opportunities in programming, networking, hardware and/or graphics & media**

**Priority Rank:**

3

**Original Start Date:**

08/08/2011

**Original End Date:**

08/01/2014

**Revised Start Date:**

08/08/2011

**Revised End Date:**

08/01/2014

**Responsible Person:**

CIS Faculty

**Strategic Direction:**

None

**Impact Type:**

-- Pick One --

**Actions/Activities:**

- **2.3.a1 - Develop Internship Opportunities**

The discipline will establish relationships with local enterprises who are interested in hiring CIS Interns in order to provide students with workforce experience in their area of focus.

**Start Date:**

03/02/2011

**End Date:**

06/01/2013

**Responsible Person:**

CIS Full-time Faculty

**Status Code:**

Work is Completed and Ongoing

**Progress Description:**

**Measurements/Documentation of Progress:**

- **3 - Goal - Establish the premier digital media and visual arts program in the Inland Empire**

**Priority Rank:**

3

**Objectives:**

- **3.1 - Objective - Students will interact with software on high end PCs**

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. One of our labs should have been upgraded this fall, the other two labs are due for replacement at the end of the current academic year. Students are having difficulty completing homework assignments in the computer lab due to inadequate graphics cards and available memory. An Autodesk certified graphics card is especially important to ensure 3D animation packages such as the Autodesk Entertainment Creation suite (Maya) run efficiently and error free.

**Priority Rank:**

1



**Original Start Date:**

08/01/2011

**Original End Date:**

08/01/2014

**Revised Start Date:**

08/01/2011

**Revised End Date:**

08/01/2014

**Responsible Person:**

IT Department

**Strategic Direction:**

None

**Impact Type:**

-- Pick One --

**Resource Requests:**

- **3.1.r1 - Replacement of all CIS Lab PCs**

**Description**

Corey will work with the CHC IT staff to coordinate the purchase and replacement of all PCs in the CIS labs. The ideal would be to have all PCs the same as this promotes efficiency of software imaging and hardware troubleshooting. SAME AS 1.1.1 resource request.

**Rationale**

Computer hardware should be upgrade on a three-year cycle. The CHC IT plan calls for the replacement of the CIS lab computers every four years. One of our labs should have been upgraded this fall, the other two labs are due for replacement at the end of the current academic year. Students are having difficulty completing homework assignments in the computer lab due to inadequate graphics cards and available memory. An Autodesk certified graphics card is especially important to ensure 3D animation packages such as the Autodesk Entertainment Creation suite (Maya) run efficiently and error free.

**Resource Type:**

Ongoing

**Expenditure Category:**

Equipment

**Funded:**

Yes

**Funding Source:**

District IT hardware replacement

**First Year Cost/Savings:**

\$51,000.00/\$0.00

**Actions/Activities:**

- **3.1.a1 - Lab PC Upgrade**

Corey will work with the CHC IT staff to coordinate the purchase and replacement of all PCs in the CIS labs. The ideal would be to have all PCs the same as this promotes efficiency of software imaging and hardware troubleshooting.

**Start Date:**

07/01/2011

**End Date:**

07/01/2014

**Responsible Person:**

Corey Johnson

**Status Code:**

Work is Completed and Ongoing

**Progress Description:**

**Measurements/Documentation of Progress:**

- **3.2 - Objective - Students will develop advanced skills with current digital media applications**

In order to maintain relevancy, software must be kept current. The needs for a successful digital media arts program can be met through the Adobe Creative Suite Design Premium 5 and Autodesk Entertainment Creation suite. With these two suites, CHC can continue to offer industry relevant instruction in graphic design, web design, and 3D design. It is vital that students learn the most current versions of these software applications to best prepare them for a competitive job market.

**Priority Rank:**

2

**Original Start Date:**

08/01/2011

**Original End Date:**

07/01/2014

**Revised Start Date:**

08/01/2011

**Revised End Date:**

07/01/2014

**Responsible Person:**

CIS Department Chair

**Strategic Direction:**

None

**Impact Type:**

-- Pick One --

**Resource Requests:**

- **3.2.r1 - Adobe Creative Suite Design Premium Upgrade**

**Description**

50 User upgrade - Creative Suite Design Premium 5: Adobe Creative Suite Design Premium is the industry-standard software students need to deliver innovative ideas in print, web, and mobile design.

**Rationale**

**Resource Type:**

Ongoing

**Expenditure Category:**

Software

**Funded:**

Yes

**Funding Source:**

District IT fund

**First Year Cost/Savings:**

\$23,000.00/\$0.00

- **3.2.r2 - Autodesk Entertainment Creation Suite (2011)**

**Description**

35 User License: Autodesk Entertainment Creation Suites 2011 is a cost-effective solution that enables students to increase creativity and efficiency including:

- \* Powerful 3D modeling, animation, effects, rendering, and compositing tools
- \* Intuitive, organic modeling, texturing, and painting software
- \* Real-time character animation and motion editing software

**Rationale****Resource Type:**

Ongoing

**Expenditure Category:**

Software

**Funded:**

Yes

**Funding Source:**

Perkins

**First Year Cost/Savings:**

\$23,000.00/\$0.00

**Actions/Activities:**

- **3.2.a1 - Software Acquisition**

Purchase 50 licenses for the latest version of Adobe Creative Suite Design Premium 5 and 35 user license for Autodesk Entertainment Creation suite (2011).

**Start Date:**

07/01/2011

**End Date:**

07/01/2011

**Responsible Person:**

Corey Johnson

**Status Code:**

Work is Completed

**Progress Description:****Measurements/Documentation of Progress:**

- **3.3 - Objective - Secure Full-time expertise for the digital media program**

In order to offer a high-quality graphics media program, the discipline needs to hire a full-time faculty member who specializes in media, graphics, video and 3D.

**Priority Rank:**

2

**Original Start Date:**

08/01/2011

**Original End Date:**

08/15/2012

**Revised Start Date:**

08/01/2011

**Revised End Date:**

08/15/2012

**Responsible Person:**

CIS Department Chair

**Strategic Direction:**

None

**Impact Type:**

-- Pick One --

**Actions/Activities:**

- **3.3.a1 - 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:**

- **3.4 - Objective - Develop a fully-transferable digital media arts degree**

The computer graphics field is a growing as is the demand for digital media specialists. Providing students a well-rounded education in all aspects of digital media creation will grant them a considerable advantage in a highly competitive job market. The CIS discipline already offers several courses in digital media arts, however we are lacking an advanced Photoshop course and video courses

**Priority Rank:**

3

**Original Start Date:**

09/01/2011

**Original End Date:**

09/01/2014

**Revised Start Date:**

09/01/2011

**Revised End Date:**

09/01/2014

**Responsible Person:**

CIS Full-time Faculty

**Strategic Direction:**

None

**Impact Type:**

-- Pick One --

**Resource Requests:**

- **3.4.r1 - Hire a Full-time Digital Media Arts Instructor**

**Description**

**Rationale**

The new full-time Digital Media Arts faculty member would be responsible for managing, growing and updating as required the DMA program courses, certificates and degree. The discipline 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:**

Personnel

**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:**

- **3.4.a1 - Develop New Courses**

Plan and develop three new courses:

1. Advanced Photoshop
2. Introduction to Video Editing and Authoring
3. Introduction to Video Compositing and Effects

Initiate a collaborative partnership between the Art and BIT departments and hire an additional full-time digital media arts faculty member to manage and keep current the program courses, certificates and degree.

**Start Date:**

09/01/2011

**End Date:**

09/01/2014

**Responsible Person:**

CIS Department Chair

**Status Code:**

Work is Completed

**Progress Description:**

**Measurements/Documentation of Progress:**

- **4 - Goal - Become a training center for Health Information Technology**

Continue research and discussions necessary to the development of an HIT certificate

**Priority Rank:**

4

**Objectives:**

- **4.1 - Objective - Develop an HIT program that meets the needs of current and future health care professionals**

- Research HIT certificates offered by neighboring colleges and training centers
- Explore partnerships with CIS emergency services disciplines
- Continue research of HIT career options
- Continue developing relationships with CIO at Riverside community Hospital
- Explore additional partnerships with local health and emergency agencies

**Priority Rank:**

1

**Original Start Date:**

02/01/2011

**Original End Date:**

08/15/2012

**Revised Start Date:**

02/01/2011

**Revised End Date:**

08/15/2012

**Responsible Person:**

CIS Faculty

**Strategic Direction:**

None

**Impact Type:**

-- Pick One --

**Actions/Activities:**

- **4.1.a1 - Develop an HIT certificate and write courses**
- Develop and submit for approval an HIT certificate
- Write and submit for approval 2-3 HIT courses

**Start Date:**

03/01/2011

**End Date:**

10/01/2011

**Responsible Person:**

CIS Faculty

**Status Code:**

Objective was Removed

**Progress Description:**

**Measurements/Documentation of Progress:**

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

**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. 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:**  
1  
**Start Date:**  
08/15/2014  
**End Date:**  
09/01/2018  
**Responsible Person:**  
CIS Department Chair  
**Strategic Direction:**  
1. Student Access and Success  
**Impact Type:**  
Department  
**Resource Requests:**

- **1.1.r1 - Replacement of all CIS lab PCs**

**Description**

In order to maintain a quality learning environment, the computer hardware should be upgrade 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 - 2016, and new equipments will be in place in the new facilities, at which point we will reinitiate the replacement cycle.

**Rationale**

**Resource Type:**

Ongoing

**Expenditure Category:**

Equipment

**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

- **1.2 - 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:**

6

**Start Date:**

08/15/2014

**End Date:**

08/15/2018

**Responsible Person:**

CIS Department Chair

**Strategic Direction:**

1. Student Access and Success

**Impact Type:**

Department

**Resource Requests:**

- **1.2.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**

**Resource Type:**

Ongoing

**Expenditure Category:**

Software

**First Year Cost/Savings:**

\$35,300.00/\$0.00

**Third Year Cost/Savings:**

\$35,300.00/\$0.00

▪ **1.2.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:**

Equipment

**First Year Cost/Savings:**

\$15,850.00/\$0.00

**Third Year Cost/Savings:**

\$4,000.00/\$0.00

**Actions/Activities:**

▪ **1.2.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

▪ **1.2.a2 - Purchase Hardware Class Instructional Supplies**

**Start Date:**

08/01/2014

**End Date:**

07/29/2018

**Responsible Person:**



Lab-tech

- **1.3 - 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:**

2

**Start Date:**

08/01/2014

**End Date:**

08/01/2018

**Responsible Person:**

CIS Department Chair

**Strategic Direction:**

1. Student Access and Success

**Impact Type:**

Department

**Resource Requests:**

- **1.3.r1 - Funds to hire Part-time lab techs**

**Description**

3-15 Hour lab tutors/techs

**Rationale**

**Resource Type:**

Ongoing

**Expenditure Category:**

Personnel

**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 - 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 Department Chair

- **1.4 - Objective - Improve the transfer rate of CIS/CS students.**

**Priority Rank:**

10

**Start Date:**

08/01/2014

**End Date:**

08/01/2018

**Responsible Person:**

CIS Faculty

**Strategic Direction:**

1. Student Access and Success

**Impact Type:**

Department

**Actions/Activities:**

- **1.4.a1 - Provide a CIS/CS faculty transfer advocate**  
**Start Date:**  
08/01/2014  
**End Date:**  
08/01/2018  
**Responsible Person:**  
CIS Full-time Faculty
- **1.4.a2 - Establish clear transfer pathways**  
**Responsible Person:**  
Faculty member
- **1.5 - Objective - Increase online and hybrid course offerings**  
**Priority Rank:**  
13  
**Start Date:**  
01/12/2015  
**End Date:**  
12/01/2016  
**Responsible Person:**  
CIS faculty members  
**Strategic Direction:**  
1. Student Access and Success  
**Impact Type:**  
Department  
**Actions/Activities:**
  - **1.5.a1 - Identify courses appropriate for the online learning environment**
  - **1.5.a2 - Write DE addendum for identified courses**
  - **1.5.a3 - Submit new online courses to the curriculum approval process**
  - **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:**

3

**Start Date:**

08/01/2014

**End Date:**

08/01/2018

**Responsible Person:**

CIS Instructors

**Strategic Direction:**

3. Best Practices for Teaching and Learning

**Impact Type:**

Department

**Resource Requests:**

- **2.1.r1 - Funds for workshops and conferences**

**Description**

**Rationale**

Necessary to maintain professional currency.

**Resource Type:**

Ongoing

**Expenditure Category:**

Other

**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

- **2.2 - Objective - Provide transfer and workforce relevant CIS/CS courses, degrees, and certificates**

Review, revise and update all CIS degrees and certificates to increase efficiency, transfer rate and workforce relevancy.

**Priority Rank:**

7

**Start Date:**

08/01/2014

**End Date:**

08/01/2018

**Responsible Person:**

CIS Faculty

**Strategic Direction:**

1. Student Access and Success

**Impact Type:**

Department

**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

- **2.2.a2 - Obtain job market data and identify high-growth areas**
- **2.2.a3 - Develop new courses, certificates, and/or degrees in high-growth areas.**
- **2.2.a4 - Continue to hold annual advisory meetings with industry and education representatives**
- **2.3 - Objective - Establish a campus testing center for industry relevant certificates (e.g. Adobe, Cisco)**

**Priority Rank:**

12

**Start Date:**

02/01/2015

**End Date:**

10/01/2015

**Responsible Person:**

Professional Expert in Digital Media

**Strategic Direction:**

1. Student Access and Success

**Impact Type:**

District

**Resource Requests:**

- **2.3.r1 - Stipend for professional experts**

**Description**

**Rationale**

**Resource Type:**

One-time

**Expenditure Category:**

Personnel

**First Year Cost/Savings:**

\$10,000.00/\$0.00

**Actions/Activities:**

- **2.3.a1 - Hire a digital media professional expert**
- **2.3.a2 - Investigate the feasibility of establishing a testing center**
- **2.3.a3 - Research costs for establishing testing center**
- **2.3.a4 - Devise budget and action plans for establishing a testing center**
- **2.4 - Objective - Provide student internship opportunities in CIS**

**Priority Rank:**

14

**Start Date:**

10/01/2014

**End Date:**

10/01/2018

**Responsible Person:**

CIS Faculty

**Strategic Direction:**

1. Student Access and Success

**Impact Type:**

Department

**Actions/Activities:**

- **2.4.a1 - Collaborate with the Career Center on establishing internship positions**
- **2.4.a2 - Offer internship courses**
- **2.5 - Objective - Increase the number of students in our program as well as the diversity of our program student body.**

**Priority Rank:**

15

**Start Date:**

10/01/2014

**End Date:**

08/31/2018

**Responsible Person:**

CIS Faculty

**Strategic Direction:**

2. Inclusiveness

**Impact Type:**

Department

**Actions/Activities:**

- **2.5.a1 - Update, develop and distribute marketing materials targeting different students**
- **2.5.a2 - Participate in outreach events**
- **3 - Goal - Establish the premier digital media and visual arts program in the Inland Empire**

**Priority Rank:**

3

**Objectives:**

- **3.1 - Objective - Students will develop advanced skills with current digital media applications**

In order to maintain relevancy, software must be kept current. The needs for a successful digital media arts program can be met through the Adobe Creative Suite Design Premium 5 and Autodesk Entertainment Creation suite. With these two suites, CHC can continue to offer industry relevant instruction in graphic design, web design, and 3D design. It is vital that students learn the most current versions of these software applications to best prepare them for a competitive job market.

**Priority Rank:**

8

**Start Date:**

08/01/2014

**End Date:**

07/01/2018

**Responsible Person:**

CIS Department Chair

**Strategic Direction:**

1. Student Access and Success

**Impact Type:**

Department

**Resource Requests:**

- **3.1.r1 - Adobe Creative Suite Design Premium Upgrade Description**

50 User upgrade - Creative Suite: Adobe Creative Suite Design Premium is the industry-standard software students need to deliver innovative ideas in print, web, and mobile design.

**Rationale**

**Resource Type:**

Ongoing

**Expenditure Category:**

Software

**First Year Cost/Savings:**

\$23,000.00/\$0.00

▪ **3.1.r2 - Autodesk Entertainment Creation Suite**

**Description**

35 User License: Autodesk Entertainment Creation Suites is a cost-effective solution that enables students to increase creativity and efficiency including:

- \* Powerful 3D modeling, animation, effects, rendering, and compositing tools
- \* Intuitive, organic modeling, texturing, and painting software
- \* Real-time character animation and motion editing software

**Rationale**

**Resource Type:**

Ongoing

**Expenditure Category:**

Software

**First Year Cost/Savings:**

\$10,000.00/\$0.00

**Third Year Cost/Savings:**

\$10,000.00/\$0.00

**Actions/Activities:**

▪ **3.1.a1 - Software Acquisition**

Purchase 50 licenses for the latest version of Adobe Creative Suite Design Premium and 35 user license for Autodesk Entertainment Creation suite.

**Start Date:**

07/01/2014

**End Date:**

07/01/2018

**Responsible Person:**

Lab Tech

○ **3.2 - Objective - Secure Full-time expertise for the digital media program**

In order to offer a high-quality graphics media program, the discipline needs to hire a full-time faculty member who specializes in media, graphics, video and 3D.

**Priority Rank:**

9

**Start Date:**

08/01/2014

**End Date:**

08/15/2018

**Responsible Person:**

CIS Department Chair

**Strategic Direction:**

8. Effective Resource Use and Development

**Impact Type:**

Institutional

**Resource Requests:**

- **3.2.r1 - Hire a Full-time Digital Media Expert**

**Description**

**Rationale**

The new full-time Digital Media faculty member would be responsible for managing, growing and updating as required the DMA program courses, certificates and degree. The discipline 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:**

Personnel

**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:**

- **3.2.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

- **3.3 - Objective - Develop a fully-transferable digital media degree**

The computer graphics field is a growing as is the demand for digital media specialists. Providing students a well-rounded education in all aspects of digital media creation will grant them a considerable advantage in a highly competitive job market. The CIS discipline already offers several courses in digital media arts, however we are lacking an advanced Photoshop course and video courses

**Priority Rank:**

11

**Start Date:**

09/01/2014

**End Date:**

09/01/2018

**Responsible Person:**

CIS Full-time Faculty

**Strategic Direction:**

1. Student Access and Success

**Impact Type:**

Department

**Actions/Activities:**

- **3.3.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

- **3.3.a2 - Develop transfer degree in Graphic Media**

## 11. Supporting Documents

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