Program Review - Overall Report

2024 - 2027

Instructional: Chemistry

Overall Trends

Please add any relevant documents here.

What overall trends do you see in success, retention, program of study, educational planning, and awards over the past 3 or more years?

Overall, the success of students in Chemistry courses has decreased from 68.2% in 2018/2019 to 65.6% in 2022/2023, while their retention stayed the same at 85.3% during this same five-year period. Moreover, the rate of students receiving less than passing (DF) grades in Chemistry courses has increased from 17.1% to 19.7% from 2018/2019 to 2022/2023.

Success and Retention Data of Norco College Chemistry Students from Power BI

Year	Success Rate	Retention Rate	DF Rate
2017-2018	64.1%	82.3%	18.2%
2018-2019	68.2%	85.3%	17.1%
2019-2020	68.7%	81.7%	13.0%
2020-2021	55.7%	75.3%	19.6%
2021-2022	66.4%	83.4%	17.0%
2022-2023	65.6%	85.3%	19.7%

In terms of student subgroups in Chemistry courses, Hispanic Females consistently showed gaps in Success from 2018/2019 to 2022/2023 that are concerning. While Hispanic Males, African American Females, and African American Males also experienced lower than average success rates in 2020/2021, it is speculated that these lower rates may have been due to the societal upheaval from the Covid pandemic.

Concerning Success Data of Norco College Chemistry Students Disaggregated By Race from Power BI

Year	Hispanic Females	Hispanic Males	African American Females	African American Males
2017-2018	55.0%			
2018-2019	64.0%			
2019-2020	64.8%			
2020-2021	52.0%	49.2%	47.1%	42.1%

2021-2022	61.7%			
2022-2023	58.4%			

There are no ongoing concerning trends in subgroup Retention data from Chemistry courses over the past five years. While Hispanic Males experienced lower than expected retention in the 2018/2019-2020/2021, Hispanic Females experienced lower than expected retention in the 2020/2021-2021/2022, and Females Identifying as Two or More races experienced lower than expected retention in the 2022/2023, these either corrected themselves in subsequent years or (in the case of Two or More Females), represent only a single year of lower-than-expected rates.

Concerning Retention Data Disaggregated By Race from Power BI

Year	Hispanic Females	Hispanic Males	African American Females	African American Males	Two or More Female
2017-2018					
2018-2019		80.9%			
2019-2020		76.6%			
2020-2021	71.5%				
2021-2022	78.9%				
2022-2023					63.2%

The number of students who have declared a major Chemistry went from 72 to 92 in 4 years. This represents 28% increased growth for this program. Of these students, 24.3% developed an educational plan, which is lower than the college-wide average of 32.0%.

Retention Data Disaggregate by Gender from Power BI

Year	Female	Males	Total
2019-2020	42	30	72
2020-2021	51	33	84
2021-2022	52	30	82
2022-2023	54	35	91

Ed Plans for Students in Chemistry

Data Review

Student Educational Pan	2019-20	2020-21	2021-22	2022-23	**Total**
No Ed Plan	81.94%	80.95%	64.63%	75.82%	**75.68%**
Comprehensive Ed Plan	15.28%	8.33%	23.17%	16.48%	**15.81%**
Abbreviated Ed Plan		4.76%	8.54%	2.20%	**3.95%**
Abbreviated and Comprehensive Ed Plan	2.78%	5.95%	3.66%	5.49%	**4.56%**

Ed Plans for Students at Norco College

Student Educational Pan	2019-20	2020-21	2021-22	2022-23	**Total**
No Ed Plan	60.60%	68.99%	67.28%	75.50%	**67.99%**
Comprehensive Ed Plan	32.29%	20.90%	19.87%	16.49%	**22.69%**
Abbreviated Ed Plan	3.95%	6.79%	8.72%	4.17%	**5.74%**
Abbreviated and Comprehensive Ed Plan	3.16%	3.32%	4.14%	3.83%	**3.59%**

(Look at Awards Dashboard-Instruction)
The number of students who have completed a degree or certificate in Chemistry went from 2 to 3 in 5 years. This represents increased for this program. In the most recent year (or whatever year is appropriate), 3 students graduated. The expected number of students who should get a degree would be approximately 18 (20% of Program of Study number in most recent year, 0.20 x 91). The gap in the pipeline is approximately 15 more students to graduate with a degree or certificate.

Disaggregated Student Subgroups

Look at the disaggregated student subgroups in success, retention, program of study, educational planning, and awards for your area. Are there any equity gaps that you will address in the next 3 years?
Across the past 6 years, the success rate of Hispanic females has always had an equity gap, in regards to all chemistry classes at Norco College together. Additionally, Hispanic females are the largest group in chemistry courses. For these reasons, efforts will be focused into addressing this particular equity gap in the next 3 years.
In the past 3 years, the success rates of Hispanic males have had equity gaps, in regards to the introductory chemistry class (CHE-2A) at Norco College. Hispanic males are the second largest group in chemistry courses. For these reasons, efforts will be focused into addressing this particular equity gap in the next 3 years.

If there are any concerning trends over the past 3 or more years, or if equity gaps exist, what is your action plan to address them?
As previously mentioned, Hispanic females and males have had the largest equity gaps across students in chemistry classes. To address this in the next years, we will look to establish a greater connection with this student population to learn how to better improve their success rates specfically.
Ways in which we can achieve this are by participating in committees or clubs that service these students, attending workshops related to addressing needs of Hispanic students, and also by collaborating with programs like Puente to gain more overall insight. Currently some full-time chemistry faculty are apart of the Diversity, Equity, Inclusion, and Accesibility committee, which is one committee that directly serves and supports Hispanic females and males. Increasing participation in this committee from our faculty will help connect more with these students with the goal of increasing their success.
Also of note, one of the biggest challenges of chemistry students in the past years has been the math component. The general consesus from instructors teaching introductory chemistry courses (CHE-2A) is that students are struggling much more with foundational math skills. Many factors have contributed to this result.
-There is no longer prequisite college math classes for entering CHE-2A (before it was MAT-52).

Data Review

- The pandemic caused a dramatic shift to online classes, and then a shift back to in-person/online/hybrid classes. The dramatic amount of change in such a short period of time has been difficult for everyone to deal with. This has had an undeniable impact, as success rates during the 2020-2021 academic year (in the middle of the pandemic) were at their lowest in the past 6 years (55.7% for all groups, versus an average of 66.7% over the other 5 past years).
-The pandemic has lead to more online math classes, which are more suscectable to cheating. Therefore, for some students, they may pass classes but never pick up the expected skills from passing those classes.
One way the chemistry discipline has tried to address this is creating a Chemistry-Math Workshop series. These workshops focus on addressing foundational math skills that are required to solve chemistry problems involving math. This special project received funding and the workshops were implemented this semester (Spring 2024). For the workshops (three separate workshops, offered three times each, over the first three weeks of the semester), a total of 69 unique students attended, an overall pleasing result base on the total possible CHE-2A student population (~300 students).We plan to continue this project for future years in hopes of refining it based on data collected from the workshops (student surveys). This project is another way in which we can increase success rates of students, which include Hispanic females and males, by supporting their math skills.

Please add any relevant documents here.

Program/Unit Goals

Add Che-3 and Che-2B to the Chemistry Program at Norco College

Program/Unit Goal

Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college.

Goal Cycle

2024 - 2027

What are you doing now in support of this goal?

Che-3:

- several faculty are working on lab experiments that best support this course
- addressing storage and preparation limitations in the Chemistry technician prep areas by updating requests for money needed for room modifications and added storage in the prep rooms, instrument room, and lab rooms
- placing highest priority to obatin funds that support increasing storage and preparation spaces
- faculty member applying for sabbatical leave to be able to write experiments that also address storage and preparation limitations
- requesting the existing part-time technician position to become a full-time technician position to support additional courses in Chemistry as well as Biology and Physics.

Che-2B:

- addressing storage and preparation limitations in the Chemistry technician prep areas by updating requests for money needed for room modifications and added storage in the prep rooms, instrument room, and lab rooms
- placing highest priority to obatin funds that support increasing storage and preparation spaces
- requesting the existing part-time technician position to become a full-time technician position to support additional courses in Chemistry as well as Biology and Physics

Program/Unit Goals

What are your plans (3-year) regarding this goal?

Che-3:

- 2024-2025: Chemistry faculty work on completing lab experiments and using funds to increase storage and prep room space.
- 2025-2026: Start offering course in either Fall 2025 or Spring 2026.

Che-2B:

- 2024-2025: Chemistry faculty work on completing lab experiments and using funds to increase storage and prep room space.
- 2025-2026: Complete lab experiments.
- 2026: Start offering course in Spring 2026.

Please add any relevant documents here.

Mapping

Educational Master Plan (2020-2025): *undefined*

- **2025 Objective 1.1 - KPI 1 (Academic Affairs):** Go from 7,366 to 8,759 total FTES (✔)
- **2025 Objective 1.2 - KPI 2 (Student Services):** Go from 14,624 headcount to 16,581 total headcount (✔)
- **2025 Objective 1.3 (Student Services):** Expand enrollment with strategic groups (Dual Enrollment, International, Online, California Rehabilitation Center, Veterans, etc.) (✔)
- **2025 Objective 1.4 - KPI 3 (Student Services):** Increase capture rates from feeder high schools by 4% annually (✔)
- **2025 Objective 2.1 - KPI 4 (Academic Affairs):** Increase number of degrees completed by 15% annually (✔)
- **2025 Objective 2.2 - KPI 5 (Academic Affairs):** Increase number of certificates completely by 15% annually (✔)
- **2025 Objective 2.4 - KPI 6 (Student Services):** Increase number of transfers 15% annually (✔)
- **2025 Objective 3.1 - KPI 8 (Student Services):** Reduce the equity gap for African American students by 40% (✔)
- **2025 Objective 3.2 - KPI 9 (Student Services):** Reduce the equity gap for Latinx students by 40% (✔)
- **2025 Objective 3.3 - KPI 10 (Student Services):** Reduce the equity gap for Men of Color by 40% (✔)
- **2025 Objective 3.4 - KPI 11 (Student Services):** Reduce the equity gap for LGBTQ+ students by 40% (✔)
- **2025 Objective 3.5 - KPI 12 (Student Services):** Reduce the equity gap for Foster Youth students by 40% (✔)
- **2025 Objective 5.1- KPI 13 (Student Services):** Increase the median annual earnings of all students (✔)
- **2025 Objective 5.3 - KPI 15 (Student Services):** Increase percent of all students who attain a livable wage by 5% annually (✔)
- **2025 Objective 6.2 (Planning and Development):** Contribute to regional economic and workforce development by creating and expanding relationships with business and civic organizations (✔)
- **2025 Objective 6.5 (Office of the President):** Position the college's image and reputation as a leading academic institution in the region (✔)
- **2025 Objective 7.1 (Academic Senate):** Develop comprehensive breadth of academic programs (✔)
- **2025 Objective 7.5 (Academic Senate):** Add capacity to existing disciplines with a demonstrated need (✔)
- **2025 Objective 7.7 (Academic Affairs):** Build and support academic support services to improve student success (✔)
- **2030 Goal 1: Access:** Expand college access by increasing both headcount and FTES (✔)
- **2030 Goal 2: Success:** Implement Guided Pathways framework. (✔)

Program/Unit Goals

- **2030 Goal 3: Equity:** Close all student equity gaps. (✔)
- **2030 Goal 5: Workforce and Economic Development:** Reduce working poverty and the skills gap (✔)
- **2030 Goal 7: Programs:** Become the regional college of choice by offering a comprehensive range of programs that prepare students for the future and meet employer workforce needs. (✔)

Equity-Resource Database

Program/Unit Goal
To prepare an equity-resource database, which will be made available to all Chemistry faculty

Goal Cycle
2024 - 2027

What are you doing now in support of this goal?
-To organize communal chemistry resources, a Norco College Chemistry Discipline Canvas page has been created. Current resources include: CHE-3 lab curriculum, CHE-3 COR, Assessment Resources, Program Review Resources, Chemistry Discipline Meeting information, Math-Chem Special projects documents, and others. This Canvas page could easily serve as a repository for equity-related resources as well, simply by adding files into the organized modules.

-When new, relevant content is added to this shell, it is communicated to faculty who can benefit from those resources.

-Chemistry faculty have attended a variety of equity-related workshops and trainings to increase awareness to available equity-related resources. Some of those workshops and training are listed below.

1. Participated in equity trainings provided during FLEX of each semester in Norco College.
2. Participated in schoolwide (School of Natural Sciences, Health & Kinesiology) training on Assistive Technology in the Classroom provided by Kimberly Bell and Matt Allen from DRC on Sept. 15, 2022.
3. Participated in schoolwide (School of Natural Sciences, Health & Kinesiology) training on “Using LibreText” presented by Dr. Teresa Friedrich Finnern in March, 2023.
4. Completed the online course “OER Basics” in 2023.
5. Attended OER (OLI) workshop held at Mt SAC in June, 2023.
6. Attended Achieving Equity in Guided Pathway 2023 Summit on Sept. 14-15, 2023 to learn more about equity in guided pathway at Norco College.
7. Attended webinars on OER Basics Series presented by Academic Senate for California Community Colleges in 2024.

What are your plans (3-year) regarding this goal?
-Continue to attend equity-related workshops, trainings and conferences, while storing available resources in the Norco College Chemistry Discipline Canvas shell.

- Provide new chemistry faculty with access to the Canvas shell, as well as giving them an overview of how to utilize it.

-Continuously encourage current and new faculty to contribute relevant resources to grow the database.

-Maintain the database by reorganizing modules to accommodate new resources or new resource categories. In general, continue to make sure that resources are organized and easy to find when someone intends to access specific content.

Program/Unit Goals

-Obtain feedback from chemistry faculty about the database, determining what could be done to improve it. Does it have desired resources? Is it easy to use? Is it maintained frequently enough? Questions like these can be answered via faculty comments, or through responses from polls/surveys.

-Host trainings on how to best utilize the database.

Please add any relevant documents here.

Mapping

Educational Master Plan (2020-2025): *undefined*

- **2025 Objective 3.1 - KPI 8 (Student Services):** Reduce the equity gap for African American students by 40% (✔)
- **2025 Objective 3.2 - KPI 9 (Student Services):** Reduce the equity gap for Latinx students by 40% (✔)
- **2025 Objective 3.3 - KPI 10 (Student Services):** Reduce the equity gap for Men of Color by 40% (✔)
- **2025 Objective 3.4 - KPI 11 (Student Services):** Reduce the equity gap for LGBTQ+ students by 40% (✔)
- **2025 Objective 3.5 - KPI 12 (Student Services):** Reduce the equity gap for Foster Youth students by 40% (✔)
- **2030 Goal 3: Equity:** Close all student equity gaps. (✔)

Progress and Evidence

Evidence Date

03/08/2024

What progress have you made toward this goal?

How do you measure your progress?

Discuss your evidence/results.

Please provide any assessment data or other evidence that supports this Program/Unit Goal.

By creating a equity-resource database for Chemistry faculty, EMP Goals 3.1- 3.5 can be addressed. If faculty have easier access to equity-related resources, they will apply that information in their classrooms more. African American, Latinx, Men of Color, LGBTQ+, and Foster Youth students will benefit from having more informed chemistry faculty who can address the needs of the diverse student population. Equity gaps will gradually reduce from chemistry faculty progressively increasing their knowledge and skills related to equity issues.

For the Spring semester there are 19 sections of Chemistry classes that have a capacity of 32 students (classes ranging from CHE-2A, CHE-1A, and CHE-1B). Also 2 sections of Chemistry classes that have a capacity of 17 students 9 (CHE-12A and CHE-12B). Approximately

Currently 550 students are enrolled in chemistry classes are interacting with 12 different chemistry professors (3/8/2024 via https://www.norcocollege.edu/scheduleapp/Pages/index.aspx). Investing in these few chemistry professors will have a broad impact on a substantial number of students. A high percentage of these students fall within the categories included in EMP Goal 3.

Is there a resource request associated with this Goal?

Yes

If yes, please provide a short description.

Part of developing the database is to attend equity-related conferences. Funding for attending those conferences would be needed.

Please add any relevant documents here.

Zero-Cost Textbooks and Lab Manuals

Program/Unit Goal

Program/Unit Goals

Identify and implement zero-cost textbooks and lab manuals for CHE-2A, CHE-2B, and CHE-3

Goal Cycle

2024 - 2027

What are you doing now in support of this goal?

- Faculty in chemistry discipline have received training on “Using LibreText” and completed the online course “OER Basics”. Faculty also attended some OER workshops and webinars. Some chemistry faculty had adopted zero-cost textbook “Chemistry 2e” by OpenStax in earlier teaching practice when taught in other school district.
- The Chemistry discipline is actively reviewing resources of zero-cost textbooks for chemistry courses provided in Norco College and have agreed to apply ZCT starting from some introductory level chemistry courses such as CHE-2A, CHE-2B, and CHE-3.
- In the summer of 2023, faculty met online regularly to work on initial preparation of CHE-3 lab curriculum, and decided to develop our own lab manuals and make them free to use by Norco College students who take this chemistry course. Based on CHE-3 course contents, faculty have proposed some lab topics and some lab manuals have been drafted for review.

What are your plans (3-year) regarding this goal?

- Adopt low-cost textbook for CHE-2A and CHE-2B by Fall 2026 and create lab manuals for each of these courses that are free for students to use.
- Adopt low-cost textbook for CHE-3 by Fall 2027 and created lab manuals for the course that are free for students to use.
- Dr. Jody Tyler is applying for a sabbatical leave for the 2024-2025 academic year to develop a CHE-3 lab manual.

Please add any relevant documents here.

Mapping

Educational Master Plan (2020-2025): *undefined*

- **2025 Objective 3.1 - KPI 8 (Student Services):** Reduce the equity gap for African American students by 40% (✔)
- **2025 Objective 3.2 - KPI 9 (Student Services):** Reduce the equity gap for Latinx students by 40% (✔)
- **2025 Objective 3.3 - KPI 10 (Student Services):** Reduce the equity gap for Men of Color by 40% (✔)
- **2025 Objective 3.4 - KPI 11 (Student Services):** Reduce the equity gap for LGBTQ+ students by 40% (✔)
- **2025 Objective 3.5 - KPI 12 (Student Services):** Reduce the equity gap for Foster Youth students by 40% (✔)
- **2030 Goal 3: Equity:** Close all student equity gaps. (✔)

Reduce Course Caps

Program/Unit Goal

Reduce course caps in Introductory and General Chemistry lab courses.

Goal Cycle

2024 - 2027

What are you doing now in support of this goal?

Program/Unit Goals

The Chemistry Discipline at Norco College is seeking to lower the lab capacities (lab caps) of its General Chemistry and Introductory Chemistry courses from 32 to 25 students based on safety concerns for faculty and students. Chemistry lab classes are unique in that faculty must be constantly vigilant and available to all students to create a safe and optimal learning environment. However, it is very difficult to ensure that safety and effective learning take place in lab class environments of 32 students. Thus, the Norco College Chemistry faculty have two major safety concerns about the college's current lab caps: 1) the ability of instructors to oversee and manage the number of students in a lab class and 2) the amount of individual workspace provided to each student.

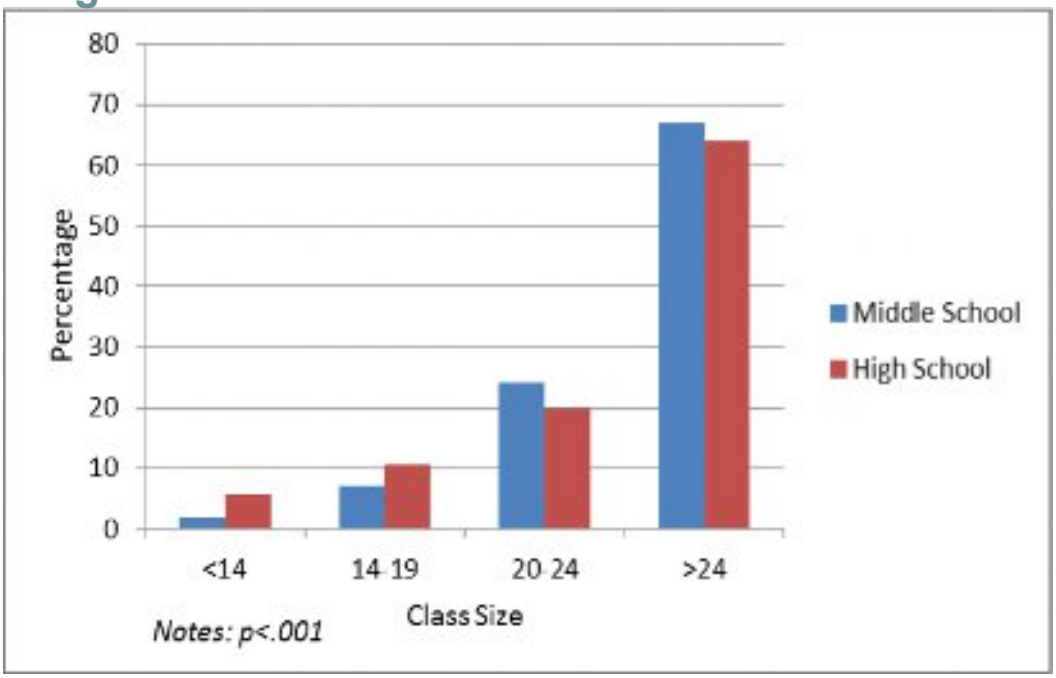
The American Chemical Society (ACS) provides guidelines for lab safety. The ACS is the largest scientific society in the world and the largest professional society for those who work in the chemistry field. Thus, the ACS is viewed as the authority for all chemistry-related things. In this regard, the "ACS Guidelines for Chemistry for Two-Year College Programs"1,2 recommends that academic laboratory classes have no more than 25 students to provide an optimal educational experience that minimizes overcrowding and maintain a safe working environment.

The National Fire Protection Association (NFPA) also provides guidelines for optimal workspace for student in lab classes. The NFPA is a leader in knowledge and resources regarding fire- and hazard-related issues and prevention. In its Life Safety Code 101-2012 Occupant Load Factor for educational science labs,3 the NFPA recommends that each student in an educational lab environment have at least 50 square feet of net work space. (Net work space is work space that excludes lab tables and benches.) We estimate that each student in our Introductory Chemistry lab room has about 24 square feet of net work space and each student in the General Chemistry lab room has about 35 square feet of net work space, which are far below the NFPA safety guidelines.

There is strong evidence than lower lab caps are correlated with safe lab environment. For example, the National Science Teachers Association published "Overcrowding in the Instructional Space" (April, 2014) with data collected from 199 secondary public schools in 2001 on overcrowding in academic lab classes. While this study used data from middle and high school lab classes, it's likely that the trends can be extended to any academic laboratory environment. This study found that accidents and incidents 1) increased by 82% (from 11% to 20%) when the high school lab class enrollments went from 14-19 students to 20-24 and 2) increased by an astonishing 320% (from 20% to 64%) when the high school lab class enrollments were above 24 high school students (Figure 1).4

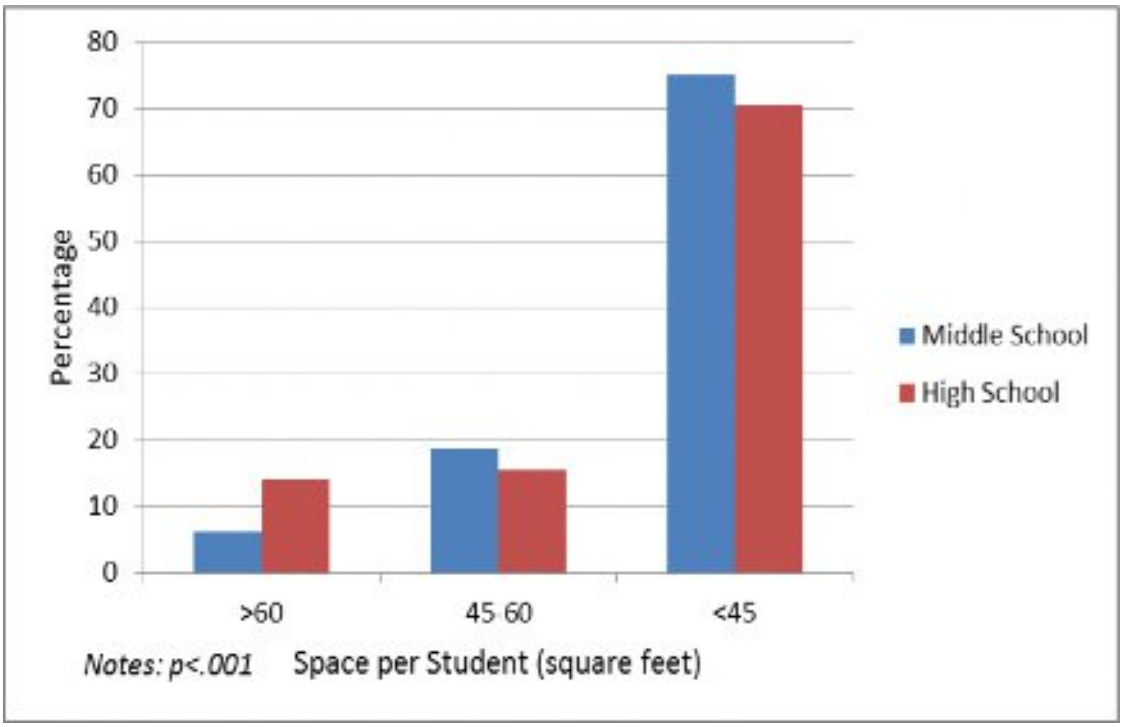
Figure 1: Accidents Increase as Class Size Increases

Program/Unit Goals



Moreover, incidents and mishaps increased 473% (from 15% to 71%) as the classroom space per student decreased from greater than 45-60 ft2 to less than 45 ft2 of net space per student (Figure 2).4 These data strongly support the concept that lab class sizes of more 24 students and less than 45 ft2 of net space per student does not provide a safe and effective learning environment for students and faculty.

Figure 2: Accidents Increase as Space/Student Decreases



Data from nearby community colleges also suggest that the capacities of the chemistry labs around Norco College are too high.

Table 1: Chemistry Lab Capacities

Program/Unit Goals

for Chemistry Classes at Local Community College and Norco College

Community College	General Chemistry (CHE-1A/1B at Norco College)	GOB (CHE-2A at Norco College)
Golden West	25	25
Mt. SAC	24	24
Santiago Canyon	24	24
El Camino	30	30
Cerritos	27	30
Mt. San Jacinto	28	28
Riverside	30	30
Moreno Valley	30	30
Norco	**32**	**32**

By decreasing lab capacities from 32 to 25 students, accidents and liability for those accidents should decrease. We are asking that the District and Norco College support the Chemistry faculty in having a cap of 25 students in all Introductory and General Chemistry lab courses to maintain a workplace that is safe and supports effective learning.

1. American Chemical Society. *Safety in Academic Chemistry Laboratories; Vol. 2, Accident Prevention for Faculty and Administrators,* 7th ed.; American Chemical Society: Washington, DC; 2003.
2. American Chemical Society. *ACS Guidelines for Chemistry in Two-Year College Programs*, Fall 2015 ed.; American Chemical Society: Washington, D.C; 2015.
3. 7 National Fire Protection Association. NFPA 101: *Life Safety Code*, 2015.
4. National Science Teachers Association, “Overcrowding in the Instructional Space”, static.nsta.org/pdfs/OvercrowdingInTheInstructionalSpace.pdf, NSTA; 2014.

What are your plans (3-year) regarding this goal?
Building awareness within the college community and in the District of the potential danger of higher lab caps.
Please add any relevant documents here.

Mapping
Educational Master Plan (2020-2025): *undefined*

- **2025 Objective 3.1 - KPI 8 (Student Services):** Reduce the equity gap for African American students by 40% (✔)
- **2025 Objective 3.2 - KPI 9 (Student Services):** Reduce the equity gap for Latinx students by 40% (✔)
- **2025 Objective 3.3 - KPI 10 (Student Services):** Reduce the equity gap for Men of Color by 40% (✔)
- **2025 Objective 3.4 - KPI 11 (Student Services):** Reduce the equity gap for LGBTQ+ students by 40% (✔)
- **2025 Objective 3.5 - KPI 12 (Student Services):** Reduce the equity gap for Foster Youth students by 40% (✔)
- **2025 Objective 9.5 (Academic Affairs & Academic Senate):** Develop strategy to maximize student-faculty time; Resist pulling faculty from students to do administrative work; Evaluate release time (✔)

Program/Unit Goals

- **2030 Goal 3: Equity:** Close all student equity gaps. (✔)

Lower cost student homework platforms

Program/Unit Goal
Identification and implementation of lower cost online student homework platforms for all chemistry courses.

Goal Cycle
2024 - 2027

What are you doing now in support of this goal?
Reducing the cost of educational material is one of the prime ways of increasing students' access to higher education, closing equity gaps, and promoting students' success. The chemistry discipline at Norco College has taken steps to lower barriers for students in accessing these educational materials. One such material for chemistry courses at Norco College is the student engagement and homework platform.

Homework is an important part of learning Chemistry. The Chemistry discipline at Norco college promotes student success by encouraging students to complete the assigned homework. Thus, it is imperative that these homework platforms enhance students' experience in learning chemistry. It is also equally important that students can financially afford these platforms.

Faculty members at Norco College are currently in search of a cost-effective and experience-enhancing student homework platform for all levels of chemistry courses offered at the college. Such search resulted in interviewing multiple online homework platform developers and having them present the features of their platforms. Aktiv Learning (formerly known as Chem101), Open Learning Initiative (OLI at Carnegie Mellon University), Knewton Alta (Wiley), and Smartwork (Norton) have been interviewed in Winter of 2024. The faculty members also plan on interviewing Achieve (McMillan Learning) and other developers soon.

What are your plans (3-year) regarding this goal?

- Interview selected online student homework platform developers and discuss their effectiveness, features, and affordability (preferably less than $40 per semester per student) of their products.
- Choose an effective and affordable homework platform to implement for general chemistry courses (CHE-1A/B) during a semester (tentatively in Fall 2024).
- Gather all necessary student data and compare it with the ones from the current homework platform(s).
- If the data are satisfactory, evaluate its effectiveness for other chemistry courses offered.
- Implement the selected homework platform through campus bookstore for our students.

Please add any relevant documents here.

Mapping
Educational Master Plan (2020-2025): *undefined*

- **2025 Objective 3.1 - KPI 8 (Student Services):** Reduce the equity gap for African American students by 40% (✔)
- **2025 Objective 3.2 - KPI 9 (Student Services):** Reduce the equity gap for Latinx students by 40% (✔)
- **2025 Objective 3.3 - KPI 10 (Student Services):** Reduce the equity gap for Men of Color by 40% (✔)
- **2025 Objective 3.4 - KPI 11 (Student Services):** Reduce the equity gap for LGBTQ+ students by 40% (✔)
- **2025 Objective 3.5 - KPI 12 (Student Services):** Reduce the equity gap for Foster Youth students by 40% (✔)
- **2030 Goal 3: Equity:** Close all student equity gaps. (✔)

Program/Unit Goals

Equipment needed for lab experiments

Program/Unit Goal
Ensure all labs have needed equipment to run all courses.

Goal Cycle
2024 - 2027

What are you doing now in support of this goal?
Request funding in Program Review each year to purchase, maintain, and replace equipment as needed.

What are your plans (3-year) regarding this goal?
Continue to advocate for more funding.

Please add any relevant documents here.

Increase student success and retention in Chemistry and support students in all majors requiring Chemistry

Program/Unit Goal
Increase student success and retention in Chemistry and access to all courses needed for all majors

Goal Cycle
2024 - 2027

What are you doing now in support of this goal?
Using the ACS Exams in General and Organic Chemistry to assess students. Requesting a budget for LRC to support students in Chemistry. Faculty request tutors and embedded tutors to support learning in Chemistry classes. We are reqsting funding to increase storage and workspace in our existing rooms by adding shelving, cabinetry, and chemical cabinets in order to offer Che-3 (which supports science majors retention and success) and Che-2B, which allows Nursing and allied health majors to finish their chemistry sequence of Che-2A and Che-2B at Norco College in order for us to be a comprehensive College.

What are your plans (3-year) regarding this goal?
Continue to advocate for more funding. Work on lecture and lab content for Che-3 and Che-2B so that once we have more storage and workspace improvements to start offering these classes.

Please add any relevant documents here.

Curriculum

Are all your courses current (within four years)?
Yes

What percentage of your courses are out of date?
0%

If you have courses that are not current, are they in the curriculum process?
N/A

For out of date courses that are not already in progress of updating, what is your plan?

Do you have proposals in progress for all the DE courses you intend to file?
No

Do you require help to get your courses up to date?
No

Please add any relevant documents here.

Credit for Prior Learning

Equity Related Professional Development Questions

1. Which equity-related professional development trainings have members of your area participated in to improve student learning, student support, and/or college support?

- Participated in equity trainings provided during FLEX of each semester in Norco College.
- Participated in schoolwide (School of Natural Sciences, Health & Kinesiology) training on Assistive Technology in the Classroom provided by Kimberly Bell and Matt Allen from DRC on Sept. 15, 2022.
- Participated in schoolwide (School of Natural Sciences, Health & Kinesiology) training on “Using LibreText” presented by Dr. Teresa Friedrich Finnern in March, 2023.
- Completed the online course “OER Basics” in 2023.
- Attended OER (OLI) workshop held at Mt SAC in June, 2023.
- Attended Achieving Equity in Guided Pathway 2023 Summit on Sept. 14-15, 2023 to learn more about equity in guided pathway at Norco College.
- Attended webinars on OER Basics Series presented by Academic Senate for California Community Colleges in 2024.
- Faculty in chemistry are actively involved in CAP events in Norco College in support of our students’ educational success and career development.
- Attended and co-hosted Ally trainings to Norco College faculty and staff in support of the LGBTQ+ population.
- Attended the ACS GCE (American Chemical Society Green Chemistry and Engineering) Conference in June 2023.
- Attended the 2022 Biennial Conference on Chemical Education - BCCE 2022

2. What knowledge or skills/techniques have members in your area implemented from these trainings and what changes have you seen?

- Faculty in Chemistry discipline have developed lab curriculum for CHE 1A and CHE 1B, which is free for students to use. This has effectively lowered the cost of the lab manual for students in taking general chemistry courses.
- Faculty are actively conducting research on cost-effective student online homework platforms including Aktiv Learning, Newton Alta, and OLI through the entire winter break of 2024 and have reached agreement to adopt Active Learning as student online homework program that will be trialed in Fall 2024 in general chemistry courses. Compared with currently used MyLab and Mastering Chemistry by Pearson Education ($79.99 per student per semester), the cost of purchasing Aktiv Learning platform is $37 per student per semester.
- Faculty in the chemistry discipline are actively searching for ZCT with high quality contents. Even though no ZCT has been adopted in chemistry teaching, some course resources from LibreText have been provided to students in teaching practice. These cost-free learning resources have definitely aided students who have financial difficulty in purchasing the textbooks.
- In Fall 2023, faculty in the chemistry discipline realized by then our lab room HUM 204 did not meet American with Disabilities Act (ADA) laws for wheelchair access. Requests on renovations to HUM 204 to meet ADA laws has been submitted in program review so the course will be accessible to all students taking the course.
- Collaborated with Norco College Math Department on a project aiming for closing the gap for students in chemistry learning due to lack of math skills so to ensure student success in chemistry study. This project includes several Math review workshops for CHE 2A (introductory chemistry) students in reviewing the fundamental math skills required in chemistry study. The outcome will be evaluated after Spring 2024 based on students’ retention rate and success rate in chemistry classes.

According to Power BI, Norco College chemistry students’ success rate and retention rate in year 2020-2021 were 55.7% and 75.3%, respectively. Slight increase was observed in student success rate and retention rate in year 2021-2022, which were 66.4% and 83.4%, respectively. Similar observation was noticed in year 2022-2023. Student success rate and retention rate were 65.6% and 85.3%, respectively.

Furtherly disaggregated by race, Norco College chemistry students’ success rate and in year 2020-2021 were found at 52.0% for Hispanic females and 49.2% Hispanic males; and 47.1% for African American females and 42.1% for African American males. Hispanic female student success rate was 61.7% in year 2021-2022, and 58.4% in year 2022-2023. No data was reported for Hispanic males and African American females and males in years between 2020-2023 by Power BI.

Equity

- Starting in Fall 2023, chemistry discipline has implemented free use of goggles in chemistry lab classes. These goggles are free to use for all students in chemistry labs. Detailed instructions on cleaning the goggles before and after use have been provided to students according to ACS guideline.
- To promote supportive learning environment and encourage diversity among Norco College chemistry students, a faculty member in chemistry discipline presented series of inspirational stories of successful people from diverse ethnic (and traditionally marginalized) backgrounds and/or who overcame adversities in life. It is believed that students showed enthusiasm in hearing these stories and felt more confident with their learning and career goals.

3. What additional equity-related professional development/trainings do you seek to better support your area?

- Seeking funds in support of faculty to attend conferences such as ACS National meetings to stay updated with developments in the chemistry field.

Please add any relevant documents here.

Assessment

Outcome Mastery by Gender

Date
03/22/2024
Observation
What did you notice?
Female and Male Mastery is nearly the same
Course(s)
CHE-1A, CHE-12A
SLO(s)
CHE-1A 1, 2, 3, and 4 and CHE-12A 1, 2, 4
Discussion/Analysis
The Outcome Mastery of females was 80.2% (26 assessed) while males were 78.4% (28 assessed). These results show that there is no significant disparity between males and females in regard to Outcome Mastery. For non-binary, there was 100% recorded, but only one student was assessed.
Please paste any relevant screenshots here.
Please add any relevant documents here.

Outcome Mastery by Age Group

Date
03/22/2024
Observation
What did you notice?
Students 20-24 had higher success rates
Course(s)
CHE-1A, CHE-12A
SLO(s)
CHE-1A 1, 2, 3, 4 and CHE-12A 1, 2, 4
Discussion/Analysis
Students in the 20-24 age group (29 assessed) had the highest Outcome Mastery (87.1%) in comparison to all other age groups. Students age 19 or less (21 assessed) had the lowest Outcome Mastery (69.5%). Other age groups had too small of a sample size to have a relevant discussion of their results, but their results did fall within the 69.5 % to 87.1% range.
Since the students 19 years or younger are less seasoned students, their lower scores can partially be rationalized in this manner. Especially since CHE-1A and CHE-12A are typically more difficult classes, students without developed study habits will suffer more so than a standard class.
Please paste any relevant screenshots here.
Please add any relevant documents here.

Outcome Mastery by SLO

Date
03/22/2024
Observation
What did you notice?
CHE-1A SLO 4 is lower in comparison to other SLOs

Assessment

Course(s)
CHE-1A, CHE-12A

SLO(s)
CHE-1A SLO 1, 2, 3, 4 and CHE-12A SLO 1, 2, 4

Discussion/Analysis
Most SLOs in CHE-1A and CHE-12A have an Outcome Mastery of 90% or higher. SLO 4 in CHE-1A, on the other hand, has a significantly lower Outcome Mastery (69.7%). SLO 4 in CHE-1A is as follows: Collect and analyze data from chemical experiments, including graphing, calculations and qualitative understanding of how data relates to the concept studied. This SLO ties closely with the laboratory component of CHE-1A, which requires a noticeably higher workload in comparison to the prerequisite chemistry class, CHE-2A. This may explain the lower Outcome Mastery relative to the other SLOs that tie in more with the lecture component of the class.

Please paste any relevant screenshots here.
Please add any relevant documents here.

Outcome Mastery by Declared Major

Date
03/22/2024

Observation

What did you notice?
Biology for Transfer CSUGE students had the lowest Outcome Mastery in comparison to other majors

Course(s)
CHE-1A and CHE-12A

SLO(s)
CHE-1A SLO 1, 2, 3, 4 and CHE-12A 1, 2, 4

Discussion/Analysis
When comparing the Outcome Mastery by declared major, most majors were either around 70% or 100%. Biology for Transfer CSUGE, on the other hand, had on Outcome Mastery of 53.6%, which is significantly lower in comparison.

Please paste any relevant screenshots here.
Please add any relevant documents here.

Resource Requests

Replacement Batteries for Pasco Spectrometers

Resource Year
2024 - 2027
What resources do we already have?
11
What resources do you need?
10
$ Amount Requested
500
Resource Type
ITEM: Equipment, Services, Software, Furniture
Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
There are two CHE-1B labs and one CHE-1A lab solely rely on the use of Pasco spectrometers. Some batteries of the spectrometers are broken and need replacement. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).
This request for my area is Priority #:
9
Is this request
Revised
For Administrative Use Only
Funding Status
No Action-Insufficient funding
Notes

Council Ranking
36
2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*
- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)

Printer dedicated to two FTIRs for Instrument Room

Resource Year
2024 - 2027
What resources do we already have?
none
What resources do you need?
1 printer
$ Amount Requested
500
Resource Type
ITEM: Equipment, Services, Software, Furniture
Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

Resource Requests

We currently have one printer to service two FTIR spectrometers, which are heavily used instruments in our Organic Chemistry classes (CHE-12A/B). However, this printer is old, and the paper jams if its fed more than one page at a time. The new printer will replace this printer. Having access to properly functioning equipment supports our students.This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
12

Is this request
Revised

For Administrative Use Only

Funding Status
No Action-Insufficient funding

Notes

Council Ranking
40

2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*

- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)

Gas Chromatograph Capillary Columns

Resource Year
2024 - 2027

What resources do we already have?
two columns but additional ones are needed as each column is dedicated to analysis of a specific type of compounds

What resources do you need?
2 columns

$ Amount Requested
2,500

Resource Type
ITEM: Equipment, Services, Software, Furniture

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
These columns will be used in a Gas Chromatograph (GC) that is used in the Organic Chemistry lab classes. GC is a basic instrument used in Organic Chemistry and is essential that students have experience using this type of instrumentation. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
16

Is this request
Revised

For Administrative Use Only

Funding Status
No longer needed

Notes
removed from RR speadsheet

Council Ranking
48

Resource Requests

2025-26 Council Ranking

Mapping

Instructional: Chemistry: *undefined*

- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)

Teaching Assistant (TA) for Che-1B Labs

Resource Year
2024 - 2027

What resources do we already have?
none

What resources do you need?
2 TA's

$ Amount Requested
5,100

Resource Type
STAFF: Classified Professional, Confidential, Mgr

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
CHE-1B labs are more complicated and students need more individual instructions during the lab. It is very stressful for the instructor to handle a lab of 32 students (if the class is fully enrolled) to ensure all students work safely while spending time working with each student individually. A TA in a CHE 1B lab will provide better support for students and ensure student learning success. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
13

Is this request
Revised

For Administrative Use Only

Funding Status

Notes

Council Ranking

2025-26 Council Ranking

Mapping

Instructional: Chemistry: *undefined*

- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Melting Point Apparatuses

Resource Year
2024 - 2027

What resources do we already have?
12

Resource Requests

What resources do you need?
Four

$ Amount Requested
6,000

Resource Type
ITEM: Equipment, Services, Software, Furniture

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
Melting point apparatuses are the most commonly used instruments in our Organic Chemistry classes (CHE-12A/B), but they have a limited lifetime. We currently have 12 functioning melting point apparatuses, which is the number we use in a class. These new units will supplement/backup those units. Having access to sufficient equipment supports our students. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
15

Is this request
Revised

For Administrative Use Only

Funding Status
No Action-Insufficient funding

Notes

Council Ranking
44

2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*

- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)

Pasco Spectrometers

Resource Year
2024 - 2027

What resources do we already have?
23

What resources do you need?
14

$ Amount Requested
7,700

Resource Type
ITEM: Equipment, Services, Software, Furniture

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
There are two CHE-1B labs and one CHE-1A lab solely rely on the use of Pasco spectrometers. We currently have 23 Pasco spectrometers in stock. Students are working in pairs due to the limited quantity of the spectrometers. Extra Pasco spectrometers are needed to ensure each student has one spectrometer to work on with during the lab. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
8

Is this request

Resource Requests

Revised

For Administrative Use Only

Funding Status

No Action-Insufficient funding

Notes

Council Ranking

32

2025-26 Council Ranking

Mapping

Instructional: Chemistry: *undefined*

- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)

Teaching Assistant for Che-2A Labs and lectures

Resource Year

2024 - 2027

What resources do we already have?

None

What resources do you need?

1 per each section for a total of 12

$ Amount Requested

30,600

Resource Type

STAFF: Classified Professional, Confidential, Mgr

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

Che-2A supports all nursing and allied health majors as well as all science majors and, pre-vet, pre-dental and pre-med majors and is the introductory course for at the beginning of their college career. Due to remedial math courses being eliminated, Che-2A math skills are much worse than before presenting an obstacle at the start of their college career. This impacts both success and retention of students particularly those groups of lower social-economic status. This course also has a cap of 64 students thus making it very difficult for one instructor to help all students. TA's would help support the instructor in efforts to provide more one on one support during class to ensure understanding of course content. In addition, the labs have 32 students and these students have little to no experience in the lab. This makes for a very unsafe environment for a single instructor to manage. A TA would help support the instructor to answering questions, providing an extra set of eyes to address safety issues, and help answer questions. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:

14

Is this request

Revised

For Administrative Use Only

Funding Status

Notes

Council Ranking

2025-26 Council Ranking

Resource Requests

Mapping
Instructional: Chemistry: *undefined*

- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Replace existing fumehood with new, larger fumehood with acid cabinet storage underneath in HUM 202

Resource Year
2024 - 2027

What resources do we already have?
Existing fumehood in need of constant repair and the full weight of the fumehood is on a cabinet that has water damage creating a safety hazard and liability for the College

What resources do you need?
1 fumehood with acid cabinet storage underneath

$ Amount Requested
100,000

Resource Type
ITEM: Equipment, Services, Software, Furniture

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
Existing 25+ year old fumehood that is used to prepare solutions and keep noxious fumes away from stockroom technicians needs constant repair and does not function as it should. The fumehood weight sits atop a cabinet that has water damage making for a hazardous situation if the cabinet were to collapse underneath. Its ventilation ability is not good and compromises the health and safety of the stockroom staff.
A new, larger fumehood with acid storage cabinetry underneath will allow more space for prep for stockroom staff as well as increase storage of hazardous chemicals providing a safe environment for all. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
1

Is this request
Revised

For Administrative Use Only

Funding Status
No Action-Insufficient funding

Notes

Council Ranking
2

2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc.,

majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)

- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)
- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Additional cabinetry and shelving needed to increase storage space in HUM 204 to accommodate adding Che-3 and Che-2B to the Chemistry Program at Norco College

Resource Year
2024 - 2027

What resources do we already have?
existing cabinets and shelving are full

What resources do you need?
Additional cabinetry and shelving needed to increase storage space in this room to accommodate adding Che-3 and Che-2B to the Chemistry Program at Norco College

$ Amount Requested
20,000

Resource Type
ITEM: Equipment, Services, Software, Furniture

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

Resource Requests

Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. This resource supports EMP goals 1 (Access), 2 (Success), 3 (Equity), 4 (Workforce and Economic Development) and 7 (Programs).

This request for my area is Priority #:
6

Is this request
Revised

For Administrative Use Only

Funding Status
No Action-Insufficient funding

Notes

Council Ranking
28

2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B

in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)

- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)
- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Additional Cabinetry and Shelving preparation room HUM 209 to accommodate adding Che-3 and Che-2B to the Chemistry Program at Norco College

Resource Year
2024 - 2027

What resources do we already have?
existing shelving and cabinetry are full

What resources do you need?
additional shelving and cabinetry

$ Amount Requested
30,000

Resource Type
ITEM: Equipment, Services, Software, Furniture

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

Resource Requests

Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
5

Is this request
Revised

For Administrative Use Only

Funding Status
No Action-Insufficient funding

Notes

Council Ranking
30

2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B

in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)

- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)
- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Additional shelving and cabinetry needed in HUM 202 Preparation room to accommodate adding Che-3 and Che-2B to the Chemistry Program at Norco College

Resource Year
2024 - 2027

What resources do we already have?
shelving and cabinetry are full (this room stores both Chemistry and Physics lab materials)

What resources do you need?
additional cabinetry and shelving

$ Amount Requested
35,000

Resource Type
ITEM: Equipment, Services, Software, Furniture

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

Resource Requests

Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college.This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
2

Is this request
Revised

For Administrative Use Only

Funding Status
No Action-Insufficient funding

Notes

Council Ranking
8

2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B

in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)

- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)
- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Expand storage space and working space in instrument room in HUM 208 to accommodate adding Che-3 and Che-2B to the Chemistry Program at Norco College

Resource Year
2024 - 2027

What resources do we already have?
cabinetry, shelving and existing bench space is full.

What resources do you need?
cabinetry, shelving and bench space

$ Amount Requested
20,000

Resource Type
ITEM: Equipment, Services, Software, Furniture

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

Resource Requests

Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
3

Is this request
Revised

For Administrative Use Only

Funding Status
No Action-Insufficient funding

Notes

Council Ranking
13

2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B

in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)

- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)
- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Change part-time lab technician position to full-time lab technician

Resource Year
2024 - 2027

What resources do we already have?
4 Full-time and one part-time

What resources do you need?
1 additional full time

$ Amount Requested
100,000

Resource Type
STAFF: Classified Professional, Confidential, Mgr

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

Resource Requests

Laboratory is an essential part of learning chemistry. Laboratory experiments help students “learn by doing”. Chemistry Discipline of Norco College offers laboratory classes to students with appropriately designed experiments for each level of classes. However, proper preparation and organization of the chemicals and equipment of these experiments are essential for their successful execution by the students during these classes. College classified staff who are responsible for preparation and organization of these experiments prior to their execution are laboratory technicians. Currently, the Disciplines of Chemistry, Biology, and Physics in the Department of Natural Sciences, Health, and Kinesiology at Norco College have four full-time and one part-time laboratory technicians who aid in all the laboratory preparations. There was a 40% increase in lab sections offered in Biology, Physics, and Chemistry from 2017 (43 sections) to 2024 (60 sections) with no increase in the number of lab techs. Some of these lab sections meet twice a week while the others meet once a week. The schedule for the stockroom technicians that support Chemistry and Physics is shown in the following table:

Name	Office Location	Hours	Courses Prepped
Raquel Hoover	HUM 202	M-F 6:00am-2:30pm	Chemistry (2A, 1A, 1B)
Janett Fragoso	ST 210	M-Th 1:30-10pm; F 9am -5:30pm	Chemistry (12A, 12B)
Maria Bazan Urmeneta	HUM 209	M-W 5-10pm; Sat. 10-2 pm	Chemistry (12A)
Robert Hernandez	IT 128	M-F 6:30am -3pm	Physics (all)

Note that on Saturday, there is only one part-time technician who is available for support that services two different disciplines (Physics and Biology) in two different buildings (ST and HUM). In addition, there is no stockroom technician in HUM office areas to support Chemistry labs from 2:30-5pm on M and W and there is no one in HUM office areas to support Chemistry labs on T and Th from 2:30-10pm. There is a stockroom technician whose office is in a different building on these days but is almost never present in the HUM prep rooms to provide support if a need arises. We need coverage in both prep rooms for both labs in HUM from 7am to 10pm M-F.

Having stockroom technicians constantly moving between three buildings to cover all labs creates serious impediments to support classes from safety to supplies concerns because the instructors and students often need assistance from our laboratory techs who remain busy between two buildings. Often an instructor who needs something must call the technician staff if they are not in the area while also look for what is needed in the stockrooms. Therefore, the faculty member is now no longer supervising students in the lab rooms thus creating a major safety and liability issue for the College.
This situation has, thus, presented a strong necessity for changing the part-time lab tech position into a third full-time position. The new full-time hire will be expected to share the burdens of the two current lab techs in our division. This will help us overcome the obstacles posed by limited availability of the full-time lab techs because of the span of their responsibilities and, thus, help us run these lab sections much more efficiently providing more enriching laboratory experiences for our students. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
7
Is this request
Revised
For Administrative Use Only
Funding Status

Notes

Council Ranking

Resource Requests

2025-26 Council Ranking

Mapping

Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)
- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Renovation HUM 204 to update room to meet American Disability Act guidelines

Resource Year
2024 - 2027

What resources do we already have?
none

What resources do you need?
renovations

$ Amount Requested
200,000

Resource Type
BUDGET: Facilities Building, Remodel

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

This request for my area is Priority #:

Is this request
Revised

Resource Requests

For Administrative Use Only

Funding Status

Notes

Council Ranking

2025-26 Council Ranking

Mapping

Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)
- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)
- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Ice Machine

Resource Year
2024 - 2027

What resources do we already have?
one that is broken

What resources do you need?
one ice machine

$ Amount Requested
2,500

Resource Type

Resource Requests

ITEM: Equipment, Services, Software, Furniture

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

Our students need ice to cool things in many of the experiments we perform in our General Chemistry (CHE-1A/B) and Organic Chemistry (CHE-12A/B) courses. We have an older ice machine that's very near the end of its life. In fact, it's currently not working after having been repaired several times. This machine will replace the older/dead one. Without an ice machine, our Lab Tech have to travel across campus with a cart to transport buckets of ice. This is a wasteful use of a highly compensated employee's time. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:

10

Is this request

New

For Administrative Use Only

Funding Status

No longer needed

Notes

Council Ranking

2025-26 Council Ranking

Mapping

Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)
- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)
- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Resource Requests

Add vented Cabinet underneath existing fumehood in HUM 204 to store chemicals to support adding Che-3 and Che-2B to the Chemistry curriculum as we don't have extra space to support these classes.

Resource Year
2024 - 2027

What resources do we already have?
A cabinet that is not vented (fumes cannot be removed as it is not vented presenting a significant safety hazard)

What resources do you need?
none

$ Amount Requested
18,000

Resource Type
ITEM: Equipment, Services, Software, Furniture

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college.This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
4

Is this request
New

For Administrative Use Only

Funding Status
In Progress

Notes

Council Ranking
18

2025-26 Council Ranking

Resource Requests

Mapping
Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)
- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)
- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

scientific calculators

Resource Year
2024 - 2027

What resources do we already have?
none

What resources do you need?
20 scientific calculators in HUM 208 and HUM 204

$ Amount Requested
450

Resource Type
ITEM: Instructional Supplies

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
Scientific calculators are needed in most of the chemistry labs and tests. With 10 scientific calculators in each of the lab room (HUM 208 and HUM 204) will ensure all students have access to this basic supply during the lab or test.

This request for my area is Priority #:
7

Is this request

Resource Requests

New

For Administrative Use Only

Funding Status

No Action-Insufficient funding

Notes

Council Ranking

85

2025-26 Council Ranking

Mapping

Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)
- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)
- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Funding for LRC Tutoring Center

Resource Year

2024 - 2027

What resources do we already have?

Temporary grant funding

What resources do you need?

Need money for tutors

$ Amount Requested

255,000

Resource Requests

Resource Type

STAFF: Classified Professional, Confidential, Mgr

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

We are requesting that the budget for the Tutoring Center at the Learning Resource Center be converted from grant funding to a line item in the General Fund. While Norco College does many things well, our history of institutionalizing good initiatives has not been our strength. We saw this with the Supplemental Instructor (SI) program, which (which being a helpful program for our chemistry students) disappeared when its grant-funding source ended. We don't want to make that mistake again. Thus, we are requesting that the Tutoring Center's budget be paid out of the General Fund to validate its importance and to help ensure its continuity. Tutoring is likely the best resource that science students have outside the classroom to help them learn subjects like chemistry. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:

18

Is this request

For Administrative Use Only

Funding Status

Notes

Council Ranking

2025-26 Council Ranking

Mapping

Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)
- **Increase student success and retention in Chemistry and support students in all majors requiring**

Resource Requests

Chemistry : Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Renew JoVE subscription

Resource Year
2024 - 2027

What resources do we already have?
Received funding in past years.

What resources do you need?
Renew subscription

$ Amount Requested
16,000

Resource Type
ITEM: Equipment, Services, Software, Furniture

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
Chemistry is considering using this software for its classes in the future. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
21

Is this request
Revised

For Administrative Use Only

Funding Status
In Progress

Notes

Council Ranking
3

2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the

most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)

Replace Chairs in lecture rooms IT 101, IT 117, and ATEC 114

Resource Year
2024 - 2027

What resources do we already have?
Existing chairs that still work but not enough for all students to have a desk to write on

What resources do you need?
Replace all chairs in the room

$ Amount Requested
50,000

Resource Type
BUDGET: Facilities Building, Remodel

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
The existing chairs in these rooms will likely need to be removed completely as we have been told that we can no longer replace the broken chairs. This has been an ongoing issue for at least 3-5 years and may not have been added to past Program Reviews as it was considered a basic necessity for any lecture room. In additon, may other disciplines use these rooms as well.

This request for my area is Priority #:

Is this request
New

For Administrative Use Only
Funding Status

Notes

Council Ranking

2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*

- **Add Che-3 and Che-2B to the Chemistry Program at Norco College :** Che-2A is the appropriate introductory chemistry course for nursing, health, and nonscience majors. Che-3 is introductory chemistry designed to prepare science majors for the more rigorous chemistry, biology, and engineering courses. Critical foundational topics for Che-1A such as stoichiometry, limiting reagents, and different ways to write chemical equations are not adequately covered in Che-2A but are more rigorously covered in Che-3. Furthermore, Che-3 lab content is more rigorous, which will better prepare students to succeed in Che-1A. Che-3 also supports multiple ADT's (Chemistry, Biology, Environmental Science and Engineering). Currently, both courses serve as the prerequisite for Che-1A (General Chemistry 1 for Science, Engineering, pre-med, pre-dent, pre-vet, etc., majors) as Che-3 is only offered at RCC. Through District Chemistry Discipline meetings, we have discussed the need to start offering Che-3 at both Norco and Moreno Valley as soon as possible to direct science majors to take Che-3 instead of Che-2A as the prerequisite for Che-1A to help increase success and retention of science majors on this career path. We also need to add Che-2B to courses offered at Norco College. Che-2B

is the sequence course to Che-2A which is needed for nursing and allied health majors. This course is also needed for the new ADT proposed in Biology for Agriculture/Plant Science. We could offer Che-3 and Che-2B in the lab room in HUM 204 as there are some time slots in the schedule available to offer these courses. However, the obstacle that makes offering this course difficult at Norco College is the limited preparation and storage space available in the chemistry stockrooms and lab rooms. The number of Chemistry courses offered at Norco has more than doubled, from 8 sections of Chemistry in Fall 2012 (Organic Chemistry was not offered at that time) to 19 sections in Spring 2024 (added both semesters of Organic Chemistry which requires the most amount of storage space for chemicals and glassware). In addition, Physics labs also use a Chemistry stockroom for storage. Physics has also grown significantly as well. Physics courses doubled from 6 sections in Fall 2012 to 12 sections in Spring 2024. All this growth occurred while still having the same lab and stockroom space. The Biology program has grown significantly as well. Most students taking Biology also need to take Chemistry. Therefore, both programs need to offer the most critical courses to support students in both programs. Thus, funds are required to renovate existing space as well to accommodate adding two more courses to the Chemistry program in order for Norco College to become a comprehensive college. (✔)

- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Pressurized gases (required to use Gas Chromatograph instruments)

Resource Year
2024 - 2027

What resources do we already have?
2 Cylinders of gas

What resources do you need?
Purchase of gases and Cylinders of Helium, zero air, and hydrogen gases

$ Amount Requested
6,000

Resource Type
ITEM: Instructional Supplies

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
Gas chromatographs are the basic instrument used in Organic Chemistry and is essential that students have experience using this type of instrumentation. These instruments cannot operate without pressurized gases. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
17

Is this request
Revised

For Administrative Use Only

Funding Status
In Progress

Notes

Council Ranking

2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*

- **Equipment needed for lab experiments:** Ensure all labs have needed equipment to run all courses. (✔)

Resource Requests

Chairs replaced in ATEC-114, IT-101, IT-117

Resource Year
2024 - 2027
What resources do we already have?
some unbroken chairs and not enough sliding desktops
What resources do you need?
replace chairs in these rooms
$ Amount Requested
50,000
Resource Type
ITEM: Equipment, Services, Software, Furniture
Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).
This request for my area is Priority #:
20
Is this request
New
For Administrative Use Only
Funding Status
In Progress
Notes

Council Ranking
1
2025-26 Council Ranking

Renovation HUM 204 to update room to meet American Disability Act guidelines

Resource Year
2024 - 2027
What resources do we already have?
lab room that does not meet ADA guidelines
What resources do you need?
Renovation to meet ADA guidelines
$ Amount Requested
200,000
Resource Type
BUDGET: Facilities Building, Remodel
Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).
This request for my area is Priority #:
19
Is this request
Revised

Resource Requests

For Administrative Use Only

Funding Status

Notes

Council Ranking

2025-26 Council Ranking

Change part-time lab technician position to full-time lab technician position

Resource Year
2025 Update

What resources do we already have?
4 Full-time and one part-time

What resources do you need?
1 additional full time

$ Amount Requested
100,000

Resource Type
STAFF: Classified Professional, Confidential, Mgr

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.

Resource Requests

Laboratory is an essential part of learning chemistry. Laboratory experiments help students “learn by doing”. Chemistry Discipline of Norco College offers laboratory classes to students with appropriately designed experiments for each level of classes. However, proper preparation and organization of the chemicals and equipment of these experiments are essential for their successful execution by the students during these classes. College classified staff who are responsible for preparation and organization of these experiments prior to their execution are laboratory technicians. Currently, the Disciplines of Chemistry, Biology, and Physics in the School of Natural Sciences, Health, and Kinesiology at Norco College have four full-time and one part-time laboratory technicians who aid in all the laboratory preparations. Below is a table representing the lab techs and their lab load in relation to sections they have to prep for, comparing Spring 2013 to Spring 2025.

Information	Sp2013	Sp2025	% Increase
total # lab techs	4	4.5	12.5
# FT Total	4	4	0
# PT Total	0	1	100
# Che lab courses	6	21	250
# Phy lab courses	3	12	300
# Bio lab courses	16	30	87.5
# lab prep=#lab periods CHE	8	30	275
# lab prep=#lab periods PHY	3	12	300
# lab prep=#lab periods BIO	22	41	86
TOTAL #lab prep(CHE/PHY/BIO)	33	83	152

NOTE: # lab preps accounts for the fact that some courses in BIO and CHE have 2 lab days instead of 1

From the data, it can be seen that although the number of techs has increased from 4 to 4.5 (12.5% increase), the number of lab sections have increased from 33 to 183 (152% increase). This results in an unreasonably increased workload per lab tech.

This also affects their ability to provide live support to instructors in need across all three of the disciplines. Having stockroom technicians constantly moving between three buildings to cover all labs creates serious impediments to support classes from safety to supplies concerns because the instructors and students often need assistance from our laboratory techs who remain busy between two buildings. Often an instructor who needs something must call the technician staff if they are not in the area while also look for what is needed in the stockrooms. Therefore, the faculty member is now no longer supervising students in the lab rooms thus creating a major safety and liability issue for the College.
This situation has, thus, presented a strong necessity for changing the part-time lab tech position into a third full-time position. The new full-time hire will be expected to share the burdens of the two current lab techs in our division. This will help us overcome the obstacles posed by limited availability of the full-time lab techs because of the span of their responsibilities and, thus, help us run these lab sections much more efficiently providing more enriching laboratory experiences for our students. This request supports the following EMP Goals 1 (access), 2 (Success), 3 (Equity), 4 (Programs), 5 (Workforce and Economic Development).

This request for my area is Priority #:
1

Is this request
Revised

For Administrative Use Only
Funding Status

Notes

Council Ranking

2025-26 Council Ranking

Resource Requests

Calculators

Resource Year
2026 Update
What resources do we already have?
none
What resources do you need?
200 calculators for Lecture (about 10 per section)
$ Amount Requested
4,000
Resource Type
ITEM: Instructional Supplies
Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
Provide adequate calculators for students who do not have access and substitute calculators for students who have AI/camera calculators to minimize cheating and taking pictures of the exam/quiz. Addresses EMP goals 1, 2 and 3.
This request for my area is Priority #:
3
Is this request
New
For Administrative Use Only
Funding Status

Notes

Council Ranking

2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*
- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Projector system in HUM 204

Resource Year
2026 Update
What resources do we already have?
existing projector system is no longer being supported
What resources do you need?
a new projection system
$ Amount Requested
27,000
Resource Type
ITEM: Technology

Resource Requests

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
Required instructional equipment to teach chemistry lab. Addresses EMP goals 1, 2, 3 and 11.

This request for my area is Priority #:
2

Is this request
New

For Administrative Use Only
Funding Status

Notes

Council Ranking

2025-26 Council Ranking

Mapping
Instructional: Chemistry: *undefined*

- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Projector system in HUM 208

Resource Year
2026 Update

What resources do we already have?
We have two projections systems with one not working and the other is no longer supported by the manufacturer.

What resources do you need?
Two new projection systems are needed to replace the broken system and another to replace the system that is no longer supported.

$ Amount Requested
35,000

Resource Type
ITEM: Technology

Please summarize how this request supports one or more EMP Goals, Equity goals, your program plans or goals, and/or is supported by outcomes assessment data.
Required instructional equipment to teach chemistry lab. Addresses EMP goals 1, 2, 3 and 11.

This request for my area is Priority #:
1

Is this request
New

For Administrative Use Only
Funding Status

Notes

Council Ranking

2025-26 Council Ranking

Resource Requests

Mapping

Instructional: Chemistry: *undefined*

- **Increase student success and retention in Chemistry and support students in all majors requiring Chemistry :** Increase student success and retention in Chemistry and access to all courses needed for all majors (✔)

Resource Request

What resources do we already have?
none

Potential Funding Source(s)
FPDC

What resources do you need?
Support for travel, registration fees, hotel, etc., to support 5 faculty members to attend one ($3000 per faculty member) conference a year.

Request related to EMP goal or Assessment?
EMP Goal 3
EMP Goal 4
EMP Goal 7

$ Amount Requested
15,000

Resource Type
FACULTY: Professional Development

The evidence to support this request can be found in:
Program/Unit Goals
Equity

This request for my area is Priority #:

Professional Development Activity Funding Request Application

Attendee and Activity Information
Has this professional development request been discussed and approved by your department chair?

Date of Request

Activity Date(s)

Attendee Name

Position

Discipline

Name of Activity and Organization/Sponsor

Link to Activity Website

Location

City, State

Have you sought any other co-sponsorship (other internal and/or external funding)?

If yes, list source and total dollar amount.

Estimated Costs ($)
Registration

What is included with Registration?

Air Travel or Mileage (65.5 cents/mile)

Hotel (tax included)

Airport Parking

Ground Transportation

Meals ($75/day maximum)

Hotel Parking

Incidentals

Total Costs

Justification for Funding Request
Select the categories of professional development that best support your request. (Check all that apply)

Briefly describe the objective of the activity and how it will benefit you and the work you do for the college. If this activity aligns with the objectives of any special programs, grants, or plans (e.g., Equity, AB 705, Guided Pathways, STEM, etc.) please explain.

How do you plan to share the information gained from the activity to your department/division? See "Dissemination Plan Ideas" document for ways to disseminate information and check all that apply.

Briefly explain your selection above.

Is there anything else you would like to add?

Approve and Submit
Proof of approval is uploaded, ready to submit?

Please upload proof of approval for travel from your department chair or Dean.

For Administrative Use Only

Funding Status

Notes

Faculty Professional Development Requests

Faculty Hiring Resource Requests

2024 - 2027

Program Review Reflections

What would make program review meaningful and relevant for your unit?
A transparent process for how funds are allocated is needed. Priorities should be based on individual need. It should not be done collectively as Schools when prioritizing needs across the College. This is particularly problematic if Schools have many disciplines such as SciKin. Additionally, the College should provide details on how it determines the overall prioritization using data to support the order.
We are asked to put all requests into Program Review including basic classroom needs like chairs, boards, IT equipment, etc. In addition, we are asked to place lab room and prep room renovations in Program Review to meet student demand for our classes. There should be an alternate way to request these essential items.

What questions do we need to ask to understand your program plans, goals, needs?

What types of data do you need to support your program plans, goals, needs?

If there are any supporting documents you would like to attach, please attach them here.

Submission

All parts of my Program Review have been completed and it is ready for review.
Yes

2026 Update

Program Review Reflections

What would make program review meaningful and relevant for your unit?

What questions do we need to ask to understand your program plans, goals, needs?

What types of data do you need to support your program plans, goals, needs?

If there are any supporting documents you would like to attach, please attach them here.

Submission

All parts of my Program Review have been completed and it is ready for review.
Yes