

Information Technology Department

AUP for Academic Year 2024-2025

October 2023

Describe Department/Unit

Connection to College Mission

It is the mission of the Department of Information Technology to provide courses and instruction that will meet the academic, career, and general education needs of our students, college, and communities. We provide instruction leading to associate degrees and certificates in multiple disciplines including digital media and information technology. The programs in the Department Information Technology provide life-long learning and support to students in their academic, technical, and vocational pursuits. The goals of our programs are to foster in students a lifelong desire to learn, a passion to excel, and a commitment to contribute actively to their local community.

Students earning associate degrees, certificates, and awards that are under the Department of Information Technology will be prepared to enter the job market with a variety of focuses including but not limited to: help desk providers, computer operators, desktop publishers, office clerks, administrative support specialists, information technology and cyber-security support specialists, social media marketing specialists, and web developers/designers.

Students graduating from the department's programs will be prepared to transfer to a four-year institution to continue in related fields of information technology, cyber-security, and web design/development.

Report on Improvements Made and Gaps Identified in the Prior Year

Student Equity

Business Office Technology

The success rate rose from 63% to 66% from 2021-22 to 2022-23, however, it is significantly below the college average. Men's success rose significantly (43-58%), however, their declining numbers are troublesome. The American Indian population significantly declined in success from 71% to 33% whereas other ethnic groups moved up.

The program has a significant gap in completion in this program. The college average in 2022-23 was 89% whereas the department success was 66%. That is a significant gap of 23%. The success rate college-wide is 78% while the department rate is 66% percent representing a 12% drop.

The success and completion gaps appear to be both for men and women with the men's gap showing a 20% drop whereas the women's gap is in success. The American Indian and Hispanic gaps are significant. The gaps between First Generation, Financial Aide, and DSPS are varying but the overall gaps in success

and retention need to be addressed. This lack of success and completion triggered the changing of the program in the last program review. It is curious that these gaps are so predominant in this program and since we are changing the program (deleting BSOT) whether these gaps will be reduced due to the new program that is replacing it. This redesign is intended to provide higher-level skills and employability for students with a different simulation package at a reduced cost.

Information Technology

Enrollment in the programs has risen and has started to rebound from the COVID era. Enrollments in the department rose from 718 (2021-22) to 732 (2022-23). The ethnicity of the enrollments have some highlights including the African American population rose from 32 (2021-22) to 51 (2022-23). Percentage-wise, this population rose from 4.5% to 7.0%, and has been a goal of the IT/Cyber program to attract more African-American students.

The success rates, on the other hand, for IT/Cyber dropped from 2021-2022 of 79% to 73% in 2022-23. The success of men fell 2% from 76% to 72% whereas women's rates fell from 84% (2021-22) to 72% (2022-23). African Americans had risen from 52% to 71% (2020-21 to 2021-22) but declined in 2022-23 to 56%. There was an increase in enrollment in this population which was encouraging. As compared to the college success rates, there is a significant gap as the college success rate is 78% versus the IT/Cyber success rate is 73%. The Hispanic/Latino success rates also had a significant gap as compared to the college. The college-wide success for Hispanic/Latino students was 77% whereas the department was 71%. It dropped 7% from the previous year (2022-23). So, there were more Hispanic/Latino students enrolling but they were less successful. There are other ethnicity success and completion rates that were noted, but not significant. The completion rates are also below college levels. The college completion rate is 89% and the IT department rate is 86%. This completion rate is just 3% lower. Men's completion rates have risen 2% (85% in 2021-22 and 87% in 2022-23), however, women fell from 89% in 2021-22 to 84% in 2022-23 whereas the college-wide rate is 89%.

Overall, students seem to be completing at lower rates but are still close to the college-wide averages. While they are completing, it appears that their success rates are following. There have been some challenges in obtaining peer tutors for the IT/Cyber areas. Specifically, the programming and higher-level IT/Cyber courses need tutors to help them with the difficult and challenging content.

Digital Media Arts

Enrollments rose steadily during the past five years until 2022-23, when they dropped 11% from the previous year. FTES showed a similar pattern, except the peak was in 2020-21. Of all of the demographic categories, the drop in enrollment is mostly accounted for students of white ethnicity and not-economically disadvantaged. I believe that this is because employment was better among these groups. According to the Bureau of Labor Statistics, unemployment spiked to almost 15% in April 2020 when the pandemic began. The unemployment rate returned to pre-pandemic levels by January 2022.

Compared to the college, the Digital Media Arts courses are over-represented by white or two or more races and underrepresented by African American, Native American, and Hispanic/Latino groups. Interestingly, the Digital Media Arts courses are overrepresented by economically disadvantaged students and underrepresented by non-economically disadvantaged students. Conversely, we are underrepresented by financial aid students and overrepresented by non aid students. Over the past 5 years, retention and success likewise showed a pattern of increase with a peak in 2021-22 and a drop in

the following year. The demographic group with the largest effect was first generation students. Not first generation students were fairly steady over the 5 year period (~87%) with a peak in 2020-21. Student success showed the same pattern with improvements over the first 3 years, a peak, and then a slight decline. And likewise, productivity, followed the same pattern with a peak in 2020-21. Over the 5-year period, productivity is improved by 2.2 points.

- Overall, significant gaps include the following:
- Total completion and success
- Men success
- Women completion
- African American success
- Hispanic/Latino completion and success

Total awards have increased significantly, owing to the dual-enrollment Digital Media and Marketing certificate program at Tehachapi High School.

Outcomes Assessment: Loop-Back Improvements Made

Actions taken in the prior academic year

Business Office Technology

The BSOT program was redesigned and moved into the IT area as the Computer Application Specialist program. No assessments will be made as the program will be discontinued.

Digital Media Arts

2022-23 was not a scheduled assessment year.

Information Technology/Cyber Security

The IT-Cyber Program Review reported on the outcomes for each of the certificate and degree programs (Program Review done in Spring 2022). In the previous year (2022-2023), we re-assessed two classes as they did not meet the targets. The classes were assessed and met the set targets. No additional assessments were completed last year.

Outcomes Assessment: Results of Last Year's Assessments

BSOT courses were scheduled for assessment in Spring 2023, however, the program was redesigned and moved into the IT area as the Computer Application Specialist program. No assessments will be made as the program will be discontinued.

Target Met?

Did Not Assess

Outcomes Assessment: Missed Targets

N/A

Outcomes Assessment: Schedule of This Year's Assessments

Business Office Technology

The program was redesigned and moved into the IT area as the Computer Application Specialist program. No assessments will be made as the program will be discontinued.

Digital Media Arts

Assessments are not scheduled this year. They are scheduled for the 2024-25 academic year.

Information Technology/Cybersecurity

The IT/Cyber program will do all Student Learning Outcome assessments for all courses starting in the Spring of 2024 and completing in the Fall of 2024). The Program Learning Outcomes will be done in the Fall of 2025/Spring of 2026 in preparation for the IT/Cyber Security Program Review beginning in the Fall of 2026 and completed in the Spring 2027.

NOTE: IT/Cyber Program Review 2022 (page 31) SLOs to be done in Spring 2024 and Fall 2024 PLOs to be done in Fall 2025-Spring 2026,

Program Review

Information Technology/Cyber Security

Year of Last Program Review:

2022

Actions Taken in the Prior Year to Address Strategies:

We had the following 2-year goals

1. Create a Computer Application Specialist COA for additional pathways for students.
2. Participate in the Chancellor's Office AWS Project
3. Review Math requirements in certificates

All three goals were completed in 2023.

Our 5-year goals were:

1. Review prerequisite courses.
2. Add new courses as required to keep programs relevant.
3. Cloud Computing COA – Program updated.

All 5-year goals were completed.

Strategies Still to be Addressed:

We have an ongoing goal of reviewing courses and updating courses to keep the programs current to meet employers' needs.

Web Professional, Digital Media

Year of Last Program Review:

2022

Actions Taken in the Prior Year to Address Strategies:

Five-year goals

1. Increase program completion by 50%
2. Expand dual enrollment to Inyo County, offering one course per semester.

3. Increase student diversity by developing marketing materials that are inclusive of a diverse student population.

Program completion increased by over 200% in the academic year 2022-23 and exceeded goal. Awards were 15 in 2021-22, and they were 31 in 2022-23.

The dual-enrollment opportunity in Inyo County has not yet materialized, but there is current interest at Burroughs High school to offer the Digital Media and Marketing certificate. Burroughs has an instructor who can teach all of the courses, and she is interested in doing so. We are initiating conversations with decision makers about this plan.

Strategies Still to be Addressed:

Redesign of marketing materials to increase student diversity still needs to be addressed.

Business Office Technology

Year of Last Program Review:

2021

Actions Taken in the Prior Year to Address Strategies:

Five-year goals

1. Update all three certificates to new names for Business Information Worker
2. Identity, including review of program/certificate outcomes.
3. Remap Program Outcomes to new certificates
4. Update marketing to include textbook efficiencies-Meet with counselors
5. Update all courses to eligibility for Exchange

These goals were developed prior to the decision to convert the Business Office Technology program to the Computer Application Specialist program. But with this change, learning outcomes have been reviewed and revised, certificates have been developed, course and program outcomes have been mapped.

Strategies Still to be Addressed:

Marketing of the CAS program will begin once it is published in the catalog. We also plan to have the new courses POCR approved.

Last Year's Initiatives

Business Information Worker/Professional

Action plan

1. Update Business Office Technology program to Business Information Worker/Professional to align with California's Information Communications Technologies sector, as well as other state initiative.
2. Update Business Office Technology courses to be better focused on essential job skills.
3. Recruit new members for the Business Information Worker/Professional Advisory Committee and solicit input.

4. Bring curriculum through Curriculum and Instruction Council.

These action items are outdated with the implementation of the Computer Application Specialist program. However, they have been completed, in a sense, through the new program model.

American Bar Association (ABA) Approval

Paralegal is no longer in this department.

Program Growth at Prison

Paralegal is no longer in this department.

Dual Enrollment in Tehachapi or other high schools in service area

The Digital Media and Marketing certificate is offered in its entirety at THS. In May 2023, the first cohort of students graduated. Status: Completed

Reminder of Initiatives for the Current Year

Action Plan

1. Develop and implement the Computer Application Specialist Certificate of Achievement/Degree.
2. Move remaining unused courses from BSOT to Business or Non-credit.
3. Discontinue the Business Office Technology Program.
4. Hire an additional Cyber Security full time faculty member.
5. Hire a Computer Application Specialist full time faculty member

Initiatives for Next Academic Year

Action Plan

1. Hire full time Masters of Science faculty to staff Cyber Security Baccalaureate Degree program
2. Launch Computer Application Specialist program
3. Launch Computer Basics noncredit program
4. Finish teach-out period of Business Office Technology program

Evaluate Resource Needs

Facilities

Business Office Technology

None requested.

Digital Media Arts

None requested.

Information Technology/Cybersecurity

Facility needs are currently being met.

Information Technology

Business Office Technology

Continued support for LinkedIn Learning is needed.

Digital Media Arts

Continued support for LinkedIn Learning is needed.

Information Technology/Cybersecurity

Continued support for LinkedIn Learning is needed.

Marketing

Business Office Technology

With the migration of BSOT to IT, we will be using printed materials, digital communications, and social media marketing for outreach. Articles from local papers.

Digital Media Arts

Funding is needed annually for social media and Google marketing of Fall courses so students can enter the pathway during the optimal time of year. This marketing has proven to make a significant difference in enrollments. We also need continued support for printing flyers and brochures for outreach events, such as Career Day, the Desert Empire Fair, and community presentations.

Information Technology/Cybersecurity

The IT/Cyber program will continue to need marketing funds and marketing is needed each semester for the programs. Brochures and banners were developed but we had some additional certificates (Cloud Computing and Linux Administration) that may need new brochures and/or we can update our current brochures. Additionally, our Data Analyst I certificate is not represented in any of our brochures and needs to be added as well. With the addition of a new certificate (Computer Application Specialist), we will need additional marketing materials and advertisements.

In addition, as we are moving more classes back on campus, we need a continual marketing campaign to let potential students know that they can take classes on campus in Ridgecrest.

Professional Development

Business Office Technology

None requested.

Digital Media Arts

LinkedIn Learning remains the most valuable resource for professional development for digital media arts faculty. We previously requested funding for the Digital Media Educators Conference, which has been a valuable professional development event for many years. It doesn't appear it is being offered anymore.

Information Technology/Cybersecurity

Funding for professional development (WASTC training sessions) and attendance at the ICT conference in January as well as other professional conferences.

Other Needs

N/A

Staffing Requests

1000 Category - Certificated Positions

Computer Application Specialist Instructor

Location: CC Online, Ridgecrest/IWV

Justification:

A full-time faculty member is requested to lead the new Computer Application Specialist program. The previous iteration of this program was the Business Office Technology program, which was overseen by a full-time faculty member before she retired. The program had overall acceptable enrollments due to dual-enrollment at California City and Tehachapi high schools, however, those dual-enrollment programs languished when the high school teachers retired. This effect underscored the need to bolster regular enrollments in the program through online and on-ground delivery, described in the 2021 Business Office Technology Program Review.

Further discussion with the Business Office Technology and Information Technology advisory committees illuminated an opportunity to increase demand for the program by shifting away from a focus on secretarial skills and toward a focus on general computer applications skills, which are transferable to more careers, especially within our service area. In the new iteration of the program, the 1-unit incremental courses have been combined into single 3.0 unit classes for each major application. Some classes have been removed (e.g. keyboarding), and others have been added (e.g. cloud-based applications).

The Computer Application Specialist program has been locally approved and is now undergoing regional and state approval. The Business Office Technology program is now in teach-out mode. The data below reflects historic Business Office Technology students.

1. Are there too few or too many students enrolling for particular classes or majors?

	2018-19	2019-20	2020-21	2021-22	2022-23
Course Count	19	19	20	20	20
Section Count	39	41	46	44	40
First Day Enrollment	1,058	1,083	1,023	956	986
Census Enrollment	803	839	798	711	868
Students Per Section	20.6	20.5	17.3	16.2	21.7
First Day Waitlist Total	1	10	18	3	7
FTES	57	49	44	50	60
FTEF	5.46	5.46	6.99	6.65	5.86
FTES to FTEF Ratio	10.4	9.0	6.3	7.5	10.3

Census enrollments and full-time equivalent students (FTES) have improved slightly over the past 5 years, with a dip during the pandemic. Productivity also dipped during the pandemic, but is only 0.1 below 2018-19. While there are improvements, the program needs dedicated leadership by a full time faculty member with industry experience.

2. Are there too many courses or programs that are under capacity?

Yes, the retiring Business Office Technology program includes more courses than are effectively serving students. The new Computer Applications Specialist program eliminates unnecessary course and adds new courses that have been requested by the advisory committee.

3. Are courses “core mission”?

Yes, this program of study is a Career Technical Education program, tying it to the College mission of providing “degrees and certificates in transfer and career technical education” and offering “learning opportunities that develop ethical and effective citizenry.” This program also provides life-long learning and support to students in their academic, technical, and vocational pursuits. One of the goals of this program is to foster a lifelong desire to learn, a passion to excel, and a commitment to contribute actively to the local community. One of the community college's core missions is to serve the workforce needs of employers. There is a workforce shortage in our service area, region, state, and nationally. The Naval Air Warfare Center at China Lake, local contractors, and other businesses have a continual need for entry-level workers for computer operators, software experts in Office, Help Desk support, and other entry-level IT support jobs.

4. Are courses overscheduled?

There will be a new long-term schedule and the classes will be scheduled through the semester instead of the 8-week cycle that has been done previously. They will be rotated throughout the year as to not be overscheduled and to be well enrolled. They will initially be offered online, but there is an intention to bring the program back on campus during the evening hours to align with potential local working student schedules in the evening. Students will not have to juggle schedules to get one of the three short courses but will take one comprehensive course for each software application.

5. Is there capacity to offer courses or programs at different times and/or locations?

With the re-focus of this program, we will initially be offered online, but there is an intention to bring the program back on campus during the evening hours to align with potential local working student schedules in the evening. There are opportunities to build new dual enrollment programs that will be more attractive due to the emphasis on software specialization and job opportunities. This is an ideal program for high school students to prepare them for entry-level work and to support their continued academics. A full-time faculty member will be the champion of this program and marketing promotion in the IWW area will need to be done to advertise the offering.

6. Is there a workforce shortage in the service area or region?

Yes. There will be an ongoing and continual need for entry-level computer operators with software specialization skills. workers as well as administrative assistants. Incumbent workers also need ongoing updating of skills as they promote up in their organizations. Students can expand their opportunities

beyond the office environment to IT entry-level jobs, Help Desk jobs and other computer operator positions.

7. What are the costs and/or lost revenue from gaps between student demand and course or program capacity?

This program has had a full-time faculty member developing and modifying the ever-changing needs for employers. The absence of a full-time faculty member to continue these efforts with an advisory committee will stagnate the program and cause gaps between students and availability as well as placement in employment. This will also impact on our relationship with employers in our service area. Additionally, direct losses in potential FTES and apportionment will cost the college.

8. In support of your proposal, provide the following data:

- a. Size of wait lists in the discipline. The waitlists for the BSOT courses over the past 5 years has been 1, 10, 18, 3, and 7.
- b. Department productivity, previous year. Productivity dipped during the pandemic, but has recovered. Currently at 10.3, it is only 0.1 below 2018-19.
- c. Number of full-time faculty currently in the department. 1.930 (330%) (However, this figure represents faculty who have primary responsibility over other programs. We do not have a full-time faculty member assigned to this program.)
- d. Number of adjunct faculty. 3.393 (58.0%)
- e. Overload. Data not given
- f. Summer. 0.532 (9.1%)
- g. Number of certificates awarded, previous year. 3 (This is only the full certificate. We did not receive award data from IR on the smaller certificates.)
- h. Number of degrees awarded, previous year. 3
- i. Core curriculum classes. 20
- j. CTE classes with workforce data (wage/high demand). 20
- k. Number of students at first day and census, previous year. 986/868

1000 Category - Certificated Positions:

Information Technology/Cyber Security for Baccalaureate program

Location: Ridgecrest/IWV

Justification

Are there too few or too many students enrolling for particular classes or majors?

This new position request will serve the new Cyber Security Baccalaureate of Science degree that has now been provisionally approved by the California Community Colleges Chancellor's Office (CCCCO). It is expected that we will get final approval no later than March 2024 by the Board of Governors. In anticipation of final approval, we need to move forward with a full-time position to provide instruction to incoming students.

Cerro Coso Institutional Research Office developed a student survey to assess student interest in a bachelor's program in cyber security. We developed the survey and then sent it to graduates, former

students enrolled in the major classes, and current students. 920 surveys were sent out and 106 students responded. Of the 106 students who responded, 67 (63.2%) were current students and 39 (36.8%) were former students. Of these students, there was substantial student interest in a bachelor's program with 91 students (88%) either very interested or interested in enrolling in the program.

Are there too many courses or programs that are under capacity?

No. The new program will consist of the following new courses and have not yet been scheduled:

Baccalaureate-degree required courses:

- IT C280: Introduction to Cloud Computing (3 units, lower division)
- IT C290: Linux Administration I (3 units, lower division)
- IT C292: Linux Administration II (3 units, lower division)
- IT C320: System Logs and Event Management (3 units)
- IT C330: Network Security (3 units)
- IT C350: Windows Forensics (3 units)
- IT C400: Cyber Incident Response (3 units)
- IT C420: Operational Security Architecture – Security class (3 units)
- IT C430: Threat Intelligence (3 units)
- IT C450: Systems and Network Auditing (3 units)
- IT C460: Enterprise Security Architecture (3 units)
- IT C470: Penetration Testing (3 units)
- IT C480 Cloud Security (3 units)

Upper-division general education courses:

- ENGL C301: Technical Writing for Professionals (4 units)
- PARA C300: Ethics & Cyber Law (3 units)
- PSYC C300: Industrial and Organizational Psychology (3 units)

Several of the courses (IT C280, C290, C292) are currently taught at the associate's level and have plenty of room in the sections to provide for the students to enroll, the 10 additional classes in the major will require additional staffing with higher-level degrees and experience. The baccalaureate courses will require a master's degree plus sufficient experience in the field. In our current full-time and adjunct pool, only two have the combination of education and experience qualified to teach these courses. We will need to move several of those adjuncts' loads to other faculty at the associate's level to provide room for the upper-division course. Those lower-division courses require a bachelor's degree, and we can more easily hire AS-level adjuncts.

Are courses “core mission”?

Yes. One of the community college's core mission is to serve the workforce needs of employers. There is a workforce shortage in our service area, region, state, and nationally.

Cyber Security professionals are in critical demand to protect our individual security, business security, and international security. The Bureau of Labor Statistics projects that Information Security jobs will grow much faster than other occupations from 2021-2031 at about 35%. It is listed as the eighth fastest occupation in the United States.

The Naval Air Warfare Center at China Lake, local contractors, and other businesses are having a difficult time hiring for both information technology and cyber security positions. The shortage is expected to increase. From 2013 to 2019, cyber security jobs demand increased by 94%, and information technology job demand increased 30% (“Recruiting Watchers for the Virtual Walls? June 2019, Burning Glass).

Additionally, we serve Edwards Air Force Base, Mojave Spaceport as well as many other businesses that need to protect computerized systems, and networks, and secure their data as well as NAWS.

Are courses overscheduled?

No. The courses in the baccalaureate program have not been scheduled, but you can see from the sequencing table below that there will be two to three additional upper-division courses scheduled immediately when the program is offered. As the BS program rolls from semester to semester the number of courses will increase and will require additional specialized full-time faculty.

Course	Units	CSU GE	Course	Units	CSU GE
Junior Year					
IT C290	3		IT C292	3	
IT C320	3		IT C350	3	
IT C330	3		IT C400	3	
ENGL C301	4	Upper GE	PARA C300	3	Upper GE
Fall Total Units	13		Spring Total Units	12	
Senior Year					
IT C280	3		IT C430	3	
IT C420	3		IT C460	3	
IT C450	3		IT C480	3	
IT C470	3		PSYC C300	3	Upper GE
Fall Total Units	12		Spring Total Units	12	

Is there capacity to offer courses or programs at different times and/or locations?

With the start of the baccalaureate program, we will initially be offering all upper-division courses online, but there is an intention to bring the program to campus during the evening hours to align with potential local working student schedules in the evening.

We are also beginning work with the local high schools to build a pathway to our cyber security and information technology programs in a dual enrollment model. Once we begin this dual enrollment program, we will have a continuing pathway of students for our cyber security program. While this is a great model, it will put further strain on our AS-level faculty as it will increase the enrollments.

Is there a workforce shortage in the service area or region?

The College has tailored its programs to meet the needs of the communities for these two objectives, but Cerro Coso's efforts do not stop there. Because of the unique qualities of the communities that the College operates in, Cerro Coso Community College has designed, implemented, and continues to seek new programs that fit the constituencies' needs. The Main Campus acts as the role model for this program. Searles Valley Minerals Corporation and the China Lake Naval Air Weapons Station (NAWS) have been working with the College since the early 70s to provide training programs and courses for their personnel that will integrate state-of-the-art technology with up-to-the-minute information to help keep employees the best educated and productive in the world. Nowhere else is this as important than at NAWS. Nearly 90% of all NAWS employees are government-contracted civilians working to develop and improve defense systems for the United States. These highly educated computer scientists, engineers, and physicists are always looking to update their skills in a variety of areas, including the College's information technology, cyber security, and career technical programs. The proposed Cyber Security Defense & Operations Bachelor of Science degree has been an emerging field for the past six years and Cerro Coso developed the Cyber Security Certificate of Achievement and Associate of Science degree to start to meet this need. While the A.S. degree and associated COA have been a popular and growing program, our employers, regional, state, and nation require higher education than an AS to meet current and future needs to protect information and our national security.

Cyber Security professionals are in critical demand to protect our individual security, business security, and international security. The Bureau of Labor Statistics projects that Information Security jobs will grow much faster than other occupations from 2021-2031 at about 35%. It is listed as the eighth fastest occupation in the United States. A bachelor's degree is becoming increasingly required for these occupations. In the Cerro Coso Community College service area, we serve five counties, 18,000 square miles (about twice the area of New Jersey) from Tehachapi to Lee Vining to Death Valley and Kern River Valley. Our expansive service area is primarily rural and remote with no California State University adjacent. We serve one of the largest Naval Research facilities (Naval Air Warfare Center at China Lake), a hub of advanced technologies at Mojave Spaceport, and the center for NASA at Edwards Airforce Base. Additionally, we serve mining and manufacturing, renewable energy, and other traditional businesses (banking, education, retail, and recreational). All these employers require cyber security professionals to secure networks for national defense, emerging technologies, and traditional business organizations.

Data from the Bureau of Labor Statistics provides an overview of the cyber security (information security) profession and the increasing need for a bachelor's degree. Lightcast (report in appendix) shows a significant difference in the current and future educational requirements. The difference educational requirements for jobs in Cyber Security/Information Security requiring an BS degree versus an AS degree is 2101 postings or 48% of the total postings. There are 495 postings or 11% of total postings for an associate degree versus those requiring a BS degree of 2,596 postings or 59% of total postings.

Wages in cyber security/information security are significantly higher than other professions with a median wage of \$102,600 per year or \$49.33 per hour in 2021. (<https://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm#tab-1>). Per the Lightcast report (attached), wages in the IWV (Indian Wells Valley) area are 5% higher than the national average at \$46,608, while the national median wage is \$44,412. There is a significant pay rate difference between those that have a BS versus an AS.

At the most recent Advisory Committee meeting and the desktop review of the developed courses, employers overwhelmingly support the baccalaureate program and will move to have the name of the program moved to the Human Resources registry so that incoming graduates from our program will earn credit for the bachelor's degree and enter at a higher classification and higher pay. The projected entry amount for someone who completes this program is \$80,000 to start (see minutes of Expert Meeting on March 1, 2023).

What are the costs and/or lost revenue from gaps between student demand and course or program capacity?

In the program application, we supplied the information below on the cost and projected budget for the program. We anticipated and planned for the offering of the program and the costs associated with it including hiring two additional full-time faculty.

The following is a projected budget for the program's first six years.

Cost Estimates	2023 24	2024 25	2025 26	2026 27	2027 28	2028 29
<i>Associate Cost</i>						
1000's Academic Salaries (1 full-time @ 1.000; part-time/overload @ 0.667)	\$85,168.20	\$108,897.40	\$111,079.84	\$113,316.83	\$115,609.75	\$117,489.95
3000's Employee Benefits	\$37,984.00	\$43,228.00	\$43,704.00	\$44,193.00	\$44,694.00	\$45,188.00
4000's Supplies & Materials	\$7,500.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00
5000's Services/Operating Expenses	\$14,500.00	\$6,000.00	\$6,000.00	\$6,000.00	\$6,000.00	\$6,000.00
6000's Equipment	\$500.00	\$500.00	\$500.00	\$10,000.00	\$500.00	\$500.00
Total Estimated Associate Cost	\$145,652.20	\$161,625.40	\$164,283.84	\$176,509.83	\$169,803.75	\$172,177.95
<i>Bachelor Cost</i>						
1000's Academic Salaries (1 additional full-time; additional part-time/overload @ 1.333)	*	*	\$92,488.20	\$130,497.40	\$132,679.84	\$134,916.83
3000's Employee Benefits	*	*	\$39,604.00	\$48,006.00	\$48,482.00	\$48,971.00
4000's Supplies & Materials	*	*	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00
5000's Services/Operating Expenses	*	*	\$6,000.00	\$6,000.00	\$6,000.00	\$6,000.00
6000's Equipment	*	*	\$500.00	\$500.00	\$500.00	\$500.00
Total Estimated Bachelor Cost	\$0.00	\$0.00	\$141,592.20	\$188,003.40	\$190,661.84	\$193,387.83
Estimated Net Costs for Full Program (Associate + Bachelor)	\$145,652.20	\$161,625.40	\$305,876.04	\$364,513.23	\$360,465.59	\$365,565.78

The table below represents the estimated revenue and enrollment for the program. As you can see, when the program commences we will begin to see a recovery of any additional costs in the second year.

Revenue Estimates	2023 24	2024 25	2025 26	2026 27	2027 28	2028 29
<i>Associate Enrollment**</i>	20	38	42	46	50	54
Base Credit* (\$4,840 per FTES)		\$86,290.29	\$155,986.29	\$172,248.69	\$188,511.09	\$204,773.49
Supplemental Allocation* (\$1,145/student eligible)	*	\$13,740.00	\$26,106.00	\$28,854.00	\$31,602.00	\$34,350.00
CTE +9.0 units* (\$645 per student)	*	\$12,900.00	\$24,510.00	\$27,090.00	\$29,670.00	\$32,250.00
Associate Degree* (\$1,935 per completer)	*	*	\$24,768.00	\$27,864.00	\$29,412.00	\$32,508.00

<i>Bachelor Enrollment**</i>			20	40	44	48
Additional \$84/unit	*	*	\$31,920.00	\$66,864.00	\$73,584.00	\$80,304.00
Base Credit* (\$4,840 per FTES)	*	*	*	\$122,797.71	\$233,647.54	\$256,879.54
Supplemental Allocation* (\$1,145 per student eligible)	*	*	*	\$13,740.00	\$27,480.00	\$30,228.00
CTE +9.0 units* (\$645 per student)	*	*	*	\$12,900.00	\$25,800.00	\$28,380.00
Baccalaureate Degree* (\$2,580 per completer)	*	*	*	*	\$41,796.00	\$46,440.00
<i>Additional Funding</i>						
Categorical Funding (Strong Workforce, Perkins, Other)	\$40,000.00	\$40,000.00	\$40,000.00	\$40,000.00	\$40,000.00	\$40,000.00
Estimated Revenue/Funding Potential	\$40,000.00	\$152,930.29	\$303,290.29	\$512,358.40	\$721,502.63	\$786,113.03
Estimated Net Revenue (Revenue minus Costs) for Full Program (Associate + Bachelor)	(\$105,652.20)	(\$8,695.11)	(\$2,585.75)	\$147,845.17	\$361,037.04	\$420,547.25

* SCFF allocations applied in the subsequent year at KCCD; dollar amounts based on 2022-23 Advance Rates; supplemental allocation assumes 60% of students eligible, consistent with college average

** Enrollment projections assume 80% retention per year at associate level, 90% retention per year at baccalaureate level

In support of your proposal, provide the following data:

Size of wait lists in the discipline

This is not relevant to this position as we will be offering new courses that are not included in the new program.

Department productivity, previous year

Number of faculty currently in the department

There are three full-time faculty that teach in the IT/Cyber area. The bachelor's degree is highly specialized and requires a master's degree and at least two years of experience in cyber security. Currently, one full-time faculty member has some cyber security experience but does not have a master's degree. The second and third full-time faculty member has a master's degree but very limited experience in the topics that our cyber security requires.

The faculty load of a full-time faculty member load is estimated below:

FALL CLASSES

Year 1

0.333	Year 2	Year 3	Year 4	
0.400	0.333	0.333	0.333	
	0.267	0.333	0.333	
	0.333	0.333	0.333	
0.733			0.267	
	0.933	1.000	1.267	3.933

SPRING CLASSES

Year 1

0.333	Year 2	Year 3	Year 4	
0.333	0.267	0.333	0.200	
0.333	0.333	0.333	0.200	
1.000		0.333	0.333	
		1.000	0.733	3.333

Number of adjunct faculty

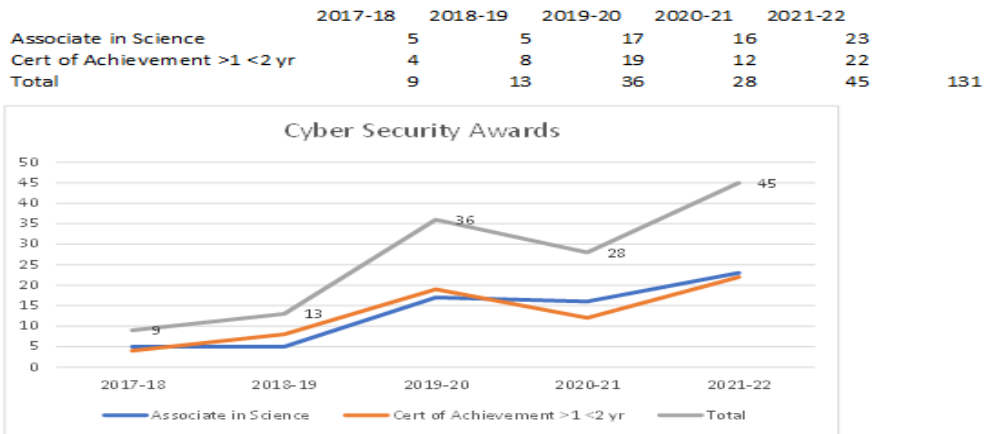
We currently have four adjunct faculty. Of the four adjunct faculty, only two have the required master’s degrees and associate experience. They are currently teaching in the AS program, so courses will need to be shifted to provide them the opportunity to teach in the baccalaureate program.

Number of certificates awarded, previous year

The number of awards and certificates has continually grown since the start of the program except the COVID years. It is anticipated with the start of the BS program; these numbers will increase.

Cerro Coso Community College - Cyber Security Technician Certificate and Cyber Security Technology Associate of Science Enrollment and Completion Data

Awards



7000 Category – Management Position

Career Center Director

Cerro Coso Community College's Career Center has been lacking key personnel to be able to sustain essential services and reach its full potential within the areas of Career Technical Education (CTE). The Career Center is responsible for a number of career readiness and job skills services. One of the most vital, being the intake and onboarding of student workers, which impacts the productivity of multiple administrative departments at the college. At this time, that duty has been supported by the classified staff in the Office of Instruction and cannot be sustained.

In addition to student workers, another avenue of employability for students is through employer job postings (currently integrated using Job Speaker platform), work-experience courses, apprenticeships, and internships (both paid and unpaid). The college currently doesn't have the capacity to expand on all of these areas under the current structure of the Career Center, which historically was run by one classified Job Development Specialist position.

After the retirement of our former Job Development Specialist, the Office of Instruction pursued recruitment of a replacement, under the same model. There were two failed recruitments for this position. As a standalone position previously, the Career Center struggled to provide the full scope of services in an efficient manner for students. It is recommended that we reevaluate the potential for this department and provide adequate support to sustain and grow the career services available to students and the community.

As part of the accountability for categorical grants, Perkins and Strong Workforce, the college needs to report on progress toward the following metrics:

- student employment rates (Perkins)
- percentage of students employed in their field of study (SWP)
- median annual earnings (SWP)
- students who attain a living wage after completion (SWP), and
- students employed in 2nd fiscal quarter after completion (SWP/Perkins)

Attainment of the regional living wage is also a metric within the Student-Centered Funding Formula. Allocating the necessary support staff to the Career Center will enable us to assist students to reaching not only their educational goals, but also their career and workforce preparation goals.

Career Technical Education is requesting the following positions to support the Career Center goals and vision: Program Coordinator (COF), Program Manager (COF)

The duties of the Program Coordinator (Career Services) – COF proposed position include:

- Coordinate and support the administration of various career exploration events with local high schools, college, and community

- Develop and coordinate job skills workshops such as resume building, interview preparation, soft skills training, dress for success
- Prepare student worker application packets, update information as needed on instructions and forms
- Coordinate student worker rosters, board documents, and timely management of student worker applications in collaboration with human resources department
- Develop and coordinate student worker onboarding and training on Web Time Entry
- Support student retention towards career pathways using variety of career exploration tools, job readiness skills
- Attend meetings with Career Technical Education team as needed
- Present at faculty chair meetings, counseling, and outreach workshops on campus regarding career services available
- Monitoring compliance and maintaining database of internship contracts
- Monitoring compliance and maintaining database of CalJobs and Employer Training Resource programs
- Monitor the careerservices@cerrocoso.edu email inbox and facilitate responses as applicable
- Manage and maintain accurate information on Job Speaker platform to include: building employer recruitment opportunities, promoting features to students and employers, interacting with employment features, maintaining accurate records, building job posts, recommending students
- Create social media posts and marketing materials to promote upcoming workshops
- Maintain accurate records of employer database
- Assist students with job placement assistance
- Assist and guide students to services available to support their career goals
- Advise and assist students in need with obtaining student services from campus and/or community resources through referral to these offices or agencies; support internship programs as assigned
- Develop and coordinate orientations, seminars and workshops designed to familiarize students with educational and career opportunities