Instructional Annual Program Review and Planning Update Form Fall 2024

## BACKGROUND:

**Program review is an integral part of the campus planning process. As programs and areas monitor their progress on the current comprehensive four-year program review, changes in need and scope can be expected. This Annual PR Update form is designed to outline and request modifications to the current program review that occur between comprehensive four-year review cycles, as needed.**

**Examples of a requested change include new information such as action plans, outcomes modifications, personnel changes, technology needs, and capital expenditures requirements. As programs and areas monitor their progress on the previous comprehensive four-year program review, the form provides the basis to suggest a change in plans and processes to improve student success and institutional effectiveness.**

## SUBMISSION:

**Program:**

Chemistry

**Principal Author(s):**

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**Dean:**

José Ramón Núñez

**Submission Date:**

11/29/2024 11:42:25 AM

**Author Signature:**

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| Electronically signed by Americo Fraboni on 11/27/2024 11:06:30 PM |

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| Electronically signed by Jose Ramon Nunez on 11/29/2024 11:42:25 AM |

# Part 1: Review of Data

## Use the data provided by the Office of Institutional Effectiveness (OIE)--[available in August 2024](https://fullcolledu-my.sharepoint.com/:f:/g/personal/dberumen_fullcoll_edu/Ejn54PAVVhJLqimOjiLWBBYBPkPdoZEFZxZtScvvyibo6A)--to review your program completion and success rates and compare them to the Institution Set Standards for course completion and success rates. Then, answer these questions:

1. **Where your program meets or exceeds the college-wide standard for completion and success, to what do you attribute your success?**

The Chemistry Department achieved course completion (retention) and course success rates of 81.6% and 65.1%, respectively, for the 2023-2024 academic year. Both values were above the Institution-Set Standards (ISS) of 74.0% and 62.0%, but below the aspirational goals of 86.7% and 78.3%. The course completion and success rates have improved from the (relatively) low values observed during the coronavirus pandemic of 75.7% and 60.8% (2021-2022), and are comparable to the rates observed for the five-year period prior to the coronavirus pandemic (81.0% and 68.9%).

The improvement in both completion and success rates can be attributed to efforts by the discipline faculty to provide students with access to academic support programs. These programs include: Hornets Tutoring, which provides embedded peer tutors in difficult chemistry courses; Peer Undergraduate Mentoring Program (PUMP), which pairs first year Fullerton College Science, Technology, Engineering and Mathematics (STEM) students with Cal State, Fullerton STEM students as individualized peer mentors; STEM Success Learning Community (STEM-SLC), which arranges students into cohorts that provide a supportive academic community, receive regular academic counseling, and enroll in specific course sections taught by full-time faculty; Boot Camps, which are full-time faculty led workshops designed to prepare students for the rigors of upcoming chemistry courses; and the delivery of instruction via nontraditional modalities (i.e., hybrid instruction), providing flexibility to the delivery of the chemistry curriculum. Furthermore, the improvement in student performance can be attributed to the recent hiring of two additional full-time faculty in the department.

1. **Where your program does not meet this standard, please examine the possible reasons and note any actions that should be taken, if appropriate.**

The average completion (retention) and success rates were below the institutional standards for both Latinx and Pacific Islander students. Whereas only two students enrolled identified as Pacific Islander, a number that is too small to draw conclusions of the program’s performance, over 1,000 students identified as Latinx. With more than half of students identifying as Latinx, this represents the largest ethnicity in the Chemistry Department.

The completion rate of 79.1% for Latinx students exceeds the institutional goal, the success rate for Latinx students did not meet the institutional goal of 62.0%, falling short at 59.3%.

The largest number of course offerings in the Chemistry Department are associated with the STEM track: general and organic chemistry. Interestingly, the success rates for Latinx students fell below the standard for the first course in each of these two important course sequences. The success rates for General Chemistry I (CHEM 111AF) and Organic Chemistry I (CHEM 211AF) were 56.1% and 56.4%, respectively. However, the success rates did meet the institutional goals for the second course in each sequence as 64.5% and 100%, respectively. Notably, not all sections of these first courses were taught by full-time faculty, partially due to recent departures and retirements in the department, while the second courses in the sequence were exclusively taught by full-time faculty. Recent hires have increased the number of full-time faculty to 10, but this falls short of the 13 full-time faculty pre-COVID. Beyond staffing, continued investment in and advertising of Boot Camps and utilization of Hornets Tutoring and the other academic support resources aim to continue improving outcomes.

1. **Compare your data analysis in questions 1 and 2 to the review of data in your 2023 Annual Program Review update (available on the** [**Program Review and Planning Committee**](https://committees.fullcoll.edu/program-review/) **website). Are there significant changes? Do you notice any patterns from year to year?**

While there have been some setbacks and some improvements regarding student success and retention rates in the Chemistry Department between the 2023 and 2024 Program Reviews, overall, the assessments are consistent. Improvements post-pandemic can be attributed to faculty-led efforts to provide students with increased access to academic support resources, as well as the staffing of vital chemistry courses with full-time chemistry faculty. Recent losses in chemistry department full-time faculty, due to retirements and role-changes, has affected the post-pandemic recovery of student outcomes for some courses, as many are still being staffed by non-full-time faculty, but the recent hiring of two new full-time faculty has improved outcomes in other courses.

The Chemistry Department continues to strive to expand access to academic support resources and aims to populate more courses with full-time chemistry faculty, with the goal of 16 full-time faculty populating the large number of chemistry course offerings.

# Part 2: Additional Resource Request Reasoning and Support

**We have reviewed our most recent self-study and have not identified any significant changes that necessitate resource requests for the upcoming academic year.**

**We have reviewed our most recent self-study and have identified significant changes that necessitate additional resource requests.**

**For programs that have identified significant changes that necessitate additional resource requests, answer the following questions for each separate resource request:**

1. **Briefly describe your resource request.**

The chemistry department is requesting three full-time faculty.

1. **Is this request related to an essential safety need?**

No

**Why must this resource request be processed now rather than during the Fall 2025 comprehensive self-study?**

Chemistry courses are either required courses or restricted electives on eighteen different program outlines (fifteen degrees and three certificates). Offering enough chemistry courses is vital for our students to complete degrees in a timely manner. According to our program review Section 3.4, to reliably staff our program, we would need to have a minimum of 16 full time faculty along with a team of 12-14 adjunct faculty.

The need for hiring of three full time faculty members is critically important for our Preparation for General Chemistry (CHEM 107 F) and Introduction to General, Organic, and Biological chemistry (CHEM 101F) courses. The chemistry department continues to struggle to meet the needs of these high demand courses. Staffing shortages limit what we can offer despite the high demand. Staffing these rapidly growing course sections has previously been challenging for quite some time, however, as the number of full-time faculty that teach these courses has been permanently reduced from 2 to 0 for CHEM 107F and 2 to 1 for CHEM 101F due to retirements and other factors, our need is now critical. These are critical courses that require full-time faculty as they are the foundational courses in the allied health and chemistry degree pathways. In Fall of 2022, 86% of the CHEM 101F sections and 75% of the CHEM 107F sections were taught by adjunct faculty. The loss of full-time faculty members resulted in 57% of the CHEM 101F courses and 90% of the CHEM 107F courses being taught by adjunct faculty in the Fall 2024 semester. The percent of sections in both CHEM 107F and CHEM 101F have been dramatically high in the past few years. The knowledge and experience of the full-time faculty within the Department cannot be replaced by adjunct faculty. Therefore, the increase in the number of sections taught by adjunct faculty presents an issue, particularly since our adjunct pool contains a significant number of inexperienced instructors. There is a continually high percentage of the sections in both CHEM 101F and CHEM 107F that are taught by adjunct faculty and given the limited pool, these sections are more at risk for cancellation despite the high demand. And, in the case of CHEM 101F, we cannot offer additional sections despite the demand because of staffing issues.

**How will this additional resource allocation specifically enhance your program’s services, activities, processes, etc. to continue or improve student learning and achievement?**

The Chemistry Department is proud that all of its faculty members participate in co-curricular activities. However, with the number of chemistry courses offered by the department, it has been essential for almost every faculty member, since our last Program Review, to act as a course coordinator. Some responsibilities of a course coordinator are developing and implementing curriculum, spearheading SLO assessment, and managing adjunct faculty to maintain consistency for each course.

Course coordinators do not receive additional compensation for performing these duties. With the Department struggles to retain adjunct faculty due to competing high-paying chemistry-related industrial positions, the full-time faculty are burdened with training new adjunct faculty in lecture and laboratory methods. With the Department’s passion to keep our laboratory experiences modern, there is a serious strain that has deterred members from participating in additional college activities. By providing more full-time faculty positions, this strain can be alleviated. The members of the Department continue to lead student-centered programs and are engaged in supporting the college’s goals. The Department is well-rounded, with interests in pedagogy, serving students directly, Division services, college initiatives, and community outreach (all described in detail in the 2021 Program Review). The addition of new full-time faculty will further improve the Department’s service to the college and will improve student learning and achievement.

More full-time faculty members are needed to provide both consistency of instruction and continuity for students to make connections with faculty, as they begin the first course in a 5-course sequence, or start their sequence to an allied health degree, or meet the requirements of other STEM programs. Overall, our department has hired a large number of adjunct faculty each semester.

Staffing the CHEM 101F courses are particularly challenging in that they require expertise in general chemistry, organic chemistry, and biochemistry. This is sufficiently specialized that most instructors that have advanced degrees in chemistry may have never even taken a biochemistry course. Thus, finding adjunct faculty to teach these courses is very difficult, requiring qualified faculty to teach overloads to avoid canceling sections. This is not sustainable. These chemistry courses are in high demand with courses filling quickly along with the waitlists. The demand for CHEM 101F sections by students has increased even during periods of decreased enrollment but staffing issues have become a barrier. Five of the eight CHEM 101F courses in Fall 2024 had almost full wait lists. In Fall 2023, seven CHEM 101F courses had full wait lists so an additional section was opened as well. All opened sections remain opened whether we have full-time faculty to teach them or not. If there is not enough full-time faculty, the courses are staffed with additional adjuncts. Both the CHEM 107F and CHEM 101F sections fill up every semester and our department turn away roughly 60 students every semester. We are currently experiencing a critical nursing shortage that’s expected to continue through 2030. Since CHEM 101F is the first in a two-course series for the allied health professions, this course is a prerequisite for the nursing programs. The addition of new faculty will allow the Chemistry department the flexibility to staff their courses as well as offer more sections, reducing the wait for students seeking chemistry classes and mitigating one of the barriers to completion.

**Is the resource request personnel-related? If so, please provide evidence to justify the requested positions such as retirements, program growth or curricular demands, full-time/adjunct ratios, etc.**

The chemistry department has seen significant changes in the number of full-time faculty over the past few years. In the academic year 2020-2021, the chemistry department had 13 full time faculty. Since then, it has dramatically dropped. Even with the addition of two new faculty in 2024, we still have not recovered from the large loss of full-time faculty over the past few years. Currently, the department has only 10 full time faculty teaching 55% of the total number of sections. We have had to hire a considerably large number of adjuncts. In the Fall 2021, we had 12 adjuncts teaching 37.2% of the sections. However, currently, in Fall 2024, we have 15 adjuncts teaching 45% of the sections. We are still offering a large number of sections despite the loss of full-time faculty. In Fall 2023, we offered 37 sections. This semester, we offered 36 sections and have a 95% fill rate. With the large number of sections still filling, we are required to hire more and more adjuncts to staff these sections.

Our department has made every effort to offer and staff our high demand chemistry classes. We currently have 20 adjuncts on contract to fill positions but still require additional adjuncts to staff additional course offerings. We are having difficulty finding and hiring adjuncts to fill our open positions. The pool of qualified adjunct faculty in the region is sufficiently small that trying to staff or even increase the number of course sections is not feasible. We have had to hire adjunct faculty every semester to keep up with the demand of the number of sections offered. We have experienced high turnover and last-minute resignations. Due to the lack of adjunct faculty, emergency hires have been made, with instructors who have little or no teaching experience to avoid canceling classes that were filled, with students on waitlists. Some classes had to be closed because they could not be staffed once the adjunct resigned. In some cases, the emergency hiring process has led to many student complaints and issues both inside and outside the classroom. The challenge in finding an adequate pool of qualified adjunct faculty coupled with our high percentage of adjunct faculty, make it difficult to manage quality and safety in the classroom and laboratory. Our students directly feel this burden and have made a number of serious safety and instruction-related complaints to both the Dean of Natural Sciences Division and the President of Fullerton College. Furthermore, the chemistry department struggles to both find and retain qualified adjunct instructors because we are competing with local industry-related jobs and higher adjunct salaries at nearby colleges.

In 2014, our department used an ACS Assessment Tool for Chemistry in Two-Year College Programs. The American Chemical Society (ACS), being the world leader in chemical education research, developed this resource to assist in the identification of strengths and opportunities for growth in two-year chemistry programs. In the Faculty and Staff section of the review, the Assessment Review Panel made the following comments regarding the department’s current use of adjunct faculty:

“… it is recommended that a minimum of 75% of the courses be taught by full-time faculty, to ensure consistency of instruction throughout the program. If course assessments show challenges providing consistent, high-quality instruction to all students, it may be necessary to hire additional full-time faculty.”

A safe laboratory environment is heavily dependent on the presence of faculty with experience in the safety and emergency response procedures specific to our program. Essentially all (95%) of the sections taught in the Chemistry Department have a laboratory component. As the percentage of adjunct faculty increases, maintaining a safe laboratory environment becomes more difficult. The high rate of turnover that is commonly observed with adjunct faculty results in a dangerous loss of experience that is essential to a safe laboratory environment.

The Chemistry department has the largest difference in full-time equivalency faculty (FTEF) and number of FT faculty in the Natural Sciences division. This provides an additional argument to support the hiring of additional faculty in the Chemistry Department. According to the Fall 2023/2024 data, the Chemistry Department has both the largest Total FTEF (19.47) and difference between the number of full-time faculty and Total FTEF in the Natural Sciences Division (-9.5). However, chemistry lab experiments involve more hazards than other labs and with 95% of our courses including a laboratory component, and our dedication to lab safety, we need more full-time faculty.

The Chemistry Department has always aimed to produce as many FTES as possible, thereby supporting both the students and Fullerton College. Even during the pandemic, followed by the low enrollment period following the pandemic, we maintained a consistent awarding of degrees: 52 in Fall 2020, 51 in Fall 2021, 48 in Fall 2022, and 36 in Fall 2023. The chemistry courses continue to fill and with the addition of three full time faculty members, we will be able to maintain the number of sections and reduce the number of closed sections due to staffing issues, especially in the high demand areas. The Chemistry Department is committed to curating a diverse faculty body and will continue to use new practices to do so in the upcoming hiring cycle upon being awarded with the ability to hire three new faculty members.

The college has recognized the need for faculty positions in chemistry by allowing us to move closer to our program review goal of sixteen full time faculty members. Our program review strategic action plan addresses the need for 16 full time chemistry faculty by 2026. To reliably staff our Chemistry program, we would need to have a minimum of 16 full time faculty along with a team of 12-14 adjunct faculty. We currently have the equivalent of 10 full time faculty and 15 adjunct faculty staffing our courses. The lack of full-time faculty places a barrier for our students to complete their degrees and/or certificates in a timely manner at FC, especially in high demand areas such as CHEM 107F and CHEM 101F. In addition, although adjunct faculty recruiting occurs throughout all semesters, we have not been able to successfully maintain a high-quality adjunct pool. We are requesting three faculty to help us meet critical student demand and move us closer to our intended goal of 16 FT faculty.

**How will this additional resource allocation help you serve the college mission or strategic initiatives, and your program’s goals for improvement, as stated in your last self-study?**

A portion of the Department’s goals, as stated in the 2021 Program Review, “we aim to provide exceptional classroom and laboratory opportunities for students to achieve success in chemistry courses” can be supported by this request. One strategy to achieve this goal, also stated in the 2021 Program Review, “provide an environment where students develop skills using safe laboratory practices” has been difficult to achieve without additional full-time faculty. With the high turnover and untimely adjunct faculty resignations, emergency hires have been made to avoid canceling full classes with full waitlists, yielding instructors who have little or no teaching experience teaching these courses. The challenge in finding an adequate pool of qualified adjunct faculty coupled with the high percentage of adjunct faculty, makes it difficult to manage quality and safety in the classroom and laboratory. The students directly feel this burden and have made a number of serious safety and instruction-related complaints to both the Dean of Natural Sciences Division and the President of Fullerton College. Furthermore, the Chemistry Department struggles to both find and retain qualified adjunct instructors because of competition with local industry-related jobs and higher adjunct salaries at nearby colleges. By securing more full-time faculty, the program will be enhanced and will move closer to the stated program goals.

The Chemistry Department program goals, objectives, and strategies to achieve the objectives support the College Goals through the promotion of student success, efforts to reduce the achievement gap, and the strengthening of its connections with the local community. The opportunities for students both in and out of the classroom and laboratory promote student retention and success, important for the underrepresented and underprepared students. The department is well-aligned with College Goal 1 as the faculty in the program continually identify opportunities to increase student success, retention, and transfer through effective teaching strategies and by adhering to best practices as identified by the American Chemical Society. To continue our alignment with these college goals, it is important for our department to obtain more full-time faculty.

**For each separate resource request, complete this chart with details of the request:**

|  |  |
| --- | --- |
| **Type of Resource** |  |
| Personnel | Faculty |
| Facilities |  |
| Supplies |  |
| Computer Hardware |  |
| Computer Software |  |
| Training |  |
| Other |  |
| **Total Requested Amount:** | $449,433.00 |

|  |
| --- |
| **Is the funding requested ongoing or one-time funding?**  Ongoing funds |
| **Is the funding requested for**[**enrollment and reengagement activities?**](https://ie.fullcoll.edu/wp-content/uploads/sites/27/2024/05/ER-2.0-Program-Review-Guide.pdf)  No |

**For each separate resource request:**

1. **Briefly describe your resource request.**

1. Instructional Equipment and Student Workers

The Chemistry Department is requesting funds for instructional equipment and student workers for the Chemistry Stockroom.

2. Labster

The Chemistry Department is requesting support to improve student success and retention through providing classroom instructional resource of Labster simulations.

3. Boot Camps

The Chemistry Department is requesting funds for the continuation of STEM Boot Camps.

4. ACS Lab Training Course

The Chemistry Department is requesting the Laboratory Safety Training Software program for all chemistry faculty through the American Chemical Society.

5. Outreach Funding

The Chemistry Department is requesting funding for outreach programs such as KinderCaminata, National Chemistry Week, and others.

1. **Is this request related to an essential safety need?**

No

**Why must this resource request be processed now rather than during the Fall 2025 comprehensive self-study?**

1. Instructional Equipment and Student Workers

The Chemical Stockroom is an essential component of the Chemistry Department. The Chemical Stockroom is responsible for the procurement and preparation of chemicals for use in the chemistry laboratories, and the maintenance and purchase of equipment that are commonly used in chemistry experiments and demonstrations. Additionally, every community event in which the Chemistry Department is engaged (e.g., National Chemistry Week, Kindercaminata and Open House celebrations) requires support from the Chemical Stockroom. To ensure that the Chemical Stockroom can provide the Chemistry Department with the support required for the courses that are offered and for participation in community events, the following resources are requested: A&D Analytical HR-60 analytical balances ($10,000.00 for 4), Top BAL 750G X1MG ($8,000.00 for 4), hot plates ($9,933.00 for 10), Thermo Scientific™ GC-IR Interface for Nicolet FTIR Spectrometers ($11,000.00), buret washer ($1,200.00), PolyScience WBE20A11B water bath ($1,200.00), lab stools to replace those that are broken ($5,000.00), Refractometer FCE-ABBE-REF2 ($1,056.00), and LabQuest 3 ($2,000.00 for 5).

2. Labster

We currently have licensing, but the price per license has increased and we would like to continue using this resource until the next program review.

3. Boot Camps

Prior to the start of the semester, students are invited to attend a free intensive review session for CHEM 107 F, 111AF, 111BF, 201 F, and 211AF courses. Topics covered in these sessions include entry level skills and laboratory techniques essential to success in the course. Each boot camp lasts several days, between 6-12 total hours. Faculty are paid to provide instruction and individualized help with computations and lab skills. The total number of hours requested per semester is 30 hours max per year per instructor for instruction and preparation. And, an additional 15 hour/year for the administrator of the boot camps. Faculty are paid as professional experts at a rate of $55/hour. With the lack of laboratory, learning, writing, and studying skills more apparent post pandemic, it is crucial to keep the Boot Camps going for the students enrolled in most chemistry courses.

4. ACS Lab Training Course

The Chemistry Department is requesting the Laboratory Safety Training Software program for all chemistry faculty through the American Chemical Society. This is directly related to lab safety, but there is not room on the online form to account for this many requests:

ACS Lab Training Course

The goal is for all faculty to have current certifications in laboratory safety training. The faculty will participate in the online training once every three years. In addition, any adjunct faculty that is hired will also participate in the training. This will increase the safety awareness of the faculty which will lead to a safer and more productive laboratory experience for the students.

The goal of this resource is to enhance the learning process and increase the retention and success rates of the students in the Chemistry program. This aligns with the College Mission to promote success for every student and commit to continuous quality improvement.

5. Outreach Funding

The Chemistry Department is requesting funding for outreach programs such as KinderCaminata, National Chemistry Week, and others.

**How will this additional resource allocation specifically enhance your program’s services, activities, processes, etc. to continue or improve student learning and achievement?**

1. Instructional Equipment and Student Workers

The Chemical Stockroom is responsible for the procurement and preparation of chemicals for use in the chemistry laboratories, and the maintenance and purchase of equipment that are commonly used in chemistry experiments and demonstrations. These are important aspects to the chemistry courses. Having the ability to perform laboratory experiments and view demonstrations improves critical thinking skills and helps attain student equity by giving the students different modes of learning opportunities. This results in an increase in completion of courses, certificate and degree programs, and transfer-readiness. It will ensure that financial, physical, and technological resources are available to maintain necessary services and programs.

2. Labster

With the pandemic came a new way of learning. Part of that was laboratory and content simulations. These give a new way for students to learn content in their chemistry courses with the goal of increasing the success and retention rates of students in the Chemistry program. Labster allows a dynamic visualization of chemical reactions, chemical concepts, laboratory techniques, and others so that students can practice and obtain a better understanding of those concepts. In a virtual setting, the students can become familiar with material before they enter the lecture or laboratory class. We would like to use it as a tool to bridge the gap between theory and practice.

3. Boot Camps

These boot camps not only provide additional training for students, but they also give them a place where they can start to form connections with faculty and other students in their learning community. Giving the students tools to learn chemistry as well as place to belong will address the learning gaps that disproportionately impacted students have coming into our chemistry courses as well as give them a better sense of belonging. In addition, some faculty like to incorporate time-management skills into their boot camps. This will help to increase persistence and success rates for disproportionally impacted students in the Chemistry Program.

**Is the resource request personnel-related? If so, please provide evidence to justify the requested positions such as retirements, program growth or curricular demands, full-time/adjunct ratios, etc.**

1. Instructional Equipment and Student Workers

Due to the vital role of the chemical stockroom to the success of the chemistry department laboratories and outreach activities, we are requesting funding to pay student workers to assist the two full-time chemical stockroom staff. The chemical stockroom supports multiple concurrent laboratory classes of various course levels Monday through Saturday, ranging from 8:00AM to 10:10PM. The presence of student workers will provide assistance to the full-time laboratory staff as they manage ongoing labs, break down completed labs, and prepare for upcoming labs.

3.Boot Camps

Faculty are paid to provide instruction and individualized help with computations and lab skills to students prior to the start of each semester, outside of faculty contract. Faculty are paid as professional experts at a rate of $55/hour. The total number of hours requested per semester is between 45-55 hours of instruction, with 10-15 hours of preparation/set up. With the lack of laboratory, learning, writing, and studying skills more apparent post pandemic, it is crucial to keep the Boot Camps going for the students enrolled in most chemistry courses.

**How will this additional resource allocation help you serve the college mission or strategic initiatives, and your program’s goals for improvement, as stated in your last self-study?**

1. Instructional Equipment and Student Workers

The purchased items will enhance the laboratory experience resulting in increased numbers of students in the Chemistry Program transferring, increased retention, persistence, and success rates of students. Students will learn how to properly use up-to-date advanced scientific equipment that will be an asset for them as they seek employment in chemical/technical fields. It will lead to increased number of Chemistry associate in arts and Associate in Science degrees as well as increased participation in community events. These all promote the college goals of promoting student success for every student and committing to accountability and continuous quality improvement.

2. Labster

The goal of this resource is to enhance the learning process and increase the retention and success rates of the students in the Chemistry program. This aligns with the College Mission to promote success for every student and commit to continuous quality improvement.

3. Boot Camps

Pre- and post-surveys of student’s perspective on the program showed increased retention rate of students in the Chemistry Program, increased success rate of students in the Chemistry Program, increased persistence though the course sequence, and increased number of students transferring. Offering the Boot Camps will improve student critical thinking skills, increase the completion of courses, certificates, and degree programs, and transfer-readiness. It will remove institutional barriers to student equity and success and foster a sense of belonging where all are welcome. This follows the college mission in which Fullerton College strives to promote success for every student and will cultivate a culture of equity.

5. Outreach Funding

This will provide funding for activities, shirts, swag that will advertise our chemistry program at Fullerton college at several events with the goal of increasing enrollment.

**For each separate resource request, complete this chart with details of the request:**

|  |  |
| --- | --- |
| **Type of Resource** |  |
| Personnel | Professional Expert |
| Facilities |  |
| Supplies | $49,389.00 (lab equipment)  $2000.00 (outreach) |
| Computer Hardware |  |
| Computer Software | $28,381.00/year (labster rate $36.20/license/student, 392 licences/semester for 16 sections) |
| Training | $4,620.00 (ACS Lab Safety Training $1,540/year) |
| Other | Boot Camp Professional Expert $36,000 ($12,000/year for three years)  Student workers $36,000 ($12,000/year for three years) |
| **Total Requested Amount:** | $212,906.00 |

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| --- |
| **Is the funding requested ongoing or one-time funding?**  Ongoing funds |
| **Is the funding requested for**[**enrollment and reengagement activities?**](https://ie.fullcoll.edu/wp-content/uploads/sites/27/2024/05/ER-2.0-Program-Review-Guide.pdf)  Yes |

**For each separate resource request:**

1. **Briefly describe your resource request.**

Equity Gaps Generated by Abbreviated Hours of Operation for Key Services:

The Chemistry Department is requesting the expansion of the hours of operation of Disability Support Services (DSS), Student Health Services, and Dining Services on the Fullerton College Campus to encompass all hours that students participate in classes.

1. **Is this request related to an essential safety need?**

No

**Why must this resource request be processed now rather than during the Fall 2025 comprehensive self-study?**

The limited hours of operation for key campus services such as Disability Support Services (DSS), Student Health Services, and the Dining Hall create significant inequities for students, particularly those who rely on these services to fully participate in academic and campus life. Currently, these services close or operate on abbreviated schedules on Fridays, after hours, and on Saturdays, even though classes are in session during these times. This mismatch between service availability and academic schedules disproportionately affects students who need consistent support but face barriers to accessing it outside of regular weekday hours.

**How will this additional resource allocation specifically enhance your program’s services, activities, processes, etc. to continue or improve student learning and achievement?**

• Disability Support Services (DSS): DSS hours do not match instructional schedules for numerous classes on campus. DSS Office Hours end at 5PM Monday through Thursday, operate only remotely on Fridays in the limited hours of 8AM to 12PM, and are closed on Saturdays. Several chemistry classes exist fully outside of the DSS Office Hours. Therefore, students who require accommodations such as extended test-taking time or other assistance may face delays or inadequate access. Since DSS services are not available during these periods of the week, students may be unable to fully participate in classes and may fall behind as a result. The chemistry department conducts classes after 5PM every weekday, on Fridays on-campus and after 12PM, and on Saturdays, when these may be the only times some students are able to come to campus.

• Student Health Services: Likewise, the hours of operation for the Student Health Center currently leave students in evening and weekend classes without essential medical support. These students are unable to access a campus resource that is available to address the health concerns or health issues of their peers, creating a systemic inequity.

• Dining Services: The Food Court closes at 6PM on Monday through Thursday, 2PM on Friday, and is not open at all on Saturday. Students who depend on affordable and nutritious meal options may struggle to find suitable alternatives within a reasonable distance from campus and at a reasonable cost. Many of these students have enrolled in chemistry courses during the evenings, Friday afternoons or on weekends due to their own work schedules and may face financial hardships. Unlike their peers, they are unable to quickly access food on campus (e.g., during class breaks). This creates inequity with their peers who can afford to enroll in earlier, daytime weekday courses.

**Is the resource request personnel-related? If so, please provide evidence to justify the requested positions such as retirements, program growth or curricular demands, full-time/adjunct ratios, etc.**

Not department personnel related

**How will this additional resource allocation help you serve the college mission or strategic initiatives, and your program’s goals for improvement, as stated in your last self-study?**

These service gaps unfairly affect students who rely on institutional support for their academic progress and personal health. The service gaps may limit students’ ability to succeed and to fully engage with campus life because important campus resources are inaccessible to them. We therefore support the expansion of hours of operation by DSS, Student Health Services, and Dining Services to address the equity gap and allow all students to equitably access all campus resources.

**For each separate resource request, complete this chart with details of the request:**

|  |  |
| --- | --- |
| **Type of Resource** |  |
| Personnel |  |
| Facilities |  |
| Supplies |  |
| Computer Hardware |  |
| Computer Software |  |
| Training |  |
| Other |  |
| **Total Requested Amount:** |  |

|  |
| --- |
| **Is the funding requested ongoing or one-time funding?**  Ongoing funds |
| **Is the funding requested for**[**enrollment and reengagement activities?**](https://ie.fullcoll.edu/wp-content/uploads/sites/27/2024/05/ER-2.0-Program-Review-Guide.pdf)  No |