

ANNUAL UPDATE REPORT

Chemistry

Annual Update Questions - Disciplines

1. Describe any changes or updates that have occurred since you last submitted program review. If there haven't been any changes or updates since your last program review, enter N/A.

1. Changes in Full-time faculty:

Response for Last Cycle	Changes to New Cycle
"One of two Full-Time Faculty members served as Curriculum Chair, and AFT obligations from the FT faculty members is the curriculum chair, reducing their capacity to teach. Only 27% FT-FTE. If the new faculty member starts in the spring, it will move to only 43% FT-FTE. We need another 2 FT faculty members to ensure access for students and do not burn out the current 2 FT faculty."	Current observations as of Fall 2026: • Total FTES, Fall 2026 = 5.76 and planned for Spring 2027 = 5.83. • FTES taught by FTF = 2.8, so 48% of all chem courses are taught by FTF, and 51% are taught by part-time faculty. • The current trend is that, per semester, 2 FTF teach 1.04 FTE, and the third teaches 0.72 FTE and takes 0.20 FTE of release time for faculty union obligations. This keeps our department under 50% for the next two academic years. • Assuming NO CHANGE in release obligations for the current three faculty, adding a new, fourth FT faculty hire teaching an additional course brings the department to 67% FTE: FTES by Fall 2027. Improved, but still a deficit according to best practice and department needs. • Two additional FTF are needed to bring us to the needed (and equitable) 75% FTF: FTE ratio.

1. Changes in non-instructional personnel:

Response for Last Cycle	Changes to New Cycle
None	i. Stockroom technicians: During October 2026, an interim part-time Stockroom Technician began covering the T/Th evening Chemistry labs, which have the most strenuous stockroom needs and demand. This was done to relieve the current stockroom staff members who support not only chemistry, but physics, astronomy, and biology, from an expected 5-10 hours of overtime per week. As of October 23rd, 2026, the second round of hiring and prospective interviews for the full-time position (approved in the 2024-2025 Comprehensive Program Review) will begin next week, after an unsuccessful first attempt in Fall 2025. Since this part-time interim stockroom position only addresses the undue stress of 'expected' overtime for current staff, the broader departmental impacts of adding a third

(part-time) stockroom staff member remain to be seen.

ii. Tutoring and Student Support
The Learning Center has reduced the maximum number of hours per tutor, and our program has faced significant changes as a result. The 'Chem Jam' peer-run problem-solving workshops have not been active since AY 2024-2025 due to a combination of trending lower overall tutor applicants and restrictions on Chem Jam Tutor hours. Embedded tutoring for courses like CHEM 231 is limited to 5 hours per week, yet the Organic Chemistry labs themselves run 6 hours per week per section. The current embedded tutor coverage creates patchwork support during hands-on lab instruction. Furthermore, chemistry tutor retention for courses like CHEM 210/220 is lower than usual: only two chemistry-specific tutors were hired for Fall 2026. A third highly qualified CHEM 210 tutor started in August 2026, but the weight of his other STEM courses, work hours, and commute to campus cost him more than his realistic tutoring wage could cover. Thus, not only are fewer students becoming tutors, but the economic constraints our tutors face is causing an attrition of the tutors we do hire. Until funding for a robust peer-tutoring model returns to Canada College, our chemistry peer-tutoring options will remain limited. We are concerned that the weakening of this core support model will negatively impact students' overall success in chemistry.
MESA funds 10 hours per week of student support to the chemistry stockroom (to provide field-specific work experience to students). This is a new development for the department that advances student support toward career-specific avenues, and we would like to continue these partnerships in the future.

1. Changes in offerings:

Response for Last Cycle	Changes to New Cycle
Fall 2025: *Saturday offerings were canceled this academic year due to limited lab staff. The new part-time lab technician will only cover evening offerings due to limited hours.*	Addition of honors sections and opportunities for CHEM 210/220 (honors-only sections) and CHEM 231/232 (honors-only sections and honors contracts). The final round of these curricular developments will be approved by the Curriculum Committee's last meeting of Fall 2026. Additionally, following a state-wide initiative to approve California Community Colleges to offer high-unit ADTs, Canada now offers a transfer-specific Associate's Degree for chemistry and field-adjacent majors. Our newest course, CHEM 120, will be offered for the first time in Spring 2027. This increases the total number of chemistry-specific courses offered at Canada College from 6 to 7 courses, with CHEM 120 unique to our college.

2. Provide a summary of the progress you have made on the goals identified in your last program review.

1. To provide high-quality education that emphasizes critical thinking, hands-on laboratory experience, and real-world applications, the department is working on:

Response from 2025	Current
1. Bring the lab experiments	

to industry standards *o Throughout the program review, the chemistry department is requesting the lab equipment needed to conduct high-quality experiments.* *o FT Faculty and Lab Coordinator are donating personal time to participate in several Chemistry Give-Aways per year to collect industrial-level lab supplies and bench-top equipment.* *o FT Faculty is using their own time to revive large-sized equipment that will give the student the chance to use real industry/research experience.*	While several resources were approved during both the 2025-2026 review cycle and the 2024-2025 Comprehensive Program Review, these resources have not made it to our students. Notably, the computers requested in Fall 2024 for student use in chemistry labs and the approved 2025 funds have still not yet been provided. Currently, individual faculty efforts to source laboratory materials are what align us with our Department Mission and keep our program running. Over four Sundays (approximately 5 hours per weekend), Professor Sol Puenzo has donated her time to participate in several science equipment "giveaways" during Spring and Fall 2026. The result of her efforts allowed for the acquisition of industrial-level lab supplies and routine benchtop equipment, which are currently used to provide students with 101, hands-on experience…all at no cost to the college. .

1. To create a department that actively addresses socio-academic inequity, the department is working on:

Response from 2025	Current
1. Guarantee materials for students • *FT faculty is funding course materials for student use and consumption (notebooks, goggles, calculators, etc.).* • *Implementing ZTC materials like homework and worksheets*	Full-time faculty still voluntarily fund learning materials like spare lab goggles, calculators, lab notebooks, and food for students as needed. Following the Summer 2026 ZTC Cohort, faculty have developed ZTC Homeworks and Worksheets for the complete core chemistry curriculum (general through organic chemistry series). These are the final ZTC additions to free lab manuals and textbooks within this series.
1. Care for students *o Respond to student crises and proactively file CARES reports, including Title IX incident reporting.* *o Provide support to students without family support.*	Faculty regularly communicate through CARES and Title IX reporting systems established with Student Support Services. Beyond individualized efforts to mentor, find housing for, and provide career options for students, the department has not received an institutionalized support mechanism or community of practice from the college. This effort needs more resources and training for faculty, as faculty cannot continue to carry the weight of students in economic crisis alone.

Annual Update

C. To improve trends in access, headcount, success, and completion rates, the department is working on:

Response from 2025	Current
1. Implementing ZTC materials for all course offerings. *o NEW: CHEM 410 moved from the ZTC books handled by the library to OER/ZTC textbooks available online.* *o That makes 5 of 6 courses have OER/ZTC textbooks, and all courses have OER/ZTC lab Manuals. ZTC.* *o Homework: an OER/ZTC was identified, it is still in the learning stage.*	Homework (non-online) has been completed for CHEM 231, 232, and CHEM 220. CHEM 210 is in development, with pauses taken until the next ZTC/OER cohort opportunity is announced.
2. Increase the offering to 14 FTE (for fall and spring) to guarantee access to chemistry courses, *o 23-24 AY: 22 courses (10.32 FTE) with 90% fill* *o 24-25 AY: 24 courses (11.52 FTE) with 91% fill* *o 25-26 AY: Fall offerings were not increased due to the current political situation, but Chemistry had 100.7% fill.*	Enrollment in Chemistry courses has increased at a rate of 6.5% per year for the last 2 years. Additionally, our department is seeing a consistent 10% annual increase in enrollment among Hispanic-identifying students. In the 2025-2026 academic year, the department's overall fill rate was 95.6%. In Fall 2026, the Chemistry department reached a 101% registration. While these numbers are robust in terms of a FTES and student headcount, chemistry faculty interpret this data differently from the perspective of access. For Fall classes, most sections reach the waitlist within a week of open registration, sometimes leaving only 1-2 seats in courses like CHEM 410 and 210 after even *priority registration* closes. As a result, even at 101% registration, the chemistry department is forced to turn students away, which does not guarantee access to our courses. For example, with our current registration and enrollment trends, CHEM 210 alone is turning away enough students to fill an entire additional section - enrollment overages not included. Moving forward, the chemistry department needs to increase our total course offerings to ensure students have maximum access to chemistry classes at their home campus.
3. Have one embedded tutor in each Lab to offer more support to students. *o Identify, encourage, and recommend students to become tutors and embed tutors.* *o Fall 25: Given the current political situation, tutors have reduced hours compared to 24-25 AY. It is showing a negative impact on student retention rates.*	Cannot do until funding is opened. Please read 1.b-

Example of CHEM 231: *o Fall 23, there was no embedded tutor; the success rate was 69%.* *o Fall 24, there was an embedded tutor for both sections at all lab meetings, and the success rate increased to 85%.* *o Fall 25, there is only an embedded tutor once a week for only one of the sections, with a current retention rate 76%.*	
4. Develop and pilot the Chem Jam program: o The chem jams for CHEM 210 and CHEM 231 were developed and fully running in Fall 2024 and Spring 2025. Chem Jam support programs are on pause until sufficient funds are allocated for STEM support programs like "Jams." o Only the CHEM 210 jam program was fully piloted. Limitations of tutors for CHEM 231/232.	Cannot do until funding is opened. Please read 1.b-
5. Establish collaborations to support services for disproportionately impacted students in chemistry. o SparkPoint collaborates with the chem department, providing 2 baskets of snacks per week near the three chemistry labs (Building 18 and Building 16). o Conversation with NOW (Nights, Online & Weekends) to support evening students.	Beginning Spring 2026, the SparkPoint program has changed significantly in how it serves our students. Most notably, snack baskets are no longer brought to areas near learning environments, and food is now only available through the food pantry. Though food access hasn't been revoked from students on paper, this change has removed a resource for students in multi-hour lab courses who cannot easily walk to another location on campus.
6. Develop an Associate in Science Chemical Technician Certificate Program o The missing course required for this certification was developed and just approved by the curriculum committee.	CHEM 120 to be offered Spring 2027.

Supporting Information

Tables & Graphs

Academic Year	FTE	Section count	Enrolment	Increase in enrolment from previous year %	Chemistry % fill	Retention rate	Success rate	Hispanic Enrolment	Increase in enrolment from previous year %
23-24	11.20	24	611		90.8%	83.8%	70.5%	255	
24-25	13.80	29	655	+7%	89.9%	85.3%	76.6%	278	+9%
25-26	13.12	28	694	+6%	95.7%	86.2%	75.5%	310	+11%

Based on the applied report filters or available data, there are no items to display.

Non-Personnel Item (2026 - 2027)

Requested Year
2026 - 2027

Program Requesting Resources
Chemistry Department

Item Requested
40 laptops with Office suite software and 2 charging carts

Item Description
Processor: Intel (or AMD equivalent) i5 or better processor, 7th gen or newer. Laptop secure storage is crucial. Ideal solution is a locking charging cabinet with padlock.

Program Goals this Request Supports
Provide high quality education to ensure student can master critical thinking, lab techniques, and research skills, based on industry and research standards. Ensure that students can be competitive at any 4-year institution.

Status
Continued Request - Active

Type of Resource
Instructional Expenses (over $5,000) e.g., equipment

Cost
65,000

One-Time or Recurring Cost?
One-time Cost

Critical Question: How does this resource request support closing the equity gaps as identified in the current SEAP plan?
The purchase of student laptops directly supports closing the equity gap by providing all students, particularly those from underrepresented groups, with the tools needed to engage fully in their coursework and develop essential digital skills. Despite living in a technological world, many students, especially those from underserved communities, lack consistent access to professional software, modern technology, and reliable internet at home, which limits their ability to develop technological proficiency. This disparity can place them at a disadvantage, both in their academic performance and in their preparation for the job market, where digital literacy is increasingly essential.
Providing students with laptops ensures that they have access to the same digital resources, reducing disparities in access to technology. It also allows them to engage in digital literacy programs, use professional software in their coursework, and develop the technology skills that employers expect in STEM and other fields. For students with limited proficiency in English, having personal access to technology enables them to use language-learning tools and online resources that can enhance their learning experience and confidence.

Critical Question: How does this resource request support LatinX, AANHPI, and Black and African American students?
According to California 2023 Statewide Digital Equity Survey, 9% of households in the bay area are unconnected or underconnected to Internet. Non-English-Only Households are nearly three times more likely to be unconnected or underconnected (about 19%) compared with English Households (6%). Low-Income Households are also more likely to be unconnected (19%), a result that likely reflects the overlap of this group with Non-English-Only Households.

Resource Requests

Latinx students are more likely to rely on smartphones as their primary means of internet access (15.5%), which limits their ability to fully engage with academic tasks that require more robust technological tools, such as data analysis, graph plotting, or running professional software used in STEM fields.
Students relying solely on smartphones often face challenges when completing assignments that demand a laptop or desktop, such as writing complex papers, using specialized software for chemistry or engineering courses, or analyzing data sets. By providing laptops, the college ensures that Latinx and AANAPISI students can fully participate in their coursework, both in and outside of the classroom. This resource also empowers students to practice and reinforce technological skills independently, which is essential for building the proficiency needed in today's job market.
Additionally, personal access to laptops allows students to engage in online learning tools, conduct research, and complete assignments that enhance their overall academic performance. For AANAPISI students, this investment provides equitable access to technology, supporting their success and helping close achievement gaps in STEM and other fields.

Map Request to College Goals and Strategic Initiatives

Non-Personnel Item (2026 - 2027)

Non-Personnel Item (2026 - 2027)

Requested Year
2026 - 2027

Program Requesting Resources
Chemistry Department

Item Requested
100 Lab stools

Item Description
4 legged metal stools with fixed heights

Program Goals this Request Supports
Safety in the lab. Reduce obstacules in case of an emergency.

Status
New Request - Active

Type of Resource
Instructional Expenses (over $5,000) e.g., equipment

Cost
27,500

One-Time or Recurring Cost?
One-time Cost

Critical Question: How does this resource request support closing the equity gaps as identified in the current SEAP plan?
Student safety

Critical Question: How does this resource request support LatinX, AANHPI, and Black and African American students?
Student safety

Map Request to College Goals and Strategic Initiatives

Non-Personnel Item (2026 - 2027)

Non-Personnel Item (2026 - 2027)

Requested Year
2026 - 2027

Program Requesting Resources
Chemistry department

Item Requested
200 lab funnels

Item Description
Material: 33 expansion borosilicate glass. Stem length: 1.37 in. (35 mm). Outer diameter (top): 1.57 in. (40 mm). Overall height: 2.55 in. (65 mm). Designed for easy and reliable buret filling

Program Goals this Request Supports
Provide high-quality education to ensure students can master critical thinking, lab techniques, and research skills, based on industry and research standards. Ensure that students can be competitive at any 4-year institution.

Status
New Request - Active

Type of Resource
Instructional Expenses (under $5,000) e.g., lab supplies, Student Athletic supplies, calculators, etc.

Cost
4,990

One-Time or Recurring Cost?
One-time Cost

Critical Question: How does this resource request support closing the equity gaps as identified in the current SEAP plan?
Having an adequate Lab supplies directly supports closing the equity gap by ensuring that all students, regardless of background or resources, have equal access to essential lab equipment. Ensuring sufficient equipment for all labs reduces delays and ensures that every student, including those from underserved communities, has a fair opportunity to complete hands-on experiments, improving their learning experience, success rates and sense of belonging.

Critical Question: How does this resource request support LatinX, AANHPI, and Black and African American students?
This resource request supports Latinx and AANHPI and black and African American students by ensuring that all students, regardless of background, have equal access to critical lab equipment. The department can provide a consistent, high-quality lab experience for all students, particularly those from underserved communities. This promotes equity in learning by ensuring that Latinx and AANAPISI students can fully participate in hands-on lab work, which is crucial for mastering Lab techniques and developing the motor skill necessary for becoming competitive candidates when applying for transfer or to internships.

Map Request to College Goals and Strategic Initiatives

Non-Personnel Item (2026 - 2027)

Non-Personnel Item (2026 - 2027)

Requested Year
2026 - 2027

Program Requesting Resources
Chemistry Department

Item Requested
Conductivity apparatus

Item Description
The Conductivity Probe determines the ionic content of an aqueous solution by measuring its conductivity. Brand: Venier. Replacement of some of the current ones bought before Covid that are not funtional.

Program Goals this Request Supports
Demonstrate critical thinking and analyze physical systems in terms of scientific concepts.

Status
New Request - Active

Type of Resource
Instructional Expenses (under $5,000) e.g., lab supplies, Student Athletic supplies, calculators, etc.

Cost
1,900

One-Time or Recurring Cost?
One-time Cost

Critical Question: How does this resource request support closing the equity gaps as identified in the current SEAP plan?
Having an adequate Lab supplies directly supports closing the equity gap by ensuring that all students, regardless of background or resources, have equal access to essential lab equipment. Ensuring sufficient equipment for all labs reduces delays and ensures that every student, including those from underserved communities, has a fair opportunity to complete hands-on experiments, improving their learning experience, success rates and sense of belonging.

Critical Question: How does this resource request support LatinX, AANHPI, and Black and African American students?
To strengthen pathways from community college to laboratory-based careers, increasing hands-on research opportunities and access to industry-standard equipment, helps to ensure that underrepresented students, like Latinx, AANHPI, and Black and African American groups, gain the necessary skills and confidence to enter the workforce or a 4-year university successfully.

Map Request to College Goals and Strategic Initiatives

Non-Personnel Item (2026 - 2027)

Non-Personnel Item (2026 - 2027)

Requested Year
2026 - 2027

Program Requesting Resources
Chemistry Department

Item Requested
CHEM draw

Item Description
Comprehensive chemical drawing tool. Suite for creating, managing, sharing, and presenting chemistry structures.

Program Goals this Request Supports
Demonstrate critical thinking and analyze physical systems in terms of scientific concepts. Document and communicate their work effectively.

Status
New Request - Active

Type of Resource
Instructional Expenses (under $5,000) e.g., lab supplies, Student Athletic supplies, calculators, etc.

Cost
1,355

One-Time or Recurring Cost?
Recurring Cost

Critical Question: How does this resource request support closing the equity gaps as identified in the current SEAP plan?
Purchasing CHEM draw licenses directly supports closing the equity gap by giving all students, especially those from underrepresented groups, the technology tools they need to fully engage in their coursework and build essential digital skills. Despite living in a technological world, many students, especially those from underserved communities, lack consistent access to professional software and modern technology. This limits their ability to develop technological proficiency. This disparity can put them at a disadvantage in both academic performance and preparation for the job market, where digital literacy is increasingly essential.
Providing students with software such as ChemDraw lets them engage in digital literacy programs, use professional software in their coursework, and develop the technology skills employers expect in STEM and other fields.

Critical Question: How does this resource request support LatinX, AANHPI, and Black and African American students?
To strengthen pathways from community college to laboratory-based careers, increasing hands-on research opportunities and access to industry-standard software, like ChemDraw, can help ensure that underrepresented students, like Latinx, AANHP, and Black and African American students, gain the necessary skills and confidence to enter the workforce or a 4-year university successfully.

Map Request to College Goals and Strategic Initiatives

Which of Cañada College's Goals does this resource request support?
Student Access and/or Success and/or Completion
Equity-Minded and Antiracist College Culture
Accessible Infrastructure and Innovation

Which of Cañada College's Strategic Initiatives does this resource request support?
Support innovative teaching that creates more equitable and antiracist learning environments
Be the best college choice for local high school students
Provide adequate access to technology
Better share what Cañada offers

Personnel - Instructional Faculty (2026 - 2027)

Personnel - Instructional Faculty (2026 - 2027)

Requested Year
2025 - 2026

Personnel Requested
2 FT/Tenure Track Chemistry Instructors

Requesting Unit
Chemistry Department

Position Description
2 FT/Tenure Track Chemistry Instructors

Status
New Request – Active

Duration of Position Requested
Permanent

Full-time Status
Full Time

Provide # of months
10

Program Goals this Request Supports
Goal(s): To increase access and successful completion of students of all groups - with specific target populations of Black, Hispanic, AANAPSI and Women students - qualified, and reliable academic support and academic intervention.
To create a department culture that universally values and functions under a framework of equity, fairness and inclusion for both students and faculty such that no individuals in our department feel unsupported in their endeavors.

Critical Question: How does this resource request support closing the equity gaps as identified in the current SEAP plan?
The Chemistry Department requests two additional tenure-track faculty lines to directly support the 2026-2028 SEAP Plan's named priorities. The department currently generates 48% of its FTEF from three full-time faculty, with 52% taught by part-time faculty. This staffing structure cannot deliver the SEAP Plan's five named actions.

The SEAP Plan identifies Filipino, White, female, and male student groups as showing persistence gaps

against the 73.2% baseline and calls for assessing and strengthening the Early Alert System. Early Alert interventions require faculty who notice attendance patterns, flag struggling students, and follow up with counselors. Part-time faculty are not compensated for this coordination, and their broader workload across multiple institutions means it is more difficult to focus on Canada's own. With 52% of chemistry FTEF contingent, most gateway chemistry students, including Filipino students with documented persistence gaps, encounter faculty who cannot reliably implement Early Alert follow-up.

Additionally, the SEAP Plan names Latine students for completion actions including "ASSESS and ADJUST N.O.W" and a culturally relevant curriculum. Chemistry is a prerequisite for STEM and allied health transfer. PRIE data confirms Hispanic students in Chemistry had success rates 12 percentage points lower than the overall rate in 2023-2024, with disproportionate withdrawal rates. Part-time faculty are not compensated for the sustained mentoring and transfer-center coordination that closing this gap requires.

Additional actions call for assessing Latine student support in the Nights, Online, Weekend (NOW) Program. The department has diversified offerings to include Friday, evening, Saturday, and a robust summer session. However, part-time faculty teach an even higher FTEF (50%) in summer chemistry than in fall and spring. If the college is to assess and improve NOW support, the department needs permanent faculty available in those time slots who can participate in annual assessment and adjust instruction accordingly.

The request also advances other SEAP priorities. The Chemistry Department has achieved 75% ZTC/OER adoption and an 11.5% success-rate increase from AY 2022-23 to 2023-24. Completing remaining materials (CHEM 220 and CHEM 232 textbooks in progress) requires release time and Cañada-focused curriculum expertise that contingent appointments do not support. Furthermore, the SEAP Plan calls for increased culturally relevant curriculum in all courses and expanded faculty professional development. Two additional tenure-track hires can be recruited with these competencies and with improved DEI representation; beyond FLEX, full-time faculty are contractually expected to participate regularly in this development, whereas part-time faculty are not compensated for such participation.

Critical Question: How does this resource request support LatinX, AANHPI, and Black and African American students?
Cañada's HSI and AANAPISI designations are commitments to structure resources so LatinX, AANHPI, and Black and African American students succeed. The chemistry department's staffing structure currently falls short in that commitment from a PRIE point of view (not for lack of trying!). Hispanic students are the largest ethnic group at the college, AANHPI students include Filipino students with documented persistence gaps, and Black and African American students remain underrepresented in STEM transfer pathways. Chemistry is a gateway sequence for all three populations, as it is required for STEM, nursing, and allied health transfer. Yet 52% of chemistry FTEF is part-time, and summer session - where students enroll to ensure their time-to-transfer is within 2 years, meaning a majority of gateway instruction is delivered by faculty not compensated for the sustained mentorship, predictable campus presence,, and MESA/UMOJA/Puente/Office of Equity referral relationships these students need. The district's tenure-track chemistry job description already lists preferred qualifications for HSI/AANAPISI knowledge and Spanish or Tagalog proficiency. Five total full-time faculty moves approximately 80% of primary-term FTEF and summer sections into permanent hands, providing the multi-course continuity that determines whether LatinX, AANHPI, and Black and African American students persist through the chemistry sequence or are pushed off the transfer pathway. HSI and AANAPISI status demand serving infrastructure. This request is that infrastructure.

A. How does the proposed position align with specific objectives within the college's and/or Board of Trustees/District's strategic plans/recommendations, goals, or initiatives?
(SMCCCD Board of Trustees Goal #2) Reinforce a thriving and positive-oriented workplace where employees feel supported in professional growth and innovation (SMCCCD Board of Trustees Goal #5)

Resource Requests

Provide students with clear pathways to completion and support innovative approaches to delivery methods and industry engagement. (SMCCCD Board of Trustees Goal #6) Inspire stronger and more meaningful community partnerships that lead to seamless pathways from cradle to college.

Summative response: Increasing the number of full-time tenure-track faculty in the chemistry department supports multiple Board policies by addressing faculty burnout, improving student outcomes, and strengthening community partnerships. In a large department with a low FTEF ratio, overburdened faculty face burnout, risking retention. Adding tenure-track positions will ease this strain, provide clearer paths for professional growth and innovation, and enhance workplace morale, aligning with the Board's goal of a positive work environment.
With growing demand for courses like CHEM 192, CHEM 410, and CHEM 210, driven by expanding programs such as Nursing, more full-time instructors are needed to ensure timely course access, supporting student progression and completion. These instructors also drive curriculum innovation and align course offerings with industry needs, particularly in healthcare.
Additionally, full-time faculty are better positioned to engage with schools, community organizations, and industry partners, fostering sustained partnerships that bridge gaps between K-12 and college. This helps create seamless pathways to college, enhancing student success and community involvement. By expanding full-time faculty, the department aligns with the Board's goals of improving retention, supporting critical programs, and building strong community ties.

B. How does the proposed position address the program's or department's goals? Please refer to specific elements of the most recent program review (e.g., comprehensive review, annual update, mid-cycle review).
The proposed position directly supports the chemistry department's prior goal of increasing retention and completion for all student groups by ensuring the department can offer ongoing, qualified, and reliable academic support and interventions. With additional full-time faculty, the department can provide consistent academic assistance, more personalized mentorship, and timely interventions for students struggling academically. These factors are critical for keeping students engaged, addressing gaps in performance, and improving overall retention and completion rates. A well-staffed department ensures that students from all backgrounds receive the support they need to persist in their studies and reach successful outcomes, aligning with the goals outlined in the most recent program review.

Program Need and Impact:

A shortage of full-time faculty may limit a department/program's ability to meet program, institutional, and site responsibilities such as committee work, program oversight, program review, etc. Certain disciplines may find it challenging to solve their staffing needs because faculty are unavailable and/or cannot be retained.

1. Number (headcount) of full-time faculty in the program or department.
3

2. What is the Full Time/Part Time ratio?
3FT:6PT

3. Does your current FTEF (Total Full Time Equivalent Faculty) meet the 75% annual goal? What is the FTEF in both Fall and Spring semesters over the past 3 years? What is the average per year?
F23-44% S24-37% F24-35%, S25-%, F25-27%, S26-30%, F26-48% with a 3-year overage of 36%FTEF. The chemistry department has been understaffed with full-time instructors since 2018, and this has only worsened over time. Currently, the department has three full-time tenure-track faculty members, resulting in a ratio of FTES to FTF (full-time faculty) of 48%. Given the need for at least one additional general chemistry section per year (as fill rates are 98-100% for several fall semesters), total FTES is 12.11 (considering only major terms), the department would need to add at least 1 more full-time instructor to reach a 61% FTEF ratio. Hiring two additional full-time tenure-track chemistry instructors will bring the department to 77%. CA AB1725 mandates a 75% ratio.

4. Average number of sections offered per year.
22

5. Average departmental Fill Rate per year.
96

6. Qualitatively and quantitatively describe student demand within this discipline, especially for those courses that will be assigned to the proposed faculty member.
CHEM 192 and/or CHEM 410 are required courses for students seeking an Allied Health Associate of Science degree and are offered exclusively through the chemistry department. From Fall 2021 to the present, the average fill rate of CHEM 410 is 96%, showing inadequate accessibility for students. CHEM 114 is required to complete the Elementary Teacher Education Associate of Arts degree for Transfer, and no section has been offered in the last 3 years. CHEM 210 has had an average fill rate of 102% over the last 3 years. CHEM 220 has averaged 92% fill during the same period. At least one section of CHEM 210. 0.52 FTEs should be added to an already at-capacity department.

7. Are there any course offerings, programmatic needs, and/or degree completions impacted and/or not available due to an inadequate number of faculty?
Currently, the department does not offer CHEM 114, which is a requirement for students seeking to complete the Early Childhood Education Associate in Science Degree Program. ECE students at Canada College have no accessible way to complete this requirement at their home campus.

8. Are there any course offerings, programmatic needs, and/or degree completions that will not be available if the position does not move forward at this time?
The department will be severely impacted if this request is not approved. The current number of sections cannot meet student demand, forcing students to seek required courses for degrees or transfer to other institutions. Furthermore, the department will be unable to offer enough sections of critical courses like CHEM 192, CHEM 410, and CHEM 210, which are essential for high-demand programs such as Nursing. This will create bottlenecks and barriers in student exit pathways, delaying student progress and completion. Furthermore, without these positions, the department's ability to provide consistent academic support and interventions will be limited, disproportionately affecting students who need additional assistance. This shortage not only impacts timely degree completion but also hinders transfer opportunities and overall student retention, directly affecting the institution's mission to support student success, retention, and career readiness, especially in key fields like healthcare and STEM. Approval of these positions is crucial to maintaining high-quality instruction and meeting the growing demand for essential courses.

9. Please explain any special circumstances not reflected in the data reported above such as reduced sections or services due to low staffing, department/program size, location specific needs versus district-wide needs, routine full-time faculty overloads, high-need courses offered infrequently because of staffing issues, chronic under-filling of required courses, etc.
Five of the seven courses offered by the department have reduced sections due to an instructor shortage, and one course has not been offered in at least three years. The department's 3 full-time faculty members are already overloaded, with FTEs of 1.14, 1.04, and 1.02, respectively. This ongoing overload has led to severe burnout, with faculty struggling to sustain a department with less than half the necessary staffing. The reduced course offerings limit student access to essential classes, further compounding delays in program completion and transfer opportunities. The current staffing crisis must be addressed to prevent further strain on faculty and ensure that students can progress in their programs without disruption.

Map Request to College Goals and Strategic Initiatives

Which of Cañada College's Goals does this resource request support?
Student Access and/or Success and/or Completion
Equity-Minded and Antiracist College Culture

Resource Requests

Which of Cañada College's Strategic Initiatives does this resource request support?

Be the best college choice for local high school students
Connect students to the academic program(s) and classes they need
Support innovative teaching that creates more equitable and antiracist learning environments
Strengthen the college culture of continuous assessment and improvement in order to ensure all programs effectively serve students and close equity gaps
Manage resources effectively
Ensure students (particularly part-time students) experience a sense of belonging and connection to the College that helps them persist and complete
Create and sustain an inclusive and/or antiracist and/or equity-minded campus culture
Better share what Cañada offers
Strengthen K-16 pathways and transfer