Plans for Computer Information Systems / Computer Science / Multimedia

>> 2022 - 2023 Computer Information Systems / Computer Science / Multimedia CHC Instructional Program Review 2022-2023

Name :
2022 - 2023 Computer Information Systems / Computer Science / Multimedia CHC Instructional Program Review 2022-2023

Principal Preparer : David Liu

Planning Participants : David Liu

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Instructions

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

1. Mission

a. Tell us your unit's mission: Provide a mission statement for your unit that clearly and succinctly describes your unit's purpose, idealistic motivations, and change it hopes to inspire.

b. Alignment with the college Mission: **Rubric Item** (Mission Alignment): The Crafton Hills College mission is to change lives. We seek to inspire our students, support our colleagues, and embrace our community through a learning environment that is transformational. Crafton Hills College welcomes everyone and is committed to working with students from diverse backgrounds. The College has an exceptional learning environment built on a tradition of excellence, a talented faculty, a driven student body, a committed staff, with passionate leadership and community support. **In what ways does your program advance the mission of the college?**

The mission of Crafton Hills College is to advance the educational, career, and personal success of our diverse campus community through engagement and learning

A. Information Technologies (IT) Disciplines Mission

The mission of the CHC Information Technologies (CIS/CSCI/MULTI) disciplines is to support the educational, career, and personal success of our students through hands-on learning and active engagement. In particular, the disciplines

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

B. Alignment with the College's Mission:

The Information Technologies (IT) disciplines are dedicated to the mission of advancing the educational, career, and personal success of our diverse campus community through engagement and learning. The discipline faculty actively engage students in the learning process through group discussions, skills-based projects, labs and hands-on tutorials. Recognizing the diversity of learning styles, the instructional faculty have modified the course delivery options, to include hybrid and fully online courses, flipped classrooms, project based learning, directed teaching and lecture based instruction. The IT faculty members value academic excellence and the advancement of each student's educational, career and personal success goals as evidenced by our commitment to remain current in our disciplines, to revise existing course outlines as well as developing new courses, certificates, and degrees that meet current and emerging workplace demands.

2. Description of Program

a. Organizational Structure and Staffing

b. Describe any activities in addition to instruction that you provide.

c. Describe any alternative modes of instruction and schedules of delivery: e.g.: online, hybrid, early morning, evening services.

d. **Rubric Item**: Describe how your curriculum is up-to-date and Needs-Based. Base the description on surveys, labor market data, transfer patterns such as GE, IGETC, CSU, AA-T, or AS-T, accreditation standards, and/or articulation agreements. Consider the results of your most recent curriculum reviews in this section.

e. **Rubric Item**: Attach your scheduling matrix to show when courses in your area are offered. Click here for sample!

A. Organizational Structure and Staffing

Computer Information Systems, Computer Sciences and Multimedia are three distinct disciplines housed under the Multimedia, Information Technology, and Noncredit (MITN) department within the Division of Social, Information and Natural Sciences. The department has traditionally offered courses in Computer Information Systems including courses on computer hardware, networking, operating systems, information security, multimedia and programming. The CSCI discipline currently includes five courses, a

certificate and an Associate of Science degree focusing on transfer preparation for students who plan to pursue a four-year degree in computer science. Last couple academic years, several new full-time faculty members with expertise in the discipline of Information Systems, Computer Science and Animation were hired.

The CIS faculty member has been updating our CIS programs and courses in Network Administration, Information Security and Computer Technician as well as our CCNA program with the updated Cisco courses. The Animation faculty has been updating digital/special effect courses and creating new animation courses and programs. Our new full-time hire in Computer Science will soon be updating our programming courses and programs.

The department staffing includes four full-time instructors, eight part-time instructors, one full-time lab technician, and several hourly computer lab techs (soon to be hired). One of the full-time faculty members has expertise in computer hardware, networking, and information security, a second full-time faculty member has expertise in programming and meets the minimum qualifications to oversee the growth and development of the computer science discipline. A third full-time faculty member with expertise in Multimedia was hired in the spring of 2018. She has been charged with growing the Multimedia discipline. The fourth faculty has expertise in both Animation and digital effects. The adjunct faculty members provide additional expertise in areas such as web design and development, digital media, cybersecurity, operating systems, and computer hardware.

The department courses are taught in up-to-date workstation equipped classrooms. 3 computer-based classrooms, an instructional support lab and a hardware lab. The classrooms in CNTL 118, 119 and 120 are equipped with 38 student-based workstations, a teaching station, a printer, and a video projector. The instructional support lab (CNTL 109a) has 36 student workstations, a video projector, and a teaching station. The hardware lab is designed to support the hardware classes, the networking classes and CIS student's exploration of PC components including the installation and repair skills as required in the CIS 101 130 and Cisco Academy courses 140, 141 & 142.

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 the Adobe Creative Cloud, Autodesk, and Microsoft office are included in each program review and subsequent annual plan goals and objectives as a top-level priority. Upgrading the MITN 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. As was previously stated, the labs were upgraded in the 2019-2020 academic year. The three-year replacement cycle should resume at the conclusion of the 2023-2024 academic year. The discipline faculty remain current with emerging trends in Information Security, computer hardware, software, and Networking by attending conferences, reading professional journals, and participating in online technical and pedagogical workshops and seminars.

The CIS, CSCI and MULTI 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 a foundational course providing students with technological and computer competency skills. CIS 101 is a required course for students preparing to transfer in many fields, including CIS, Computer Science, Medical and Radiologic technology, and education. A recently developed course, MULTI 100 has been designed to serve as a foundational course for the discipline providing students with a preview of the diverse offerings included within the Multimedia discipline.

The MITN 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 CNTL 109a) 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 department faculty and staff members help students acquire expensive software at drastically reduced costs through the maintenance of educational software purchasing agreements such as the Microsoft Imagine Program (formerly Microsoft DreamSpark), which provides an inexpensive way for students to acquire the latest version of Microsoft applications that are identical to the versions installed on the classroom and lab PCs. Access to the instructional software at a very low or no cost is invaluable to the many students with limited incomes.

B. Activities in Addition to Instruction that we Provide

Due to the hiatus in club participation caused by the COVID-19 pandemic, many of the student-led activities and clubs hit a pause button. As we crawl out of this pandemic, our students will start to engage in activities like managing and running PC Gaming club with the advisor our Lab tech. Mr. Corey Johnson.

CIS adjunct faculty member Ed Papp has been conducting the Work Experience plan for CHC and he has been developing and coordinating partnerships, workshops, and events to enhance CIS, CSCI and MITN internships opportunities.

A CIS full-time faculty member has been getting students involved in an annual regional cyber security competition since 2021 and we will continue this tradition to help students exposed to the world of hacking and information protection.

Tutors in the open lab are supporting students in their course assignments. Specialized tutoring in the disciplines is provided as well as in courses involving programming, MS Office skills and computer networking.

C. Alternative Modes of Instruction

Our classes are taught in a variety of formats including day and evening, hybrid, and online. 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. The new full-time faculty member are working their way through the college online teaching approval process and we are encouraging the PT faculty members to explore this as well. The department also offers internship courses in web design, hardware, and networking, in which students earn academic credits for practical work experience in their identified field of study. Our instruction modalities will continue to be flexible due to the COVID-19 pandemic caused shift in learning format.

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

All courses abide by the minimum six-year revision requirements. However, given the rapidly changing nature of technology, several discipline specific courses must be updated more frequently in order to meet current industry standards. For example, CIS 130 (IT Essentials) and CIS 140-142 (CCNA Networking) must use the Cisco Networking Academy curriculum which is revised every three to four years.

To support student transfer, the discipline faculty have revised existing courses and have added new 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 have also been added to the CSCI discipline to provide preparation for students who want to transfer to a four-year institution. These courses follow C-ID descriptors, and the A.S.-T in Computer Science also follows the TMC.

The newly hired full-time faculty members in the CIS, Computer Science and Animation disciplines are working on revising courses, developing additional courses, certificates and degrees so that those students interested in pursuing a career in CIS, Computer Science and digital media will have access to the applications and equipment most relevant to current and emerging industry standards.

In collaboration with our local high school partners, articulation agreements of our CIS/CSCI/MULTI courses with equivalent high schools courses are periodically updated. As of fall 2018, **articulation agreements** for applicable IT 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 MITN advisory committee, which consists of local technology industry representatives, high school educators, and our college faculty members, meets in the spring term of each academic year to discuss topics related to program development, industry needs, and alignments with high school curriculum. The yearly discussion helps the discipline faculty continue improving the program to align to the educational and industry needs of the local region.

E. Scheduling Matrix

See Q12: for the 2022~2026 Schedule matrix for CIS/CSCI courses

3. External Factors with Significant Impact

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 MITN programs has been limited by budgetary constraints as well as low student enrollment due to the COVID-19 pandemic. The department was able to hire one full-time faculty member with expertise in CIS and Information Security in 2020, one new hire for the Animation/Digital effect discipline in 2021 and recent new hire for the Computer Science program this year. The implementation of the Strong Workforce Program by the state has provided a budgetary opportunity for the department. These new hires will be working on updating the current course and programs as well as creating new courses and programs that will attract students from the region in the upcoming years.

B. Competition from Other Institutions

The MITN department 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 courses draws students to a campus. The discipline faculty will continue to evaluate existing program offerings and explore new degrees and certificates in order to attract students to our programs. For example, recognizing the value of a CS transfer degree, we have worked hard to develop the CSCI program and are encouraged by the continued and steady increase in enrollments. Additionally, we have identified digital media as a growing industry in our service area. The new digital media courses, certificates and degrees should attract additional student from the region to our program which has been designed to provide students with the industry relevant technical skills needed to excel in a media dependent workforce. Finally, our recent new hires should help with the growth and development of our animation/digital effect courses as well as our Computer Science courses.

C. Requirements of Four-Year Institutions

As discussed in question 1, the discipline faculty have focused on developing and authoring 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 fulfill the requirements of four-year institutions. New Computer Science courses have been added to the discipline in order to prepare students who want to transfer to four-year institutions.

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 contained in the current environmental scan reports, the job market outlook for the Riverside/San Bernardino/Ontario metropolitan area, identifies several high demand information technology positions including web development, software development, information systems, and network support and administration. Our existing CIS/CSCI degrees and certificates are designed to provide students with essential job skills in information security, programming, and network support knowledge and skills as required by the industry. The discipline will continue to evaluate the program degrees and certificates and will revise as needed to align to the identified local workforce needs, especially in cyber security and network administration.

For MULTI degrees and certificates the job market analysis also identifies the Orange County region, as an area with high market density in digital media fields. Additionally the Orange County region is within an acceptable commutable radius. In anticipation of start-up potential and freelance opportunities in the digital media areas, the MITN department is also seeking collaboration with the business department to include the instruction of entrepreneurial skills.

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. We have also developed and have begun offering a series of noncredit courses which teach the essential skills required for workplace success. Additional courses in the Adobe Creative Cloud have also been added to our program to enrich our digital media program. We will continue to obtain input from local employers in order to refine and revise our courses and programs to meet 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 disciplines. Major changes in software and hardware can occur every 18 months, presenting a constant challenge in terms of program currency. Many of the discipline 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 and hardware. Additionally, the classroom PCs as well as lab act equipment like Cisco routers, switches and security appliances must be upgraded every three years (as per the CHC IT plan), at minimum in order to deliver the latest application versions quickly and efficiently. IT professors must spend numerous hours learning about new hardware components, software releases, operating systems revisions, and new developments in the industry and as such, conference attendance is essential for maintaining currency.

4. Progress on Outcomes Assessment (Four-Year Question)

Refer to the SLO Cloud to evaluate the results from your program level outcomes and to develop actions reflected in your program review action plan (i.e. Question 10). **Rubric Item**: Program Learning Outcomes

a. Please summarize **Program Level Outcomes (PLO) assessment results**. Include a discussion of whether or not the program met its target for each PLO.

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

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

A. Summarize PLO Assessment Results

A. Program Level Outcome (PLO) assessment results.

The program level outcomes for CIS and the 3-year achievement percentages are as follows:

1. Apply logical and critical thinking skills to the computing discipline. 86.33% compare it to 18-19 year finding. A drop of around 1 %

2. Use appropriate information and technology to analyze, evaluate, and solve technical problems. 77.21%

3. Collaborate effectively in teams. 94.44% based on a small pool of numbers

4. Discuss the impact of information technology on the society and workplace. 73.99%

The percentage indicates some targets were met while others need to be improved in order to achieve our target of an 80% or higher on all PLOs.

The Program Level Outcomes for CSCI and the 3-year achievement percentages are as follows:

1. Apply knowledge of computer science and mathematics to design computing systems and to solve a variety of problems. 81.48%

2. Analyze a problem and identify and define the computing requirements appropriate to its solution. 54.55% (wasn't assessed in the last round of 4-year review)

3. Design, implement, and evaluate software solutions that satisfy problem requirements. 89.78%

4. Collaborate effectively in teams. (not assessed)

5. Communicate technical contents effectively in both written and spoken formats. (not assessed)

The discipline has achieved two of the three measured PLOS against its target of 80% or higher on all CSCI PLOs that were assessed over the past 3 years.

As of Fall 2018, all course level SLOs have been reviewed, updated as needed, and mapped to their corresponding PLOs. The discipline faculty members have been using the SLOCloud tool to submit SLO & PLO results. On the on-going basis, the discipline faculty members meet to discuss the SLO & PLO assessment results during departmental meeting.

B. Describe any Program/Course Instructional Improvements

B1. Program/course and/or instructional improvements made as a result of the PLO assessment process

Instructional improvements made as a result of SLO/PLO assessment results include development of practical projects to help CIS 101 students to apply skills acquired in Microsoft Office, incorporation of creative team projects that addresses social issues in CSCI 120 and connect the learned to real-world applications. Cisco academy instructors discussed SLO in the updated Cisco Courses of CIS 140, 141 & 142. In addition, the instruction on the related 7-layer OSI model was incorporated into the CIS 140 class. In the CIS 141 and 142 course, basic router and switch commands were enhanced using Cisco Academy Packet Tracer simulation software as well as instructor led demo's and CLI hands on labs using Live Equipment.

The IT faculty will assess at least one SLO for each course that is offered each academic year. We will continue to hold one department meeting per year dedicated to SLO/PLO discussion and improvement recommendations. Our plan for assessing SLOs and PLOs in 2022 – 2023 academic year is as follows:

- Fall 2022: CIS 105, 106, 111, 117, 125, 132, 134.
- Spring 2023: CIS 091, 095, 104,109, 900. CSCI 110, 120, 240.

C. Objectives or Action Steps Added to Question 10

1. All courses will continue to be taught in a high quality technically current environment.
2. At least 75% of FTE instructional load in our program will be taught by full-time faculty, we currently have four full-time faculty for CIS, CSCI, Multi and Animation programs.
3. Increase student success by continuing to provide daily access to lab tech tutors
4. IT instructors will maintain professional currency by attending workshops and conference related to new and emerging technologies
5. Providing IT student internship and mentoring opportunities
6. On ground offering and hands-on lab opportunities.

5. Unit's Performance on Institutional Quantitative Effectiveness Indicators

Please discuss your program's performance on each data item below.
a. Instructional Program Health Evaluation Rubric

i) **Rubric Item**: Use Office of Institutional Effectiveness, Research, and Planning (OIERP) data to set a Course Completion Rate target and provide an explanation for the target that has been set. **Click HERE to access your program specific data**.
ii) **Rubric Item**: Use OIERP data to set a Course Success Rate target and provide an explanation for the target that has been set. **Click HERE to access your program specific data**.
iii) **Rubric Item**: What is your FT/PT Faculty Ratio, how is it impacting your program, and student success? **Click HERE to access your program specific data**.
iv) **Rubric Item**: Use OIERP data to set a WSCH/FTEF Ratio target and provide an explanation for the

target that has been set. Based on Faculty dialogue what is a feasible WSCH/FTEF (productivity) target for your area? (Note: 525 may not be a realistic target for your area.) **Click HERE to access your program specific data**.

v) **Rubric Item**: The Fill Rate target is 80% or higher. Use the data provided by the OIERP and please provide a reason for any deviation from the target. This may involve a discussion around the appropriateness of the cap and how it was set. **Click HERE to access your program specific data**.

I. Course Completion Rate

The CIS course completion rate for 2021-2022 is 89.3% overall, increase from the previous 2020-2021 academic year of 87.9%. The completion rate for African-American students is 87%, Hispanic-American students is 88% and Caucasian-American students is 88%, which are in line with our target of 88%. In analysis of gender-based student completion data, both men and women students are at 88% for the completion, once again in line with the set target rate of 88%. Age-based analysis yielded the lowest completion rate belongs to student age 35~39 at 79%. This will require some observation as to why this age group had the lowest rate.

The CSCI course completion rate is 88.2% overall in 2021-2022 academic year. While the following groups: African-American students at 100%, Hispanic-American students at 84% and Caucasian-American students at 93%. The ethic group with the lowest percentage is still not far off from the target of 88%. However, there is a wider gap amongst female students and male students' completion rates; 78% and 92% respectively. At the difference of 14%, we as a department need to investigate ways to narrow that percentage number.

The target for course completion rate for our program is set to 88%, which is in line with the Crafton completion rate of 90.4% and the trends within both disciplines for the last four years.

The current trend for the course completion rate of the CSCI courses has seen a steady increase over the past five years, from 81.9% to 88.2% as of Spring 2022, with the exception of 2018-2019 academic year at 92%. The course with lowest completion rate is CSCI 110 at 87.8, which is still very closed to the set target rate of 88%. (see **Figure 1** below).

(Figure 1) Course Completion Rates: Spring 2022
CSCI 110 Introduction to Computer Science I (C++): 87.8%
CSCI 120 Introduction to Computer Science II (C++): 96.2%
CSCI 240 Computer Organization and Assembly Language Programming: 90.9%

II. Course Success Rate

The course success rate for CIS courses in 2021-2022 is at 71% which is a 1.7% increase from 2020-2021. The course success rate for CSCI is 73.3% which is a 3.6% decrease from 2020-2021. A reasonable target for our disciplines 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 73.3%.

The following analysis for the course success rates amongst three student groups; with African American students at 65%, Hispanic American students are 67%, and Caucasian-American students are 78%. With both African & Hispanic American students at minus percentages of 13% and 11% compared to

Caucasian-American students, we need to look more closely at an equitable learning environment for the minority students to see if there is any best-practices we can use to increase their success rates.

The success rate for gender-based analysis of the CIS courses revealed a rare reversal trend; female students at 74% while the male students at 68%. And age-based analysis shows the same age group of 35-39 with the lowest success rate.

As of Spring 2022, the overall course success rate of the CSCI is at 75.9% and we will continue to see an upswing trend in the follow semester. The analysis of following individual groups showed the success rates African American students at 55%, Hispanic American students at 67% and Caucasian American students at 79%. At the difference of 24% for the African American students, we need to look for possible equitable solution to bring up their success rate.

The gender-based analysis showed the similar on-going trend at female student success rate following behind the male counterpart at 65% vs. 75%. We as a college community need to address the disparity by attracting more female students to explore academic programs in the areas of Computer Science.

Course wise, CSCI 110 has a low success rate of 56.1% while its' completion rate is at 87.8% is probably attributed to a disconnect between instructor expectations and student workloads this should be continued to be monitored for the upcoming academic years. (See **Figure 2** below).

(Figure 2) Course Completion Rates: Spring 2022
CSCI 110 Introduction to Computer Science I (C++): 56.1%
CSCI 120 Introduction to Computer Science II (C++): 92.3%
CSCI 240 Computer Organization and Assembly Language Programming: 90.9%

III. FT/PT Faculty Ratio

The FT/PT faculty ratio for CHC Multi. And CIS programs has increased from 23.1 in 2019-20 academic year to 44.3 in this academic year 2021-2022. The FT/PT ratio for the CIS discipline has increased from 24.3% of 2020-21 academic year to 37.1% of 2021-22 academic year, which represents a 12.8% decrease over the past 5 years.

Our department has hired a full-time CIS instructor that is in charge of Cisco, Information Security and Networking programs in 2020, and last year 2021 a full-time animation/special effect instructor was hired and lately we also hired a full-time CSCI instructor to oversee the computer science program. The lack of FT faculty in multi discipline programs like CIS, Multimedia, Computer Science was a major concern. As it was already stated in the previous 4-year plan. Since that time, the issue of lack of full-time faculty has been remediated through hiring of 3 full-time faculties in the last year and half.

Our goal is to have 75% of our courses taught by full-time faculty and this goal will probably be achieved since the department now has four full-time faculty members covering Multimedia, Animation, Information Systems and Computer Science.

IV. WSCH/FTEF Ratio

The WSCH/FTEF ratio for CIS courses in 2021-2022 is at 307, and the WSCH/FTEF ratio for CSCI courses is at 477. The disciplines have set a target WSCH/FTEF ratio of 350. This would equate to

approximately 20-35 students per class. 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 which we have not be able to do because of the budget and enrollment constraints. Active and targeting marketing of the CIS, CSCI, and Multimedia courses and programs should help increase the WSCH/FTEF ratio.

V. Fill Rate

The 2021-22 rate in CIS courses is 54.5%, and the fill rate in CSCI courses is 85.5%. In order to increase the number of students who enroll in our program, marketing efforts need to increase to include advertising our courses and program courses to the community at large. Additionally, part of the reduction in CIS and CSCI course enrollments may be related to the COVID-19 pandemic attributed factors and the improving economy which traditionally has had a negative impact on Community College CTE programs a whole.

6. Other Unit-Specific Quantitative and Qualitative Results

a. **Rubric Item**: How do your program student demographics relate to the college demographics? What are the discrepancies? **Click HERE to view program and college demographics by year**.
b. Summarize the results of any quantitative or qualitative measures not provided in the previous question that you have chosen to gauge your program's effectiveness (e.g.: transfers, degrees, certificates, satisfaction, enrollments, Perkin's data, equity data, student research experience, student clubs, etc.). **Click HERE to access your program specific data on degrees and certificates**.
c. What improvements/changes have you implemented or do you plan to implement as a result of your analysis of the measures illustrated in 6a and 6b?

A. Whom We Serve

The IT disciplines 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 our 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 courses is lower than the college ratio. In 2019-2020, the percentage of Females in CIS courses was 40% and in 2021-2022, the percentage of females was 45% while the college's male to female ratios were 57% and 58%, which represents a 13~17% difference. For the same two-year range, 2019-2020 and 2021-2022 The percentage of Hispanic students in CIS courses is 45% and 48.5% which is lower than the college average by 4%~2% whereas the percentage of Caucasian students in CIS courses is 34% and 32% for

the same two year ranges, which is higher than the college average of 2%. Although our proportion of Hispanic students is lower than the college average, the percentage has been steadily increasing. In the 2019-2022 academic year 45% of the students were Hispanic. In 2021-2022 the percentage was 48.5 which represents an increase of 3.5%.

CSCI courses were offered the first time in the year 2013-14. Enrollment data for the 2021-2022 academic year indicates that 23% of CSCI students are female, and 77% male. The percentage of females in CSCI courses is significantly lower than the college average of 58% for the same academic year. The CSCI courses service similar proportions of students as the college in terms of age and ethnicity.

A lower percentage of women in IT courses is a recognized as typical in the college technical disciplines. norm for technical disciplines; and while this may be the norm, the number in percentage can improve and it is a program deficiency, we are dedicated to improving. As such, the IT faculty will continue to evaluate and improve our courses, programs, and marketing strategies in order to attract and retain more female students. In general women tend to prefer courses on the creative side of the IT industry and growing the multimedia discipline has been identified as a department priority for the past 15 years. As has already been mentioned, a full-time faculty with expertise in Multimedia was hired a few years ago and has been working on developing new courses, certificated and degrees. We also hired a new full-time faculty with animation industry background. In addition, we added a full-time faculty to oversee CIS programs as well as another full-time faculty for Computer Science was recently hired. It is with that we can anticipate more involvement of both female and minority students in our programs and course offerings. It is anticipated that the number of females participating in the program will increase once the course offerings, degrees and certificates have been approved and the courses are available for enrollment.

B. Program Effectiveness Measures

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

1. [Number of Degrees and Certificates](#)

2. [Perkins IV Core Indicators of Performance](#)

a. Technical Skill Attainment: percentage of students enrolled in our CTE courses above the introductory level who have earned a GPA of 2.0 or higher

b. Completions: percentage of students who have successfully completed a minimum 12 or more units in the CTE program and who have receive a degree, certificate or equivalent or have completed a transfer program

c. Persistence: percentage of students who persisted in education at the community college level or transferred to a two or four-year institution

d. Employment: percentage of students who did not transfer to a two or four-year institution and were found during one of the four quarters following the cohort year in an apprenticeship program, Unemployment Insurance (UI) covered employment, the Federal Government, or the military

e. Nontraditional Participation: percentage of nontraditional students participating in the program

f. Nontraditional Completion: the percentage of nontraditional students completion of the program

3. In terms of our efforts in improving transfer rate in our discipline, we will use the measure of the number of transfer applicants to IT related programs.

B. Results of Program Effectiveness Measures

1. Number of Degrees and Certificates

In the past five years (2018 ~ 2022), a total of 39 students were awarded an Associate of Science Degree. 42 students were awarded an AS-T in Computer Science and a total of 9 students were awarded a certificate in CIS, programming and Web Design.

The number of Associate of Sciences degrees awarded has steadily increased over the past five years. The addition of new multimedia degrees and certificates should have a positive impact on the number of degrees and certificates awarded.

2. Perkins IV Core Indicators of Performance

Core 1 - *Skill Attainment, GPA 2.0 & Above*: 60% (25.99% below the performance goal of 85.99%)

Core 2 - *Completions, Certificates, Degrees and Transfer Ready*: 100% (18.15% above the performance goal of 81.85%)

Core 3 - *Persistence in Higher Education*: 100% (13.13% above the performance goal of 86.87%)

Core 4 - *Employment*: 100% (28% above the performance goal of 72.00%)

Core 5a - Training Leading to *Non-traditional Employment Participation*: 0% (25.54% below the performance goal of 24.54%)

Core 5b - Training Leading to *Non-traditional Employment Completion*: 0% (28.57% below the performance goal of 28.57%)

3. Data provided by the Transfer Center indicates that 14 CHC students applied to computer science or electrical engineering majors at UCs and 22 CHC students applied to computer science, computer systems, or information systems majors at CSUs in 2017- 2018.

C. Reflection and Plan for Improvements

1. A majority of the discipline degrees or certificates are awarded in the Computer Science, Programming, Information Security and Webmaster areas of focus. The number of degrees and certificates should increase with the implementation of the new and revised courses, certificates and degrees being offered in the new multimedia, animation and special effect discipline. We also plan to

improve the number of degrees awarded by establishing clear pathways to transfer. We already have an A.S.-T in Computer Science that is designed for transfer.

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

Employment

- Work with the career center coordinator to expand the number of outside agencies who provide internships and/or employment opportunities for IT students.
- Hire a pool of PT faculty members to assist IT students with internships and employment opportunities.
- Promote the CIS and CSCI WFP/N internship and employment skills courses.
- Research additional industry-related certification exams and update as needed the related course outlines to align to the certification exam objectives.

Nontraditional participation and completion

- Distribute information on department certificates, degrees, and employment opportunities for nontraditional students in both printed and digital formats.
- Expand program offerings in distance education formats in order to increase course enrollment options.
- Maintain open lab hours in order to assist students with the completion of course specific assignments using up-to-date equipment and support from lab tutors.
- Reevaluate course offering matrix on an annual basis to ensure students can complete degrees and certificates in a maximum of a two-year cycle.

Develop and launch new CIS and multimedia certificates and degrees to attract nontraditional students.

7. Evaluation

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

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

- Professional development and training
- Compliance with applicable mandates

Overall the department disciplines continue to be effective. With the new two recent full-time hires, as a department we are now at a fully/almost fully staffed state which would help us to focus on program/course revision and development.

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.

The department offers a broad range of classes (introduction to computers, programming, web design, Cisco networking, Information Security, animation, graphics design, hardware etc.). By having four full-time faculty members, the department will be able to remain current with emerging research and techniques for all courses and programs. The current number of FT faculty member would help the department to meet its goal of having 75% of the department courses taught by FT faculty.

Alternative Modes and Schedules of Delivery

Alternative modes and schedules of delivery was addressed in question 2c - We are carefully monitoring the attrition and success rates in the online and hybrid classes. In each semester for the past two years, we have offered three 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.

Partnerships (internal and external)

The department faculty 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 with several of the High School courses. The discipline faculty members assist with articulation agreements and promote articulation pathways to local high school students. The discipline faculty also hold an annual advisory committee meeting where business and educational partners are provided an opportunity to provide ideas and suggestions for course sequencing and essential 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 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 partnership is with the Cisco Networking Academy program. The CCNA program was launched in the fall of 2003 and the partnership has continued to bring additional opportunities including access to current industry

standards and media rich instructional courses and materials. The Cisco Academy program authors have developed several cybersecurity courses which the department faculty have uses to author new CHC courses which align to the Cisco Academy cybersecurity courses.

External Partnership with Robert Half a well know employment agency that is utilized by several government entities and the department of water and power to place and fill IT positions. The college/district is in the process of reviewing and bridging a relationship that would benefit our IT students having internship opportunities thru. This connection and partnership.

Innovation and Implementation of Best Practices

As has been previously stated the MITN disciplines require instructors to remain innovative and responsive. Innovations like cloud storage, server-side services, wireless networking, mobile app development, esports, hardware and software security, and identity theft are examples of recent trends and innovations worthy of program consideration. The current shift toward cloud computing and cybersecurity have been identified as 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.

Continual implementation of best practices includes the standardization of the CIS 101 curriculum including course materials, quizzes and exams, SLOs, the use of Canvas, 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 Canvas. Canvas is used for all courses, which has improved student access to course materials, assignments and instructor support which has helped tremendously for the remote learning mandate during the COVID-19 Pandemic. 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.

We have continued to focus on implementing best practices throughout the department. As a result, we now offer two CIS Associate of Science Degrees, they are System Network Administration & Programming, and 7 certificate of achievement programs. Additionally, we have shifted the programming emphasis in CIS to CSCI and have developed both degrees and certificates for CSCI with a focus on transfer.

The newly hired full-time faculty member in the animation and digital effects is working on revising courses, developing additional courses, certificates and degrees so that those students interested in pursuing a career in digital media will have access to the applications and equipment most relevant to the current and emerging industries. Having now four full-time faculty members in the area of Information System, Multimedia, Animation and Computer Science. New programs and courses will be designed, and existing programs and course will be updated and improved. This will lead to attracting both traditional and nontraditional students in CIS arena. Having courses aligned to disciplines is a best practice and will help attract new students, including nontraditional students to the IT arena.

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 course specific labs, assignments, exams, etc. Another good example of efficiency in resource use was the development of a dedicated lab for the CIS 140,141 & 142 course for running Cisco Academy classes as well as Information Security Cybersecurity classes in room 109A.

Staffing

This is addressed in 2a - 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 department faculty members actively participate in shared governance. Department meetings are held regularly and are well attended by the adjunct faculty members and industry professionals, whose inputs is sought for various discipline matters.

Our currently hired full time faculty members are actively involved College members' shared governance by participating in Curriculum committee, Plan and review committee, technology committee and district facility committee as well as managing and advising a regional initiative called Maker space.

Professional Development and Training

The nature of the IT disciplines is one of constant change. This presents an ongoing challenge for IT 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: canvas training, online classes, reading professional and technical journals, web-based research, investing in new hardware and software, attending networking shows, annual IT 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 IT. Both Perkins and Strong Workforce funds have been a used as a funding source for professional development.

Compliance with Applicable Mandates

The department has been working on offering courses and degrees that align to the C-ID descriptors and the Transfer Model Curriculum (TMC) provided by the California Community College Chancellor's Office in order to align to the expectations of four-year institutions. New Computer Science courses have been added to the discipline in order to prepare students who want to transfer to four-year institutions.

During the Covid-19 pandemic period covering 2020 thru. 2022, We as a department and as a member of the college have complied with the district mandate in terms of social distancing and online course offering which helped our college students to continue their academic endeavors and complete graduation and transferring process.

The department is required to abide by all terms and conditions as delineated in the Cisco Networking Academy annual contract which is renewed each year at the end of the spring term. 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 Academy curriculums which places an additional burden on the program and instructors.

8. Vision

a. Tell us your unit's vision: Where would you like your program to be four years from now? Dream big while considering any upcoming changes (e.g.: new buildings, labs, growth, changes in the discipline etc.).
b. Alignment with the college Vision: **Rubric Item** ([Vision Alignment](#)): The Vision of Crafton Hills College is to empower the people who study here, the people who work here, and the people who live in our community through education, engagement, and innovation. **In what ways does your program advance and align with the vision of the college?**

A. VISION

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

- Grow our courses offerings
  - We hope to attract more students to our disciplines through targeted outreach and marketing. We plan 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 plan to increase our online / hybrid course offerings to meet student needs.
  - Specifically for the CSCI program, we intend to offer more sections of introductory CSCI classes so that the advanced courses realize a student population of at least 25.
  - To grow our program, we must maintain at least three full-time faculty members and must advocate for one additional new hire with expertise in 3D modeling, digital scuplting and VR.
- Provide a robust Multimedia program, focusing on identified high-need career and transfer pathways
  - Next fall, we expect to have three new A.S. degrees and four new certificates in multimedia that are aligned with transfer institutions and prepare students for employment in the media rich workforce.
- Increase transfer rate and the completion of AS-T degrees
  - We aim to be the program of choice for transfer-oriented students majoring in an IT discipline. 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, game development, multimedia, networking, cybersecurity and database administration

- We plan to add new courses in network design and management,multimedia, system administration, cybersecurity as well as courses in mobile app development and systems analysis. We also want to regularly offer our spreadsheet course, which we have not been able to offered 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 instructional resources available for helping students succeed.

- Increase Distance Education Course Offerings

  - Next fall we will begin to implementing our first *hybrid* courses to gauge the efficacy of switching to an *online* course model for choice CSCI courses. This plan attempts to realize the growing desire for distance education coursework in a discipline which has been predominantly taught online by both accredited programs and learning platforms like Udemy, Coursera, and Lynda.

B. Alignment with the College's Mission and Vision

The department faculty will continue to improve and enhance our curriculum in order to be recognized as the program of choice for students who seek deep learning, personal growth, and a supportive faculty. The discipline faculty will continue to examine the current course offerings and research emerging trends in technology and teaching to determine which IT 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 - Increase student success by providing a well-rounded, effective IT program**

Priority Rank: 1

Objectives:

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

  Priority Rank: 2

  Original Start Date: 08/01/2019 **Original End Date:** 08/01/2022

  Revised Start Date: 08/01/2019 **Revised End Date:** 08/01/2022

  Responsible Person: MITN Department Chair

  Strategic Direction: 1. Promote Student Success

  Impact Type: Department

  Institutional Learning Outcome: -- Pick One --

  Resource Requests:

  - **1.1.r1 - Multimedia capable iMacs for CNTL 118**

    Description

    40 - 27 inch iMacs with Retina 5k displays

    Rationale

    In order to teach current concepts using the most relevant software available, the lab PCs in CNTL 118 must be upgraded to meet the standards of the mulitimedia industry. The current PCs are inadequate.

    Resource Type: One-time

    Expenditure Category:

      Computer & Information Technology Equipment (6420)

    Funded: Yes

    Funding Source: general fund

    First Year Cost/Savings: $181,716.00/$0.00

  - **1.1.r2 - MacBook Pros**

    Description

    20 MacBook Pros for students to check out to complete course related projects.

    Rationale

    In order for students to complete projects using the most relevant software available, they must have access to laptops that meet the standards of the mulitimedia industry. We currently do not have any laptops avaiable for student use.

    Resource Type: One-time

    Expenditure Category:

      Computer & Information Technology Equipment (6420)

Funded: No

Funding Source:

First Year Cost/Savings: $52,900.00/$0.00

- **1.1.r3 - Replacement of all lab PCs**
  Description

  In order to maintain a quality learning environment, the computer hardware should be upgraded on a regular cycle.

  Rationale

  In order to maintain a quality learning environment, the computer hardware should be upgraded on a three-year cycle. The CHC technology plan calls for the replacement of the IT lab equipment every four years. The IT instructional space was renovated during the 2016 - 2017 academic year, and new equipment was installed in the rennovated space in the Fall of 2017. The equipment should be replaced at the end of the Spring 2021 term.

  Resource Type: Ongoing

  Expenditure Category:
    Computer & Information Technology Equipment (6420)

  Funded: No

  Funding Source:

  First Year Cost/Savings: $51,000.00/$0.00

- **1.1.r4 - Non-instructional Supplies**
  Description
  Rationale

  Toner $1000

  Paper $200

  Assorted Supplies $300

  Resource Type: Ongoing

  Expenditure Category: Instructional Supplies (4300)

  Funded: Yes

  Funding Source: general fund

  First Year Cost/Savings: $1,500.00/$0.00

  Second Year Cost/Savings: $1,500.00/$0.00

  Third Year Cost/Savings: $1,500.00/$0.00

- **1.1.r5 - HP Color LaserJet Enterprise Printer**
  Description

HP Color LaserJet Enterprise M750n

- Print only
- Print speed letter: Up to 30 ppm (black and color)
- Prints up to 12x18"; 3 paper trays (standard)
- FCC Class A emissions - for use in commercial environments, not residential environments

Rationale

The multimedia class need to be able to print their 4 color design work for gallary displays.

Resource Type: One-time

Expenditure Category:

 Computer & Information Technology Equipment (6420)

Funded: No

Funding Source:

First Year Cost/Savings: $2,874.98/$0.00

- **1.1.r6 - Multimedia production Tools***
Description
    - 50 compartment Mobile Roll Files ($343)
    - Mobile shelving units ($269)
    - 2 Manfrotto Compact Advanced Aluminum Tripods (Black) ($99.88 each)
    - ALZO 100 LED Macro Studio Tabletop Product Photography Kit ($275)
    - 1 Elite Screens Yard Master 2 Front Projection Screen ($147)

Rationale

In order to teach current concepts using industry relevant standard and techniques, the multimedia staff must have production level tools and staging equipment.

Resource Type: One-time

Expenditure Category: Equipment & Furniture (6400)

Funded: No

Funding Source:

First Year Cost/Savings: $2,206.00/$0.00

- **1.1.r7 - Media & Audio Makerspace items***
Description
    - 25 x MakeMusic Finale v26 - Music Notation Software (Academic, 5-29 Site Licenses, Download) $119.00 each

- 25 x Akai Professional MPK mini MKII - Compact Keyboard and Pad Controller (Black-on-White) $99.00 each
- 25 x Sennheiser HD 280 Pro Circumaural Closed-Back Monitor Headphones $99.95 each
- 2 x KRK Rokit 5 G3 - 50W 5" Two-Way Active Studio Monitor (Single, Black) $149.50 each *
- 1 x Hosa Technology Stereo Mini (3.5mm) Male to 2 RCA Male Y-Cable - 3' $5.45 each *

Rationale

Sound equipment needed to meet audio production standards.

Resource Type: One-time
Expenditure Category:
   Computer & Information Technology Equipment (6420)
Funded: No
Funding Source:
First Year Cost/Savings: $9,660.00/$0.00

Actions/Activities:

- **1.1.a1 - Add Multimedia capable PCs**

  Order and Install new iMacs in CNTL 118.

  Start Date: 06/01/2019 **End Date:**   08/10/2019
  Responsible Person: MITN Dept Faculty and Staff
  Status Code: Work is Completed and Ongoing
  Progress Description:

  NA

  Measurements/Documentation of Progress:

  NA

- **1.1.a2 - Upgrade PCs in all labs as per the established replacement cycle**
  Start Date: 06/01/2021 **End Date:**   08/15/2021
  Responsible Person: CHC Technology Department
  Status Code: Work is Completed and Ongoing
  Progress Description:

  NA

  Measurements/Documentation of Progress:

  NA

- **1.2 - Objective - At least 75% of FTE instructional load will be taught by full-time faculty.**

  Priority Rank: 1

  Original Start Date: 08/16/2019 **Original End Date:** 05/27/2022

  Revised Start Date: 08/16/2019 **Revised End Date:** 05/27/2022

  Responsible Person: CIS Faculty

  Strategic Direction: 1. Promote Student Success

  Impact Type: Site

  Institutional Learning Outcome: -- Pick One --

  Status Code: Work is Completed and Ongoing

  Progress Description:

  NA

  Resource Requests:

  - **1.2.r1 - Full-time CIS Discipline Faculty**

    Description

    A new CIS faculty member with expertise in System Software and Cybersecurity.

    Rationale

    Hire a new full-time CIS faculty member to order to achieve the identified FT/PT target ratio.

    Resource Type: Ongoing

    Expenditure Category: Contract Classroom Inst. (1100)

    Funded: Yes

    Funding Source: general fund

    First Year Cost/Savings: $80,000.00/$0.00

    Second Year Cost/Savings: $82,000.00/$0.00

    Third Year Cost/Savings: $84,000.00/$0.00

- **1.3 - Objective - Acquire and/or upgrade essential software applications and hardware instructional tools to enhance transfer and workforce readiness**

  Priority Rank: 4

  Original Start Date: 08/01/2019 **Original End Date:** 08/01/2022

  Revised Start Date: 08/01/2019 **Revised End Date:** 08/01/2022

  Responsible Person: CIS Department Chair

  Strategic Direction: 1. Promote Student Success

  Impact Type: Department

  Institutional Learning Outcome: -- Pick One --

  Resource Requests:

  - **1.3.r1 - Software Acquisition and Maintenance**

Description

Acquire and keep current the following software titles and suites
follows:

- NetOp: $1300
- MSDNAA: free with school licensing
- Adobe Creative Suite: $23,000
- Autodesk Entertainment Creation suite: currently free
- Octane rendering software (annual license): $27,960
- zBrush digital sculpting software: $35,800
- VMWare: $300
- Keyboarding software: TBD

Rationale

In order to promote transfer and workforce preparedness, essential
software applications and hardware instructional tools must be
upgraded as neccessary.

Resource Type: Ongoing
Expenditure Category: Software (4430)
Funded: No
Funding Source:
First Year Cost/Savings: $88,060.00/$0.00
Second Year Cost/Savings: $60,000.00/$0.00
Third Year Cost/Savings: $88,060.00/$0.00

- **1.3.r2 - Tablets for Multimedia**
  Description

  Wacom tablets

  Rationale

  Students in the Multimedia courses need drawing tablets in order to
  develop their skills and abilities with computer assisted graphic design.

  Resource Type: One-time
  Expenditure Category:
    Computer & Information Technology Equipment (6420)
  Funded: No
  Funding Source:
  First Year Cost/Savings: $1,000.00/$0.00

- **1.3.r3 - Hardware Class Instructional Supplies**
  Description

- Intel barebones kits

- barebones laptop kit

- Laser networkable printer

- Wireless router

- LAN/WAN router

- variable voltage control

- isolation transformer

- NAS external drives

- Wireless AP

- Wireless access card

- Multifunction meter with temp measure

Rationale

The hardware class instructional supplies need to be upgraded
regularly.

Resource Type: Ongoing

Expenditure Category: Instructional Supplies (4300)

Funded: No

Funding Source:

First Year Cost/Savings: $2,000.00/$0.00

Second Year Cost/Savings: $2,000.00/$0.00

Third Year Cost/Savings: $2,000.00/$0.00

- **1.3.r4 - Cisco Routers and Switches**
Description

Routers and switches needed for CIS 140-143 (Cisco Networking)
course labs and related hands-on activities.

- ConvergeOne - Cisco Equipment 11 sets consisting of the
following: ($1923.02 for each set)

- ISR4221-SEC/K9 Cisco ISR 4221 SEC Bundle with SEClic 1
$1,022.02

- WS-C2960+24TC-L CAT2960 PLUS 24PORT + 2T SFP 1
$542.00

- NIM-2T= 2-Port Serial WAN Interface card 1 $344.00

- CAB-SS-26MTC-06 Smart Serial to Smart Serial DTE/DCE
Assy, 6-FT 1 $15.00

Rationale

The current equipment was purchased 15 years ago and is approaching end of life. The equipment needs to be to meet industry standards. A regular replacement cycle is needed to maintain the currency of the equipoment.

Resource Type: Ongoing

Expenditure Category:

Computer & Information Technology Equipment (6420)

Funded: Yes

Funding Source: general fund

First Year Cost/Savings: $24,326.00/$0.00

Second Year Cost/Savings: $20,000.00/$0.00

Third Year Cost/Savings: $20,000.00/$0.00

- **1.3.r5 - Lynda.com Subscription**
  Description
  Rationale

  Provide open access to Lynda.com for all multimedia students.

  Resource Type: Ongoing

  Expenditure Category: Software (4430)

  Funded: No

  Funding Source:

  First Year Cost/Savings: $20,000.00/$0.00

  Second Year Cost/Savings: $0.00/$20,000.00

  Third Year Cost/Savings: $20,000.00/$0.00

Actions/Activities:

- **1.3.a1 - Acquire and/or upgrade necessary software programs**

  Upgrade the following software titles and suites follows:

  - NetOp
  - MSDNAA
  - Adobe Creative Suite
  - Autodesk Entertainment Creation suite
  - Octane rendering software
  - zBrush digital sculpting software
  - VMWare
  - Keyboarding software

  Responsible Person: Fulltime Lab-Tech

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

NA

Measurements/Documentation of Progress:

NA

- **1.3.a2 - Purchase Hardware Instructional Supplies**
  Responsible Person: Lab-tech
  Status Code: Work is Completed and Ongoing
  Progress Description:

  NA

  Measurements/Documentation of Progress:

  NA

- **1.4 - Objective - Increase student success by providing daily access to lab tech tutors**
  Priority Rank: 5
  Original Start Date: 08/01/2019 **Original End Date:** 08/01/2022
  Revised Start Date: 08/01/2019 **Revised End Date:** 08/01/2022
  Responsible Person: Fulltime Lab-Tech
  Strategic Direction: 1. Promote Student Success
  Impact Type: Department
  Institutional Learning Outcome: -- Pick One --
  Resource Requests:

  - **1.4.r1 - Funds to hire Part-time lab techs**
    Description

    6-15 Hour hourly lab tutors/techs - 3 for CIS, 1 for CSCI and 2 for Multimedia

    Rationale

    Part-time lab techs are needed to maintain regular open lab hours and provide technical assistance to CIS, CSCI and Multimedia students.

    Resource Type: Ongoing
    Expenditure Category: Part-Time / Overtime / Student (2380)
    Funded: No
    Funding Source:
    First Year Cost/Savings: $30,000.00/$0.00
    Second Year Cost/Savings: $30,000.00/$0.00
    Third Year Cost/Savings: $30,000.00/$0.00

  - **1.4.r2 - Full time Lab Tech**
    Description

Full-time MutliMedia Lab Tech

Rationale

A full time lab techs is needed to assist with classroom related projects, maintain lab hardware and software, provide support during open Multimedia lab hourse and provide technical assistance as needed for the CHC Multimedia students.

Resource Type: Ongoing
Expenditure Category: Cert Non-Mgt. Non-Teach (1283)
Funded: Yes
Funding Source: general fund
First Year Cost/Savings: $60,000.00/$0.00
Second Year Cost/Savings: $62,000.00/$0.00
Third Year Cost/Savings: $64,000.00/$0.00

Actions/Activities:

- **1.4.a1 - Hire Part-time Lab Techs**

  Interview and hire 6 part-time lab tech for each academic year.

  Start Date: 08/01/2019 **End Date:** 08/01/2022
  Responsible Person: Full time Lab Tech & Division Dean
  Status Code: Work is Scheduled to begin on a resonably firm date
  Progress Description:

  NA

  Measurements/Documentation of Progress:

  NA

- **2 - Goal - Become the premier IT program in the Inland Empire**
  Priority Rank: 2
  Objectives:

  - **2.1 - Objective - Discipline faculty will maintain professional currency**
    Priority Rank: 6
    Original Start Date: 08/01/2019 **Original End Date:** 08/01/2022
    Revised Start Date: 08/01/2019 **Revised End Date:** 08/01/2022
    Responsible Person: Discipline faculty
    Strategic Direction: 3. Develop Teaching and Learning Practices
    Impact Type: Department
    Institutional Learning Outcome: -- Pick One --
    Resource Requests:

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

Description
Rationale

Necessary to maintain professional currency.

Resource Type: Ongoing

Expenditure Category: Conference and Travel (5200)

Funded: No

Funding Source:

First Year Cost/Savings: $5,500.00/$0.00

Second Year Cost/Savings: $5,500.00/$0.00

Third Year Cost/Savings: $5,500.00/$0.00

Actions/Activities:

- **2.1.a1 - Attend technical and/or education workshops and conferences**
  Responsible Person: Discipline faculty
  Status Code: Work is Completed and Ongoing
  Progress Description:

  NA

  Measurements/Documentation of Progress:

  NA

- **2.2 - Objective - Provide transfer and workforce relevant courses, degrees, and certificates in multiple modalities**

  Priority Rank: 9

  Original Start Date: 08/01/2019 **Original End Date:** 08/31/2022

  Revised Start Date: 08/01/2019 **Revised End Date:** 08/31/2022

  Responsible Person: Discipline Faculty

  Strategic Direction: 1. Promote Student Success

  Impact Type: Department

  Institutional Learning Outcome: -- Pick One --

  Actions/Activities:

  - **2.2.a1 - Revise degrees and certificate as needed**
    - Review and revise current degrees and certificates as needed
    - Gain discipline wide support for revisions

    Start Date: 08/01/2019 **End Date:** 08/01/2022
    Responsible Person: Department Chair

Status Code: Work is Completed and Ongoing
Progress Description:

NA

Measurements/Documentation of Progress:

NA

- **2.2.a2 - Develop new courses, certificates, and/or degrees in high-growth areas.**
  Start Date: 08/01/2019 **End Date:**   08/01/2022
  Responsible Person: Discipline faculty
  Status Code: Work is Completed and Ongoing
  Progress Description:

  NA

  Measurements/Documentation of Progress:

  NA

- **2.2.a3 - Continue to hold annual advisory meetings with industry and education representatives**
  Status Code: Work is Completed and Ongoing
  Progress Description:

  NA

  Measurements/Documentation of Progress:

  NA

- **2.3 - Objective - Provide student internship and mentoring opportunities**
  Priority Rank: 8
  Original Start Date: 08/01/2019 **Original End Date:**   08/01/2022
  Revised Start Date: 08/01/2019 **Revised End Date:**   08/01/2022
  Responsible Person: Discipline Faculty
  Strategic Direction: 1. Promote Student Success
  Impact Type: Department
  Institutional Learning Outcome: -- Pick One --
  Resource Requests:

  - **2.3.r1 - Provide funding for a professional expert to coordinate internship/mentoring opportunities for students**
    Description
    Rationale

A professional expert will identify and coordinate internship opportunities for IT students.

Resource Type: Ongoing
Expenditure Category: Professional Expert - Non FTE (2389)
Funded: No
Funding Source:
First Year Cost/Savings: $9,000.00/$0.00
Second Year Cost/Savings: $9,000.00/$0.00
Third Year Cost/Savings: $9,000.00/$0.00

- **2.3.r2 - Director of Interships and Workforce Development Description**

  Part time Director of Interships and Workforce Development

  Rationale

  A part-time director is needed to oversee and support internship workforce development opportunities for IT students.

  Resource Type: Ongoing
  Expenditure Category: Instructors Day/Hourly (1300)
  Funded: No
  Funding Source:
  First Year Cost/Savings: $38,000.00/$0.00
  Second Year Cost/Savings: $40,000.00/$0.00
  Third Year Cost/Savings: $40,000.00/$0.00

Actions/Activities:

- **2.3.a1 - Establishing internship and mentoring opportunities**
  Status Code: Work is Planned but not yet firmly scheduled
  Progress Description:

  NA

  Measurements/Documentation of Progress:

  NA

- **2.3.a2 - Offer internship courses**
  Status Code: Work is Scheduled to begin on a resonably firm date
  Progress Description:

  NA

  Measurements/Documentation of Progress:

NA

- 2.4 - Objective - **Increase enrollments and diversity in IT courses and programs.**
  Priority Rank: 12

  Original Start Date: 08/01/2019 **Original End Date:**   08/01/2022

  Revised Start Date: 08/01/2019 **Revised End Date:**   08/01/2022

  Responsible Person: Discipline Faculty

  Strategic Direction: 2. Build Campus Community

  Impact Type: Department

  Institutional Learning Outcome: -- Pick One --

  Actions/Activities:

  - **2.4.a1 - Develop and distribute course and program specific marketing materials**
    Status Code: Work is Planned but not yet firmly scheduled
    Progress Description:

    NA

    Measurements/Documentation of Progress:

    NA

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

    NA

    Measurements/Documentation of Progress:

    NA

- 3 - Goal - **Develop and implement a industry-relevant multimedia/graphic design program.**
  Priority Rank: 3
  Objectives:

  - **3.1 - Objective - Develop Associate of Science Multimedia Degrees and Certificates of Achievement with identified area of focus.**
    Priority Rank: 10

    Original Start Date: 08/01/2019 **Original End Date:**   08/01/2022

    Revised Start Date: 08/01/2019 **Revised End Date:**   08/01/2022

    Responsible Person: Full-time Multimedia Faculty

    Strategic Direction: 7. Develop Programs and Services

    Impact Type: Department

    Institutional Learning Outcome: -- Pick One --

    Resource Requests:

- **3.1.r1 - Release time for Multimedia faculty member**
Description

.4 release for the Spring 2019 term and the 2019-2020 academic year

Rationale

Provide the release time required for the development of a multimedia program that compliments the RTVF academy at SBVC

Resource Type: One-time
Expenditure Category: Reassigned Time (1102)
Funded: No
Funding Source:
First Year Cost/Savings: $10,000.00/$0.00
Second Year Cost/Savings: $20,000.00/$0.00

- **3.1.r2 - FT Multimedia Faculty***
Description

Full time Faculty with expertise in 3D modeling, digital sculpting and VR

Rationale

Expertise is required in order to design, develop and industry standard courses and programs in expertise in 3D modeling, digital sculpting and VR.

Resource Type: Ongoing
Expenditure Category: Contract Classroom Inst. (1100)
Funded: Yes
Funding Source: general fund
First Year Cost/Savings: $85,000.00/$0.00
Second Year Cost/Savings: $90,000.00/$0.00
Third Year Cost/Savings: $95,000.00/$0.00

- **3.1.r3 - Summer Camp Support**
Description

Faculty and support staff

Rationale

The summer camps require staffing, marketing and support staff in order to be successful.

Resource Type: Ongoing
Expenditure Category: Non-Instructional Supplies (4500)

Funded: No

Funding Source:

First Year Cost/Savings: $15,000.00/$0.00

Second Year Cost/Savings: $15,000.00/$0.00

Third Year Cost/Savings: $15,000.00/$0.00

Actions/Activities:

- **3.1.a1 - Develop New Courses**

  Plan and develop new courses in areas as identified by the full-time faculty member with expertise in Multimedia

  Start Date: 08/01/2019 **End Date:** 08/01/2022

  Responsible Person: Multimedia Faculty

  Status Code: Work is Completed and Ongoing

  Progress Description:

  NA

  Measurements/Documentation of Progress:

  NA

- **3.1.a2 - Develop Associate of Science degrees in multimedia**
  Status Code: Work is Completed and Ongoing
  Progress Description:

  NA

  Measurements/Documentation of Progress:

  NA

- **3.1.a3 - Develop Certificates of Achievement in Multimedia**
  Status Code: Work is Completed and Ongoing
  Progress Description:

  NA

  Measurements/Documentation of Progress:

  NA

- **3.1.a4 - Align program courses, degrees, and certificates to industry certifications and demands**
  Status Code: Work is Completed and Ongoing
  Progress Description:

NA

Measurements/Documentation of Progress:

NA

- ○ **3.2 - Objective - Continue to develop the makerspace project, which was initially funded by the strong workforce grant.**
  Priority Rank: 7
  Original Start Date: 08/01/2018 **Original End Date:** 08/01/2022
  Revised Start Date: 08/01/2018 **Revised End Date:** 08/01/2022
  Responsible Person: Makerspace consultant, Discipline faculty and staff
  Strategic Direction: 1. Promote Student Success
  Impact Type: Site
  Institutional Learning Outcome: -- Pick One --
  Resource Requests:

  - ■ **3.2.r1 - Provide funding for a consultant/coordinator of the makerspace project**
    Description
    Rationale

    A digital media expert is needed to oversee and develop the makerspace.

    Resource Type: Ongoing
    Expenditure Category: Professional Expert - Non FTE (2389)
    Funded: No
    Funding Source:
    First Year Cost/Savings: $35,000.00/$0.00
    Second Year Cost/Savings: $35,000.00/$0.00
    Third Year Cost/Savings: $35,000.00/$0.00

  - ■ **3.2.r2 - Purchase supplies and equipment for the makerspace project**
    Description

    - ■ 2 - Green screens: 1,000
    - ■ 36 Dell XPS 8930 PCs with Dell UltraSharpe 27" 4k monitors: $102,886
    - ■ 36 Licences of Finale audio editing software: $14,000
    - ■ 36 Akai Professional MKII audio editor controllers: $5,000
    - ■ 36 Sennheiser HD 280 headphones: $5,000
    - ■ 2 3D printers:$20,000
    - ■ 30 VR headsheets: $15,000

    Rationale

Equipment, software, and supplies for emerging digital media technologies, such as green screens, 3D printers and virtual reality headsets.

Resource Type: Ongoing

Expenditure Category:

Computer & Information Technology Equipment (6420)

Funded: No

Funding Source:

First Year Cost/Savings: $163,000.00/$0.00

Second Year Cost/Savings: $20,000.00/$0.00

Third Year Cost/Savings: $20,000.00/$0.00

- **3.2.r3 - Part-time Makerspace Staff**
  Description
  Rationale

  Part-time staff is needed to oversee the space during its open hours.

  Resource Type: Ongoing

  Expenditure Category: Part-Time / Overtime / Student (2380)

  Funded: No

  Funding Source:

  First Year Cost/Savings: $10,000.00/$0.00

  Second Year Cost/Savings: $10,000.00/$0.00

  Third Year Cost/Savings: $10,000.00/$0.00

Actions/Activities:

- **3.2.a1 - Secure and develop a space for the project**
  Status Code: Work is Completed and Ongoing
  Progress Description:

  NA

  Measurements/Documentation of Progress:

  NA

- **4 - Goal - Develop and implement a center for PC game competency.**
  Priority Rank: 4
  Objectives:

  - **4.1 - Objective - Develop Associate of Science Gaming Degrees and Certificates of Achievement with identified area of focus.**
    Priority Rank: 11
    Original Start Date: 10/01/2019 **Original End Date:** 06/01/2021
    Revised Start Date: 10/01/2019 **Revised End Date:** 06/01/2021
    Responsible Person: Department Chair and discipline faculty

Strategic Direction: 7. Develop Programs and Services

Impact Type: Department

Institutional Learning Outcome: -- Pick One --

Status Code: Work is Planned but not yet firmly scheduled

Progress Description:

NA

Resource Requests:

- **4.1.r1 - Consultant**
  Description

  There is a need to hire a consultant with expertise in gaming who can help with the program design as well as the develop game specific courses and programs of study.

  Rationale

  Need expertise in the field to determine which types of gaming courses are viable at the community college level as well designing appropriate course sequencing that will lead to a transfer pathway or workplace readiness.

  Resource Type: One-time
  Expenditure Category: Non-Instruction Hourly (1480)
  Funded: No
  Funding Source:
  First Year Cost/Savings: $40,000.00/$0.00
  Second Year Cost/Savings: $40,000.00/$0.00

- **4.2 - Objective - All courses and PC games will be hosted in high quality technically current environments.**
  Priority Rank: 3
  Original Start Date: 08/01/2019 **Original End Date:** 08/01/2022
  Revised Start Date: 08/01/2019 **Revised End Date:** 08/01/2022
  Responsible Person: MITN Dept Chair
  Strategic Direction: 1. Promote Student Success
  Impact Type: Department
  Institutional Learning Outcome: -- Pick One --
  Status Code: Work is Planned but not yet firmly scheduled
  Progress Description:

  NA

  Resource Requests:

  - **4.2.r1 - eSports Arena**

Description

There is a need to establish a space with high end PCs and periphearl devices to support the eSport gaming experience.

Rationale

There is a need to establish a space with high end PCs and periphearl devices to support the eSport gaming experience.

Resource Type: Ongoing
Expenditure Category:
   Computer & Information Technology Equipment (6420)
Funded: No
Funding Source:
First Year Cost/Savings: $250,000.00/$0.00
Second Year Cost/Savings: $100,000.00/$0.00
Third Year Cost/Savings: $100,000.00/$0.00

- **4.2.r2 - Upgrade lab PCs**
  ### Description

  In order to maintain a quality learning environment, the computer hardware should be upgraded on a regular cycle.

  ### Rationale

  In order to maintain a quality learning environment, the lab-based computers should be upgraded on a three-year cycle. The CHC technology plan calls for the replacement of the IT lab equipment every four years. The IT instructional space was renovated during the 2016 - 2017 academic year, and new equipment was installed in the rennovated space in the Fall of 2017. The eGame equipment, whereever it is located should be upgraded in the Fall 2019 with hight end PCs and then upgraded every 3 years.

  Resource Type: Ongoing
  Expenditure Category:
     Computer & Information Technology Equipment (6420)
  Funded: No
  Funding Source:
  First Year Cost/Savings: $70,000.00/$0.00

- **4.2.r3 - eSport Coach**
  ### Description

  Hire a PT eSport to oversee the growth and development of the eSport program

Rationale

Expertise in the field is required in order to provide a quality gaming program and experience.

Resource Type: One-time

Expenditure Category: Contract Coach Stipend (1306)

Funded: No

Funding Source:

First Year Cost/Savings: $20,000.00/$0.00

- **4.3 - Objective - To develop gender diversity in gaming**
  Priority Rank: 13
  Original Start Date: 09/01/2020 **Original End Date:**   08/01/2023
  Revised Start Date: 09/01/2020 **Revised End Date:**   08/01/2023
  Responsible Person: Department Chair and discipline faculty
  Strategic Direction: 4. Expand Access
  Impact Type: Department
  Institutional Learning Outcome: -- Pick One --
  Status Code: Work is Planned but not yet firmly scheduled
  Progress Description:

  NA

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. **In writing your objectives and developing your resource requests, take into account student learning and program assessment results**. Assign an overall priority to each goal and each objective. In addition, enter any actions and/or resources required to achieve each objective. (Click here to see a definition of goals, objectives, actions, and how they work together.)

- **1 - Goal - Increase student success by providing a well-rounded, effective IT program**
  Priority Rank: 1
  Objectives:

  - **1.1 - Objective - All courses will be taught in a high quality technically current environment.**
    Priority Rank: 2
    Start Date: 08/01/2022 **End Date:**   08/01/2026
    Responsible Person: MITN Department Chair
    Strategic Direction: 1. Promote Student Success

Impact Type: Department

Institutional Learning Outcome: Not Applicable

Resource Requests:

- **1.1.r1 - MacBook Pros**
  Description

  20 MacBook Pros for students to check out to complete course related projects.

  Rationale

  In order for students to complete projects using the most relevant software available, they must have access to laptops that meet the standards of the mulitimedia industry. We currently do not have any laptops avaiable for student use.

  Resource Type: One-time

  Expenditure Category:
    Computer & Information Technology Equipment (6420)

  First Year Cost/Savings: $52,900.00/$0.00

- **1.1.r2 - Replacement of all lab PCs**
  Description

  In order to maintain a quality learning environment, the computer hardware should be upgraded on a regular cycle.

  Rationale

  In order to maintain a quality learning environment, the computer hardware should be upgraded on a three-year cycle. The CHC technology plan calls for the replacement of the IT lab equipment every four years. The IT instructional space was renovated during the 2016 - 2017 academic year, and new equipment was installed in the rennovated space in the Fall of 2017. The equipment should be replaced at the end of the Spring 2021 term.

  Resource Type: Ongoing

  Expenditure Category:
    Computer & Information Technology Equipment (6420)

  First Year Cost/Savings: $51,000.00/$0.00

- **1.1.r3 - Non-instructional Supplies**
  Description
  Rationale

  Toner $1000

Paper $200

Assorted Supplies $300

Resource Type: Ongoing

Expenditure Category: Instructional Supplies (4300)

First Year Cost/Savings: $1,500.00/$0.00

Second Year Cost/Savings: $1,500.00/$0.00

Third Year Cost/Savings: $1,500.00/$0.00

- **1.1.r4 - HP Color LaserJet Enterprise Printer**
  Description

  HP Color LaserJet Enterprise M750n

  - Print only
  - Print speed letter: Up to 30 ppm (black and color)
  - Prints up to 12x18"; 3 paper trays (standard)
  - FCC Class A emissions - for use in commercial environments, not residential environments

  Rationale

  The multimedia class need to be able to print their 4 color design work for gallary displays.

  Resource Type: One-time

  Expenditure Category:
  Computer & Information Technology Equipment (6420)

  First Year Cost/Savings: $2,874.98/$0.00

- **1.1.r5 - Multimedia production Tools***
  Description
  - 50 compartment Mobile Roll Files ($343)
  - Mobile shelving units ($269)
  - 2 Manfrotto Compact Advanced Aluminum Tripods (Black) ($99.88 each)
  - ALZO 100 LED Macro Studio Tabletop Product Photography Kit ($275)
  - 1 Elite Screens Yard Master 2 Front Projection Screen ($147)

  Rationale

  In order to teach current concepts using industry relevant standard and techniques, the multimedia staff must have production level tools and staging equipment.

  Resource Type: One-time

Expenditure Category: Equipment & Furniture (6400)

First Year Cost/Savings: $2,206.00/$0.00

- **1.1.r6 - Media & Audio Makerspace items***
  Description

    - 25 x MakeMusic Finale v26 - Music Notation Software (Academic, 5-29 Site Licenses, Download) $119.00 each

    - 25 x Akai Professional MPK mini MKII - Compact Keyboard and Pad Controller (Black-on-White) $99.00 each

    - 25 x Sennheiser HD 280 Pro Circumaural Closed-Back Monitor Headphones $99.95 each

    - 2 x KRK Rokit 5 G3 - 50W 5" Two-Way Active Studio Monitor (Single, Black) $149.50 each *

    - 1 x Hosa Technology Stereo Mini (3.5mm) Male to 2 RCA Male Y-Cable - 3' $5.45 each *

  Rationale

  Sound equipment needed to meet audio production standards.

  Resource Type: One-time

  Expenditure Category:
    Computer & Information Technology Equipment (6420)

  First Year Cost/Savings: $9,660.00/$0.00

Actions/Activities:

- **1.1.a1 - Add Multimedia capable PCs**

  Order and Install new iMacs in CNTL 118.

  Start Date: 06/01/2019 **End Date:**   08/10/2019

  Responsible Person: MITN Dept Faculty and Staff

- **1.1.a2 - Upgrade PCs in all labs as per the established replacement cycle**
  Start Date: 06/01/2021 **End Date:**   08/15/2021

  Responsible Person: CHC Technology Department

- **1.2 - Objective - At least 75% of FTE instructional load will be taught by full-time faculty.**
  Priority Rank: 1

  Start Date: 08/16/2022 **End Date:**   05/27/2026

  Responsible Person: CIS Faculty

  Strategic Direction: 1. Promote Student Success

  Impact Type: Site

  Institutional Learning Outcome: Not Applicable

- **1.3 - Objective - Acquire and/or upgrade essential software applications and hardware instructional tools to enhance transfer and workforce**

readiness

Priority Rank: 4

Start Date: 08/01/2022 **End Date:**   08/01/2026

Responsible Person: CIS Department Chair

Strategic Direction: 1. Promote Student Success

Impact Type: Department

Institutional Learning Outcome: Not Applicable

Resource Requests:

- **1.3.r1 - Software Acquisition and Maintenance**
  Description

  Acquire and keep current the following software titles and suites follows:

  - NetOp: $1300
  - MSDNAA: free with school licensing
  - Adobe Creative Suite: $23,000
  - Autodesk Entertainment Creation suite: currently free
  - Octane rendering software (annual license): $27,960
  - zBrush digital sculpting software: $35,800
  - VMWare: $300
  - Keyboarding software: TBD

  Rationale

  In order to promote transfer and workforce preparedness, essential software applications and hardware instructional tools must be upgraded as neccessary.

  Resource Type: Ongoing
  Expenditure Category: Software (4430)
  First Year Cost/Savings: $88,060.00/$0.00
  Second Year Cost/Savings: $60,000.00/$0.00
  Third Year Cost/Savings: $88,060.00/$0.00

- **1.3.r2 - Tablets for Multimedia**
  Description

  Wacom tablets

  Rationale

  Students in the Multimedia courses need drawing tablets in order to develop their skills and abilities with computer assisted graphic design.

  Resource Type: One-time

Expenditure Category:

Computer & Information Technology Equipment (6420)

First Year Cost/Savings: $1,000.00/$0.00

- **1.3.r3 - Hardware Class Instructional Supplies**
Description

  - Intel barebones kits

  - barebones laptop kit

  - Laser networkable printer

  - Wireless router

  - LAN/WAN router

  - variable voltage control

  - isolation transformer

  - NAS external drives

  - Wireless AP

  - Wireless access card

  - Multifunction meter with temp measure

Rationale

The hardware class instructional supplies need to be upgraded regularly.

Resource Type: Ongoing

Expenditure Category: Instructional Supplies (4300)

First Year Cost/Savings: $2,000.00/$0.00

Second Year Cost/Savings: $2,000.00/$0.00

Third Year Cost/Savings: $2,000.00/$0.00

- **1.3.r4 - Cisco Routers and Switches**
Description

Routers and switches needed for CIS 140-143 (Cisco Networking) course labs and related hands-on activities.

  - ConvergeOne - Cisco Equipment 11 sets consisting of the following: ($1923.02 for each set)

  - ISR4221-SEC/K9 Cisco ISR 4221 SEC Bundle with SEClic 1 $1,022.02

  - WS-C2960+24TC-L CAT2960 PLUS 24PORT + 2T SFP 1 $542.00

  - NIM-2T= 2-Port Serial WAN Interface card 1 $344.00

  - CAB-SS-26MTC-06 Smart Serial to Smart Serial DTE/DCE Assy, 6-FT 1 $15.00

Rationale

The current equipment was purchased 15 years ago and is approaching end of life. The equipment needs to be to meet industry standards. A regular replacement cycle is needed to maintain the currency of the equipoment.

Resource Type: Ongoing
Expenditure Category:
   Computer & Information Technology Equipment (6420)
First Year Cost/Savings: $24,326.00/$0.00
Second Year Cost/Savings: $20,000.00/$0.00
Third Year Cost/Savings: $20,000.00/$0.00

- **1.3.r5 - Lynda.com Subscription**
  Description
  Rationale

  Provide open access to Lynda.com for all multimedia students.

  Resource Type: Ongoing
  Expenditure Category: Software (4430)
  First Year Cost/Savings: $20,000.00/$0.00
  Second Year Cost/Savings: $0.00/$20,000.00
  Third Year Cost/Savings: $20,000.00/$0.00

Actions/Activities:

- **1.3.a1 - Acquire and/or upgrade necessary software programs**

  Upgrade the following software titles and suites follows:

  - NetOp
  - MSDNAA
  - Adobe Creative Suite
  - Autodesk Entertainment Creation suite
  - Octane rendering software
  - zBrush digital sculpting software
  - VMWare
  - Keyboarding software

  Responsible Person: Fulltime Lab-Tech

- **1.3.a2 - Purchase Hardware Instructional Supplies**
  Responsible Person: Lab-tech

- **1.4 - Objective - Increase student success by providing daily access to lab tech tutors**

Priority Rank: 5

Start Date: 08/01/2022 **End Date:**   08/01/2026

Responsible Person: Fulltime Lab-Tech

Strategic Direction: 1. Promote Student Success

Impact Type: Department

Institutional Learning Outcome: Not Applicable

Resource Requests:

- **1.4.r1 - Funds to hire Part-time lab techs**
Description

  6-15 Hour hourly lab tutors/techs - 3 for CIS, 1 for CSCI and 2 for Multimedia

  Rationale

  Part-time lab techs are needed to maintain regular open lab hours and provide technical assistance to CIS, CSCI and Multimedia students.

  Resource Type: Ongoing
  Expenditure Category: Part-Time / Overtime / Student (2380)
  First Year Cost/Savings: $30,000.00/$0.00
  Second Year Cost/Savings: $30,000.00/$0.00
  Third Year Cost/Savings: $30,000.00/$0.00

- **1.4.r2 - Full time Lab Tech**
Description

  Full-time MutliMedia Lab Tech

  Rationale

  A full time lab techs is needed to assist with classroom related projects, maintain lab hardware and software, provide support during open Multimedia lab hourse and provide technical assistance as needed for the CHC Multimedia students.

  Resource Type: Ongoing
  Expenditure Category: Cert Non-Mgt. Non-Teach (1283)
  First Year Cost/Savings: $60,000.00/$0.00
  Second Year Cost/Savings: $62,000.00/$0.00
  Third Year Cost/Savings: $64,000.00/$0.00

Actions/Activities:

- **1.4.a1 - Hire Part-time Lab Techs**

  Interview and hire 6 part-time lab tech for each academic year.

Start Date: 08/01/2019 **End Date:**   08/01/2022
Responsible Person: Full time Lab Tech & Division Dean

- **2 - Goal - Increase equity in classroom to promote student success.**
  Priority Rank: 2
  Objectives:

  - **2.1 - Objective - Increase African-American and Hispanic-America student course success rate.**
    Priority Rank: 13
    Start Date: 11/07/2022 **End Date:**   11/09/2026
    Responsible Person: Discipline Faculty
    Strategic Direction: 1. Promote Student Success
    Impact Type: Department
    Institutional Learning Outcome: Not Applicable
    Resource Requests:

    - **2.1.r1 - Equity based workshop/conference**
      Description
      Rationale

      To increase faculty awareness with equity in education to promote student success amongst disadvataged student groups.

      Resource Type: Ongoing
      Expenditure Category: Conference and Travel (5200)
      First Year Cost/Savings: $5,500.00/$0.00
      Second Year Cost/Savings: $5,500.00/$0.00
      Third Year Cost/Savings: $5,500.00/$0.00

  - **2.2 - Objective - Increase CSCI course success rate for women students.**
    Priority Rank: 14
    Start Date: 11/07/2022 **End Date:**   11/09/2026
    Responsible Person: Discipline Faculty
    Strategic Direction: 1. Promote Student Success
    Impact Type: Department
    Institutional Learning Outcome: Not Applicable
    Resource Requests:

    - **2.2.r1 - fund for workshop and conference**
      Description
      Rationale

      To increase awareness for women in Technology and technology education.

      Resource Type: Ongoing
      Expenditure Category: Conference and Travel (5200)
      First Year Cost/Savings: $5,500.00/$0.00

Second Year Cost/Savings: $5,500.00/$0.00

Third Year Cost/Savings: $5,500.00/$0.00

- ○ **2.3 - Objective - Increase course success rate amongst students in 35 ~ 39 age group.**

  Priority Rank: 15

  Start Date: 11/07/2022 **End Date:** 11/09/2026

  Responsible Person: Department Faculty

  Strategic Direction: 1. Promote Student Success

  Impact Type: Department

  Institutional Learning Outcome: Not Applicable

  Resource Requests:

    - ▪ **2.3.r1 - fund for workshop and conference**
      Description
      Rationale

      To increase awarness in learning modality amongst age groups and different gererations

      Resource Type: Ongoing

      Expenditure Category: Conference and Travel (5200)

      First Year Cost/Savings: $5,500.00/$0.00

      Second Year Cost/Savings: $5,500.00/$0.00

      Third Year Cost/Savings: $5,500.00/$0.00

- **3 - Goal - Become the premier IT program in the Inland Empire**

  Priority Rank: 5

  Objectives:

  - ○ **3.1 - Objective - Discipline faculty will maintain professional currency**

    Priority Rank: 6

    Start Date: 08/01/2022 **End Date:** 08/01/2026

    Responsible Person: Discipline faculty

    Strategic Direction: 3. Develop Teaching and Learning Practices

    Impact Type: Department

    Institutional Learning Outcome: Not Applicable

    Resource Requests:

      - ▪ **3.1.r1 - Funds for workshops and conferences**
        Description
        Rationale

        Necessary to maintain professional currency.

        Resource Type: Ongoing

        Expenditure Category: Conference and Travel (5200)

        First Year Cost/Savings: $5,500.00/$0.00

        Second Year Cost/Savings: $5,500.00/$0.00

Third Year Cost/Savings: $5,500.00/$0.00

Actions/Activities:

- **3.1.a1 - Attend technical and/or education workshops and conferences**
  Responsible Person: Discipline faculty

○ **3.2 - Objective - Provide transfer and workforce relevant courses, degrees, and certificates in multiple modalities**

Priority Rank: 9

Start Date: 08/01/2022 **End Date:**   08/31/2026

Responsible Person: Discipline Faculty

Strategic Direction: 1. Promote Student Success

Impact Type: Department

Institutional Learning Outcome: Not Applicable

Actions/Activities:

- **3.2.a1 - Revise degrees and certificate as needed**

  - Review and revise current degrees and certificates as needed

  - Gain discipline wide support for revisions

  Start Date: 08/01/2019 **End Date:**   08/01/2022

  Responsible Person: Department Chair

- **3.2.a2 - Develop new courses, certificates, and/or degrees in high-growth areas.**
  Start Date: 08/01/2019 **End Date:**   08/01/2022
  Responsible Person: Discipline faculty

- **3.2.a3 - Continue to hold annual advisory meetings with industry and education representatives**

○ **3.3 - Objective - Provide student internship and mentoring opportunities**
Priority Rank: 8
Start Date: 08/01/2022 **End Date:**   08/01/2026
Responsible Person: Discipline Faculty
Strategic Direction: 1. Promote Student Success
Impact Type: Department
Institutional Learning Outcome: Not Applicable
Resource Requests:

- **3.3.r1 - Provide funding for a professional expert to coordinate internship/mentoring opportunities for students**
  Description
  Rationale

A professional expert will identify and coordinate internship opportunities for IT students.

Resource Type: Ongoing

Expenditure Category: Professional Expert - Non FTE (2389)

First Year Cost/Savings: $9,000.00/$0.00

Second Year Cost/Savings: $9,000.00/$0.00

Third Year Cost/Savings: $9,000.00/$0.00

- **3.3.r2 - Director of Interships and Workforce Development Description**

  Part time Director of Interships and Workforce Development

  Rationale

  A part-time director is needed to oversee and support internship workforce development opportunities for IT students.

  Resource Type: Ongoing

  Expenditure Category: Instructors Day/Hourly (1300)

  First Year Cost/Savings: $38,000.00/$0.00

  Second Year Cost/Savings: $40,000.00/$0.00

  Third Year Cost/Savings: $40,000.00/$0.00

Actions/Activities:

- **3.3.a1 - Establishing internship and mentoring opportunities**
- **3.3.a2 - Offer internship courses**

○ **3.4 - Objective - Increase enrollments and diversity in IT courses and programs.**

Priority Rank: 12

Start Date: 08/01/2022 **End Date:** 08/01/2026

Responsible Person: Discipline Faculty

Strategic Direction: 2. Build Campus Community

Impact Type: Department

Institutional Learning Outcome: Not Applicable

Actions/Activities:

- **3.4.a1 - Develop and distribute course and program specific marketing materials**
- **3.4.a2 - Participate in outreach events**

- **4 - Goal - Develop and implement a industry-relevant multimedia/graphic design program.**

Priority Rank: 3

Objectives:

○ **4.1 - Objective - Develop Associate of Science Multimedia Degrees and Certificates of Achievement with identified area of focus.**

Priority Rank: 10

Start Date: 08/01/2022 **End Date:** 08/01/2026

Responsible Person: Full-time Multimedia Faculty

Strategic Direction: 7. Develop Programs and Services

Impact Type: Department

Institutional Learning Outcome: Not Applicable

Resource Requests:

- **4.1.r1 - Release time for Multimedia faculty member**
  Description

  .4 release for the Spring 2019 term and the 2019-2020 academic year

  Rationale

  Provide the release time required for the development of a multimedia program that compliments the RTVF academy at SBVC

  Resource Type: One-time

  Expenditure Category: Reassigned Time (1102)

  First Year Cost/Savings: $10,000.00/$0.00

  Second Year Cost/Savings: $20,000.00/$0.00

- **4.1.r2 - Summer Camp Support**
  Description

  Faculty and support staff

  Rationale

  The summer camps require staffing, marketing and support staff in order to be successful.

  Resource Type: Ongoing

  Expenditure Category: Non-Instructional Supplies (4500)

  First Year Cost/Savings: $15,000.00/$0.00

  Second Year Cost/Savings: $15,000.00/$0.00

  Third Year Cost/Savings: $15,000.00/$0.00

Actions/Activities:

- **4.1.a1 - Develop New Courses**

  Plan and develop new courses in areas as identified by the full-time faculty member with expertise in Multimedia

  Start Date: 08/01/2019 **End Date:** 08/01/2022

  Responsible Person: Multimedia Faculty

- **4.1.a2 - Develop Associate of Science degrees in multimedia**
- **4.1.a3 - Develop Certificates of Achievement in Multimedia**
- **4.1.a4 - Align program courses, degrees, and certificates to industry certifications and demands**

- **4.2 - Objective - Continue to develop the makerspace project, which was initially funded by the strong workforce grant.**
Priority Rank: 7
Start Date: 08/01/2022 **End Date:** 08/01/2026
Responsible Person: Makerspace consultant, Discipline faculty and staff
Strategic Direction: 1. Promote Student Success
Impact Type: Site
Institutional Learning Outcome: Not Applicable
Resource Requests:

  - **4.2.r1 - Provide funding for a consultant/coordinator of the makerspace project**
  Description
  Rationale

    A digital media expert is needed to oversee and develop the makerspace.

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

  - **4.2.r2 - Purchase supplies and equipment for the makerspace project**
  Description

    - 2 - Green screens: 1,000
    - 36 Dell XPS 8930 PCs with Dell UltraSharpe 27" 4k monitors: $102,886
    - 36 Licences of Finale audio editing software: $14,000
    - 36 Akai Professional MKII audio editor controllers: $5,000
    - 36 Sennheiser HD 280 headphones: $5,000
    - 2 3D printers:$20,000
    - 30 VR headsheets: $15,000

    Rationale

    Equipment, software, and supplies for emerging digital media technologies, such as green screens, 3D printers and virtual reality headsets.

Resource Type: Ongoing

Expenditure Category:

Computer & Information Technology Equipment (6420)

First Year Cost/Savings: $163,000.00/$0.00

Second Year Cost/Savings: $20,000.00/$0.00

Third Year Cost/Savings: $20,000.00/$0.00

- **4.2.r3 - Part-time Makerspace Staff**
  Description
  Rationale

  Part-time staff is needed to oversee the space during its open hours.

  Resource Type: Ongoing

  Expenditure Category: Part-Time / Overtime / Student (2380)

  First Year Cost/Savings: $10,000.00/$0.00

  Second Year Cost/Savings: $10,000.00/$0.00

  Third Year Cost/Savings: $10,000.00/$0.00

Actions/Activities:

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

11. Comments

This space is provided for participants and managers to make additional comments. Comments are not required.

There are no comments for this plan.

12. Supporting Documents

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

- UC_F2018_Crafton Hills College.xlsx
- CIS Degrees and Certificates for past 2013-2018.pdf
- Cisco CCNA & Cybersecurity Certificates Fall 18 Revise.pdf
- articulated course listing.pdf
- CIS-CSCI-MULTI Course Matrix Fall 18 Revise.pdf
- CIS-CSCI Course Matrix 2022-2026.xlsx
- CHC IT transfers to CSUs.pdf

- [2018 SummPerformDetailReportbyCollegeTOP4.pdf](#)
- [Multimedia Certificates Fall 18 Revise.pdf](#)
- [PerKins IV Core Indicators_20-21.pdf](#)
- [CIS-CSCI Course Rotation Patterns_F18.pdf](#)