Skyline College

# Comprehensive Program Review

SKY SS - STEM Center

# Student and Learning Support Services Comprehensive Review

**Submitter Name:**
Luis Prado

**Submission Date:**
02/06/2026

## BACKGROUND

**1.A. DIVISION:**
Science, Technology, Engineering, and Mathematics (STEM)

**PROGRAM NAME:**
STEM Center

**1.B. YEAR OF REVIEW:**
2025 - 2026

**1.C. PROGRAM REVIEW TEAM**
• Luis Jibaja Prado – Program Services Coordinator, STEM Center
• Portia Luong – STEM Retention Specialist
• Sahil Niwas – Instructional Aide II
• Benjamin Lam – Instructional Aide II

**1.D. CONNECTIONS TO THE COLLEGE MISSION/VISION/VALUES:**

**i. Describe the program, its purpose, and how it contributes to Skyline College's Mission, "To empower and transform a global community of learners."**

The STEM Center serves as Skyline College's central hub for academic support, collaboration, and engagement in science, technology, engineering, and mathematics. Its purpose is to provide accessible, high-quality learning experiences that empower students to persist and succeed in rigorous STEM coursework while fostering a sense of community and belonging.

The STEM Center's main service is tutoring, offered through two main modalities; synchronous and asynchronous. In the synchronous model, Peer Instructional Leaders (PI) are embedded directly into STEM classes, attending lectures or labs in person to assist students during in-class or hands-on activities. In the asynchronous model, PIs are embedded within a course's Canvas shell, allowing them to post announcements, monitor class content, and use the space to host drop-in tutoring hours either in person or virtually. PIs being embedded into classes also allowed them to facilitate Academic Excellence Workshops, which provide an extra layer of support focused on class review and assessment preparation. In both modalities, PIs bridge the gap between classroom learning and academic support, helping students apply key concepts, prepare for exams, and strengthen their study strategies.

STEM Center also supports open lab tutoring, a more specialized form of assistance designed to meet the needs of laboratory-based science courses. Currently focused on biology courses, this service provides To-Be-Arranged (TBA) hours where PIs guide students through laboratory procedures, reinforce complex topics, and help them apply theoretical knowledge to practical experiments.

Collectively, these tutoring services provide support for 37 transferable STEM courses across Biology, Chemistry, Physics, Mathematics, Computer Science, and Engineering. This coverage ensures students have access to consistent support across different STEM pathways from introductory to advanced subjects.
Beyond tutoring, the STEM Center offers study and collaboration spaces where students can work independently, form study groups, and meet with classmates. Faculty often use the space to hold office hours, while the STEM Center's conference room provides an area for student clubs and college teams to meet. The STEM Center has become a hub for academic and social connection through events that foster community across disciplines.

The STEM Center also collaborates with campus and external partners including MESA, Phi Theta Kappa, the Transfer Center, Strategic Partnership & Workforce Development, Learning Center, and Growth Sector to host events and connect students with internships and professional development opportunities.
By combining academic support, collaborative learning, and community engagement, the STEM Center directly contributes to Skyline College's mission "to empower and transform a global community of learners." It empowers students to achieve academic excellence, transforms their confidence in STEM disciplines, and builds inclusive spaces where learning, mentorship, and opportunity thrive.

## 1.E. PROGRAM PERSONNEL

### i. Provide the current Full-Time Equivalent (FTE) of each category of personnel:

**Full-time Faculty FTE:**
0

**Adjunct Faculty FTE:**
0

**Classified Professionals FTE:**
3

**Manager/ Director FTE:**
0

**Dean FTE (if applicable):**
1

**ii. Describe any changes in staffing since the last CPR, and how the change(s) have impacted the program. Are there any unmet needs in the program pertaining to program personnel (e.g. staffing, schedule limitations, turnover)? If yes, please specify.**

The STEM Center has experienced frequent staffing transitions that directly impacted its ability to sustain operations and meet growing student demand. The Program Services Coordinator (PSC) position has changed hands multiple times, including a six-month temporary appointment before the current PSC began in 2024–25. During periods without a permanent PSC, core functions such as tutor training, scheduling, event coordination, and data tracking were significantly strained.

The STEM Retention Specialist position has had six different staff members over five years, resulting in recurring disruptions to outreach, faculty communication, and student follow-up.

Instructional Aide II staffing was also inconsistent; historically, only one part-time IA II was available at a time, and a vacancy in Fall 2023 left the Center with no IA II support during a period of high usage. Now, STEM Center employs three part-time (10 hour) IAs, and recently on February 2026 the full-time IA II position has being fill, but coverage gaps remain during peak hours.

Unmet Staffing Needs and Operational Impact:
- Extended hours cannot be fully supported. With long service hours (8am–7pm Mon–Thu, 9am–4pm Fri), current staffing is insufficient to maintain full coverage, leading to reduced access for students.

- Limited capacity for PI training and supervision. High turnover and limited staffing reduce the ability to provide consistent onboarding, coaching, and academic excellence workshop preparation for Peer Instructional Leaders.

- Event and workshop support is constrained. Staffing shortages limit the Center's ability to plan and manage academic, community-building, and professional development events.

- Assessment and data work are under-resourced. Increased demand for evaluation, usage analysis, and equity reporting requires staffing capacity that is currently unavailable.

- Service consistency is affected during turnover. Each staffing change creates temporary gaps in communication, coordination, and student support.

Overall, the Center's rapid growth in student usage contrasts with staffing levels that have remained limited and unstable. Additional permanent staffing is needed to maintain consistent service delivery, support extended hours, and meet the academic support needs of STEM students.

### 1.F. PROFESSIONAL DEVELOPMENT

## CURRENT STATUS

### 2.A. ACHIEVEMENTS

**Describe the program's achievements since the last CPR.**

1. Establishment of the STEM Center as a Core Academic Support Hub
- Transition from grant-funded concept to fully integrated Skyline student service.

2. Growth in Student Usage
- Unique student users grew from 87 (Spring 2021) to 736 (Spring 2023).
- Total visits increased more than 20x over five years.
- Average visits per student increased significantly, peaking at 22.6 visits per student in Spring 2024.
- Consistent high usage across Fall/Spring semesters demonstrates the Center is a trusted academic space.

3. Expansion of Tutoring Modalities
- Synchronous embedded tutoring (in-class and lab support).
- Asynchronous embedded Canvas support.
- Drop-in tutoring (in-person and virtual).
- Academic Excellence Workshops.
- Open Lab (TBA) support for microbiology and anatomy.

4. Support for 37 Transferable STEM Courses
- A full cross-disciplinary support: Biology, Chemistry, CIS, Engineering, Math, Physics.
- Growth in high-demand gateway courses (MATH 251, BIOL 240, CHEM 210, etc.).

5. Development of a Strong Embedded Tutor Program
- Embedded Class support grew dramatically: 13k+ visits in AY 2023–2024.
- Faculty partnership across STEM departments expanded.
- Embedded tutors are now integrated into Canvas shells and classroom structures.

6. Expansion of Open Lab Support
- BIOL 240, 250, and 260 support has become a major service.
- Open Lab usage for BIOL 240 grew from 2,225 (21–22) to 6,448 (24–25).

7. Establishment of the STEM Center as a Community and Study Space
- Space to Study grew into one of the most-used services (12k+ visits in AY 2022–2023).
- Used by STEM clubs and Learning Communities (ETS/BCS).
- Used by faculty for office hours.
- Regular social and academic activities (boba socials, student meet-ups, workshops).

8. Strengthening Campus and External Partnerships
- Collaborations with MESA, PTK, Learning Center, Transfer Center, SPWD, Growth Sector.
- Coordination with faculty to align embedded support with course needs.
- Increasing role in internships: SIREN, Winter Scholars, Growth Sector.

9. Creation of a Data-Informed Assessment Infrastructure
- Developed usage tracking across services, courses, and semesters.
- Integrated StudentID tracking for PSLO analysis (retention, course success comparisons).

10. Improved Student Engagement and Belonging
- Workshops, academic success events, study groups, Science in Action promotion.
- Growing peer-to-peer connections through PIs and clubs.

## 2.B. IMPACTS ON PROGRAM

# ACCESS

## 3.A. DATA COLLECTION OVERVIEW

**What program data about usage or access is relevant to your program, and why? How is it collected?**

The STEM Center collects data on student usage, access, and outcomes to evaluate program effectiveness and guide equity-based improvements. The most relevant data for the program include tutoring participation logs, course-level engagement records, and student feedback surveys, which together provide insight into how students use STEM Center services and how these services impact academic performance and persistence.

Tutoring usage data are collected each semester through student sign-ins and session tracking in Accudemia, where each entry records the student ID, course, subject, service type, and total tutoring minutes. These data are categorized by service modality, including in-person tutoring, virtual tutoring, embedded classroom support, and open lab assistance to analyze participation across formats.
In addition, the STEM Center maintains records of Academic Excellence Workshop attendance and embedded tutoring activity, which capture engagement with Peer Instructional Leaders (PIs).

The program collaborates with the Office of Planning, Research, and Institutional Effectiveness (PRIE) to match tutoring usage data with course success, retention, and demographic data using identified student IDs. This allows the STEM Center to compare outcomes for users versus non-users and identify equity gaps across demographic groups and subject areas.

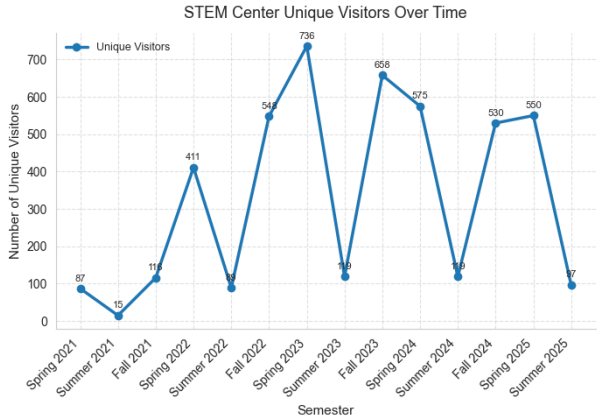
Student feedback is collected through end-of-semester surveys, which capture students' perceptions of how STEM Center services influence their learning, confidence, and sense of belonging. Together, these data sources provide a comprehensive view of how students access and benefit from the Center's academic and community support services.

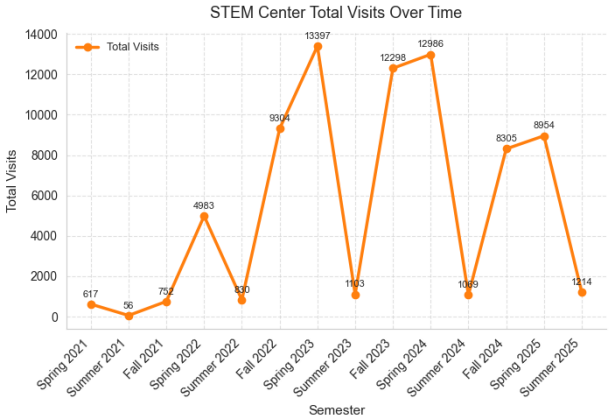
## 3.B. USAGE TRENDS

**Provide student and/or community usage trends for all major programming over the last five years, by cohort, if applicable.**

**1. Usage Trends**

STEM Center usage has grown substantially over the last five years, both in the number of students served and in overall engagement with academic support services. Two indicators; unique visitors and total visits, show clear upward trends with notable shifts before and after the return to in-person instruction.




**Unique Visitors:**

Use of the STEM Center increased sharply following the transition back to in-person learning. Unique student users rose from **87 in Spring 2021** (remote instruction) to a peak of **736 in Spring 2023**. Since then, usage

has stabilized between **530–660 students per major (Fall-Spring) semester**, indicating a steady and sustained demand for STEM academic support.

**Total Visits:**

Total interactions grew even more dramatically, demonstrating deeper and repeated engagement with services. Visits increased from **617 in Spring 2021** to more than **13,400 in Spring 2023**, representing the highest volume in the five-year period. Fall and Spring semesters consistently show higher activity, while Summer terms have predictably lower engagement.

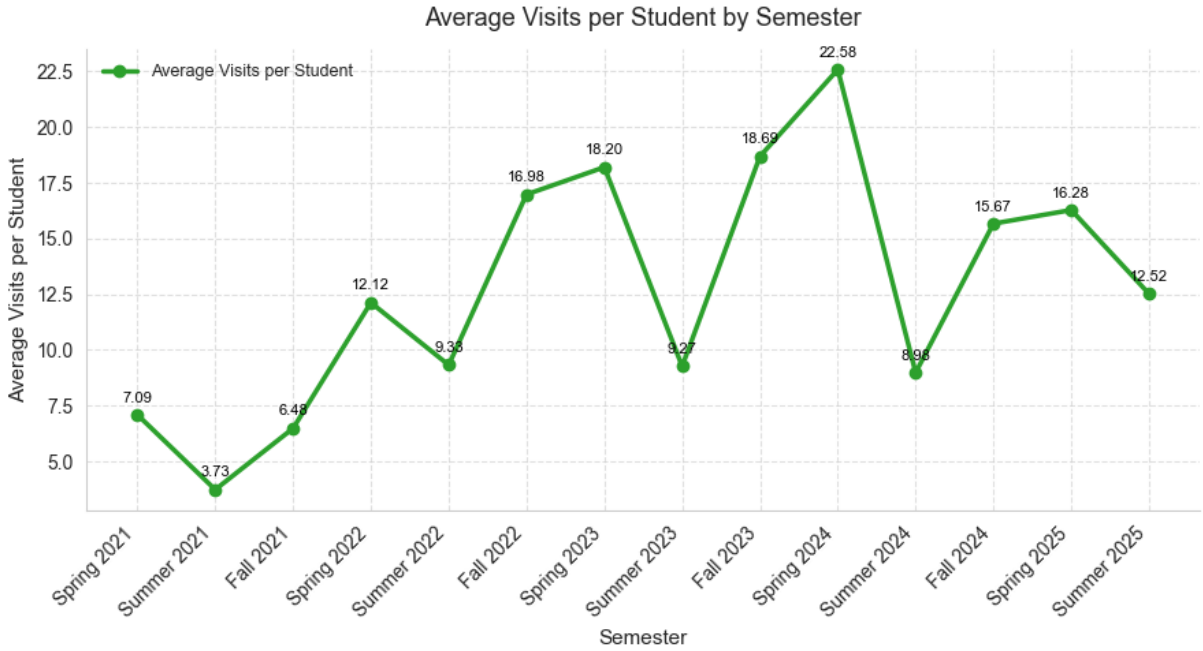
**Key Changes Over Time:**

- **2021–2022:** Gradual recovery from pandemic restrictions, with strong growth beginning Spring 2022.
- **2022–2023:** Major expansion in usage; both unique visitors and total visits reached their highest levels.
- **2023–2025:** Sustained high demand, with consistently strong usage each major semester and continued increases in repeated visits.

From Fall 2023 to Fall 2024 we observe a decline in unique visitors while the total visits increase in the same time period, reflecting a higher retention of unique students using the STEM Center

Overall, the data show that the STEM Center has become a central academic resource for STEM students, with significant growth in both reach and depth of engagement over the last five years.

**2. Average Visits per Student**



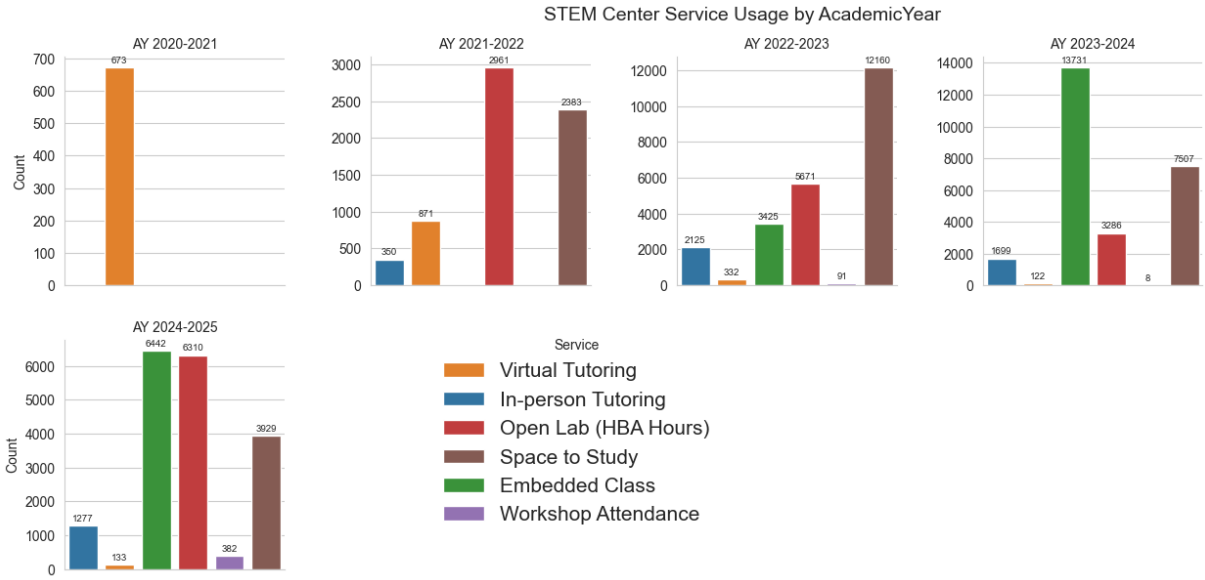

Average visits per student increased substantially over the five-year period, showing that students not only used STEM Center services in greater numbers but also returned more frequently throughout the semester. After low activity during remote instruction in **Spring 2021 (7.09)** and **Summer 2021 (3.73)**, the average steadily increased as in-person support resumed.

A significant rise occurred beginning in **Fall 2022 (16.98)** and continued through **Spring 2023 (18.20)**, indicating stronger engagement with tutoring, open lab, embedded support, and study-space services. The highest level of repeated engagement was reached in **Spring 2024**, with an average of **22.58 visits per student**, representing the peak depth of usage during the review period.

Although **Summer terms** consistently show lower averages due to lower enrollment and reduced course intensity, major semesters after 2022 consistently maintain averages between **15 and 22 visits per student**, demonstrating sustained, repeated utilization of STEM Center support services.

### 3. Service Usage Trends by Academic Year

Service usage across academic years shows a major shift in how students engage with STEM Center resources as instruction transitioned from remote to fully in-person and as embedded and open-lab support expanded. Clear notice that STEM Center start functioning from Spring 2021.




**AY 2020–2021 (Remote Instruction):**

Usage was overwhelmingly concentrated in **Virtual Tutoring**, reflecting limited access to in-person support during the pandemic. Other services remained minimal or inactive due to campus restrictions.

**AY 2021–2022 (Return to Campus):**

With the reopening of the STEM Center, **Open Lab (HBA Hours)** and **Space to Study** rapidly became high-demand services, generating **2,961** and **2,383** visits respectively. Virtual tutoring remained active (**871** visits), but in-person usage began to reestablish itself.

**AY 2022–2023 (Expansion Phase):**

This year shows the most dramatic increase in service usage.

- **Space to Study** surged to **12,160** visits, indicating that the STEM Center became a primary academic hub for students.
- **Embedded Class** support expanded significantly (**3,425** visits), demonstrating growth in classroom-integrated support.
- **Open Lab** also reached a high level (**5,671** visits), reflecting strong demand for hands-on biology and science support.

**AY 2023–2024 (Stabilization at High Levels):**

- **Embedded Class** peaked at **13,731** visits, becoming the most utilized service.
- **Space to Study** usage remained strong (**7,507**), continuing to serve as a core function of the center.
- **Open Lab** remained central with **3,286** visits.

  Overall, services stabilized at high post-pandemic demand levels.

**AY 2024–2025 (Current Year):**

Patterns remain consistent, with:

- **Embedded Class: 6,442** visits
- **Open Lab: 6,310** visits

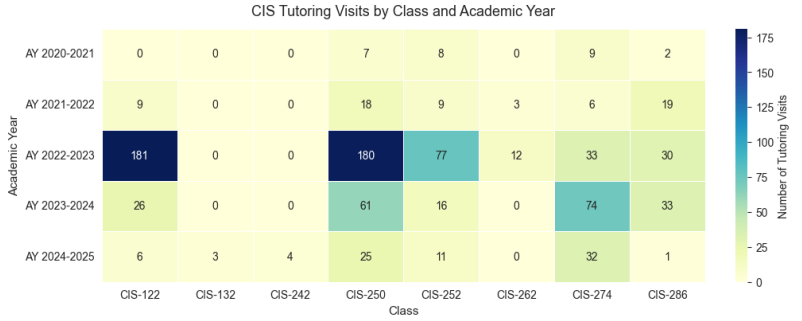
## SKY SS - STEM Center

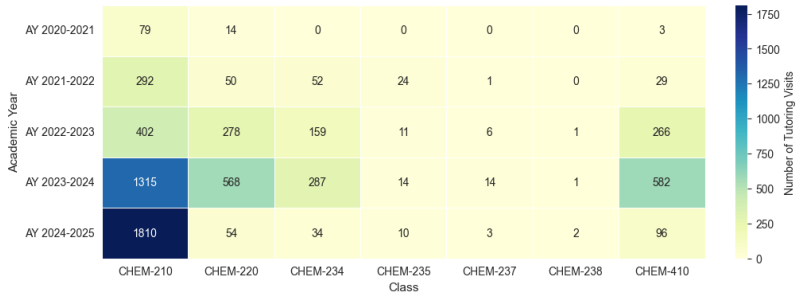
- **Space to Study: 3,929** visits
- Resurgence in **Workshop Attendance** (**382**) and growing **In-Person Tutoring** (**1,277**)

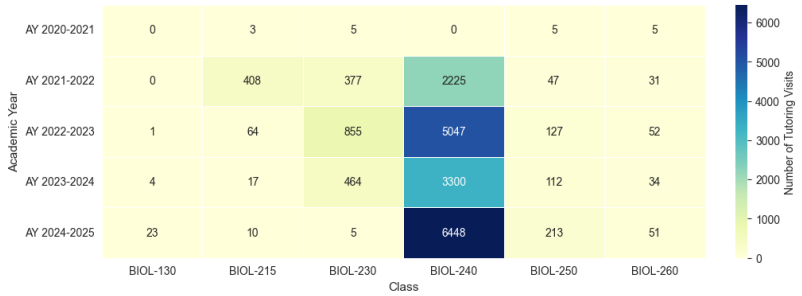
These trends indicate a broadening of student engagement across multiple modalities rather than reliance on a single service.

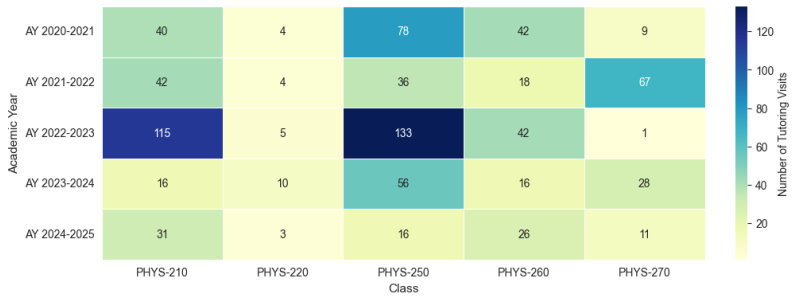
**4. Subject-Level Tutoring Usage Trends**
Subject-level tutoring data, beginning in **Spring 2021**, show clear growth across all STEM areas as the Center transitioned from remote to in-person support. Across the review period, usage patterns reflect increasing demand for foundational STEM coursework, expanded embedded and open-lab services, and the formal transition of **COMP** courses into **CIS** beginning in AY 2022–2023.

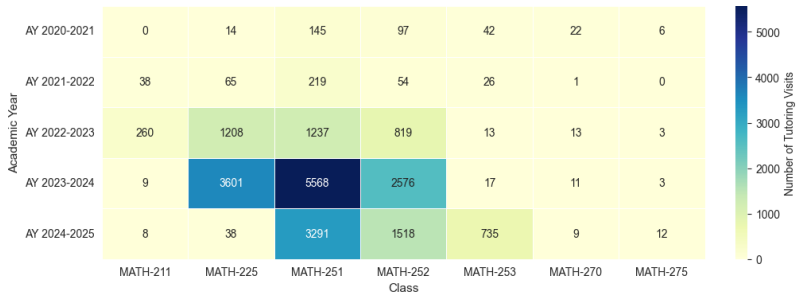
## SKY SS - STEM Center

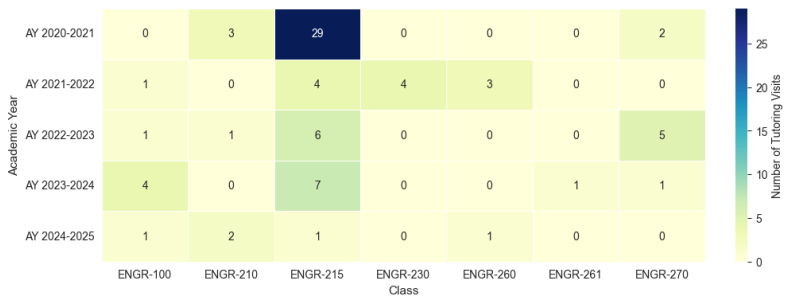


## MATH

- MATH saw the most dramatic expansion in tutoring usage outside biology.
- After modest usage in AY 2020–2022, demand surged in **AY 2022–2023**, especially in the calculus sequence.
- **AY 2023–2024 shows the highest math demand**, with extremely high engagement in **MATH 251 (5,568 visits)** and **MATH 252 (2,576 visits)** due to expanded embedded support and strong course enrollment.
- High usage continues in AY 2024–2025 with sustained demand in MATH 251 and MATH 252.

## CHEM

- CHEM support expanded steadily as in-person lab courses resumed.
- **CHEM 210 and CHEM 220** show increasing demand every year, with strong growth in AY 2022–2023 and AY 2023–2024.
- The highest demand appears in **CHEM 210**, reaching **1,315 visits in AY 2023–2024** and **1,810 in AY 2024–2025**, reflecting both course difficulty and reliance on in-person lab-based support.

## BIOL

- BIOL shows some of the strongest, most consistent growth due to the popularity and difficulty of anatomy, physiology, and microbiology pathways.
- **BIOL 240 (Microbiology)** is the highest-demand class in the entire dataset.
- **BIOL 250 (Physiology)** also shows steady increases each year.

## PHYS

- Physics demand remained moderate across academic years, with consistent engagement in **PHYS 210, PHYS 220, and PHYS 250**.
- AY 2022–2023 shows the highest usage across all PHYS courses, with peaks in **PHYS 210 (115 visits)** and **PHYS 250 (133 visits)**.
- Usage in later years remains steady, aligning with enrollment patterns.

## CIS (formerly COMP)

- Tutoring demand was limited before full in-person return, with modest activity in AY 2020–2022.
- A major shift occurred in **AY 2022–2023**, when the COMP prefix transitioned to **CIS**, and usage increased sharply in gateway programming courses such as **CIS-122, CIS-250, and CIS-286**, reaching peaks of **180–181+ visits**.
- Usage decline in intro major CIS courses since **AY 2022-2023**, similarly generative AIs platforms became public and got a high acceptance by public usage since Fall 2022.

## ENGR

- Engineering courses show consistent but smaller-scale usage compared to other subjects.
- **ENGR 215** had the highest demand, particularly in AY 2021–2022 and AY 2022–2023.
- Support remains steady each year, reflecting smaller course sizes but continuous need for discipline-specific tutoring.

Growth is most pronounced in high-impact STEM courses such as **MATH 251**, **MATH 252**, **BIOL 240**, **CHEM 210**,

## 3.C. DISAGGREGATION OF PROGRAM PARTICIPANT DATA

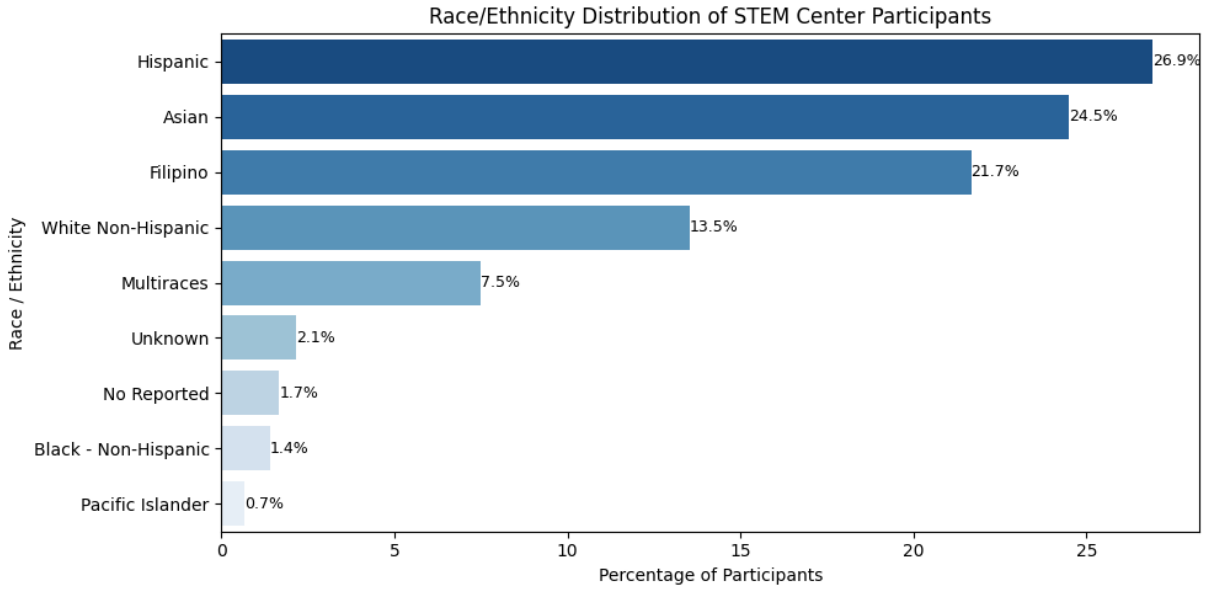
**Disaggregate the data from 3.B. and compare it to the overall College population; choose disaggregations which are most relevant to programming decisions (e.g., ethnicity, gender, age, enrollment status, and/or modality). Work with PRIE to disaggregate any data collected via student IDs.**

This section examines the demographic composition of STEM Center participants and compares it, where possible, to the overall college population to inform program planning and outreach strategies. Participant demographics were analyzed using student-level data provided by PRIE and include race/ethnicity, gender, age group, enrollment status, first-generation status, and low-income status. To provide institutional context, college-wide demographic data were obtained from Skyline College Data dashboards, which report annual unduplicated headcounts by selected demographic characteristics.

STEM Center participants' data are **aggregated across multiple semesters**, spanning Spring 2021 through Summer 2025, and are not disaggregated by academic year. In contrast, college-wide demographic data are reported annually as unduplicated headcounts. As a result, comparisons presented in this section are intended to identify broad patterns of representation rather than direct year-by-year equivalence.

The following figures present the distribution of STEM Center participants by key demographic characteristics, followed by a contextual comparison to the overall college population for variables where comparable data are available.

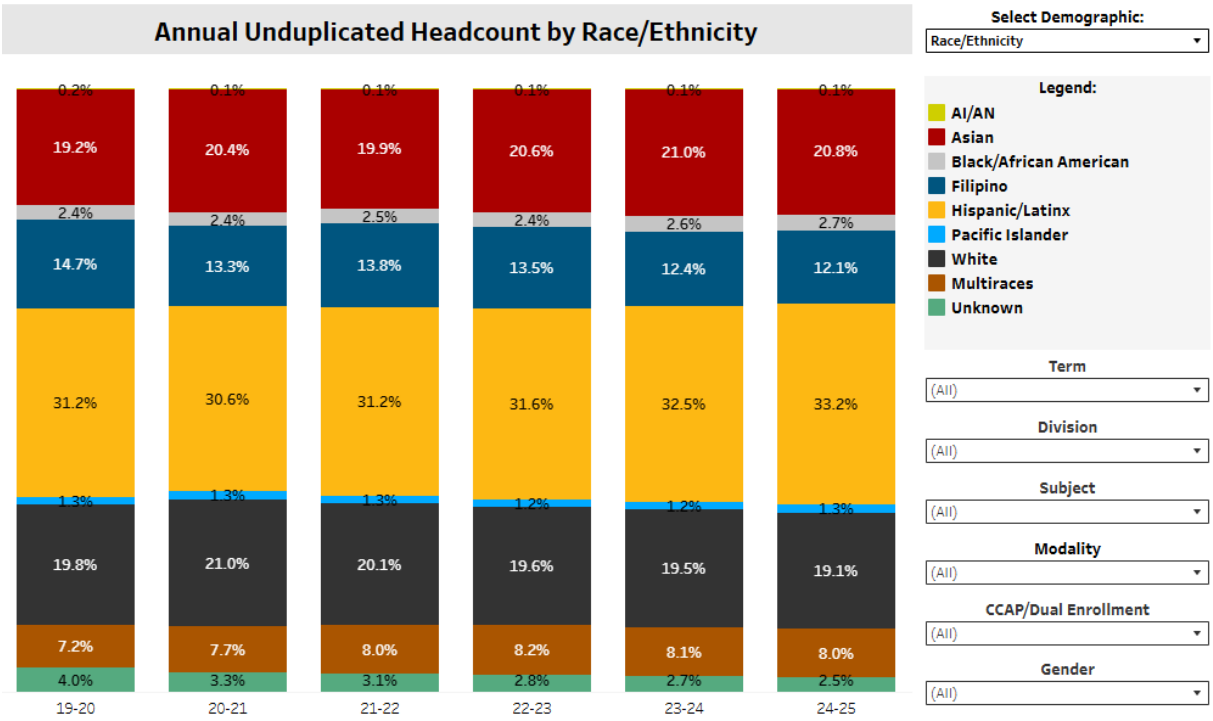
**Race/ethnicity Analysis:**




The figure above presents the race and ethnicity distribution of STEM Center participants aggregated across Spring 2021 through Summer 2025.

Hispanic/Latinx students represent the largest share of STEM Center participants (26.9%), followed by Asian (24.5%) and Filipino (21.7%) students. White non-Hispanic students account for 13.5% of participants, while multiracial, Black/African American, Pacific Islander, and unknown race/ethnicities each comprise smaller proportions of total usage.

## SKY SS - STEM Center




When compared to recent college-wide demographic distributions, the STEM Center participant population broadly reflects the racial and ethnic diversity of the college, with some notable differences in representation. Hispanic/Latinx students comprise approximately one-third of the overall college population, while their representation among STEM Center participants is slightly lower. In contrast, Asian and Filipino students are represented at higher proportions in the STEM Center relative to their share of the college population.

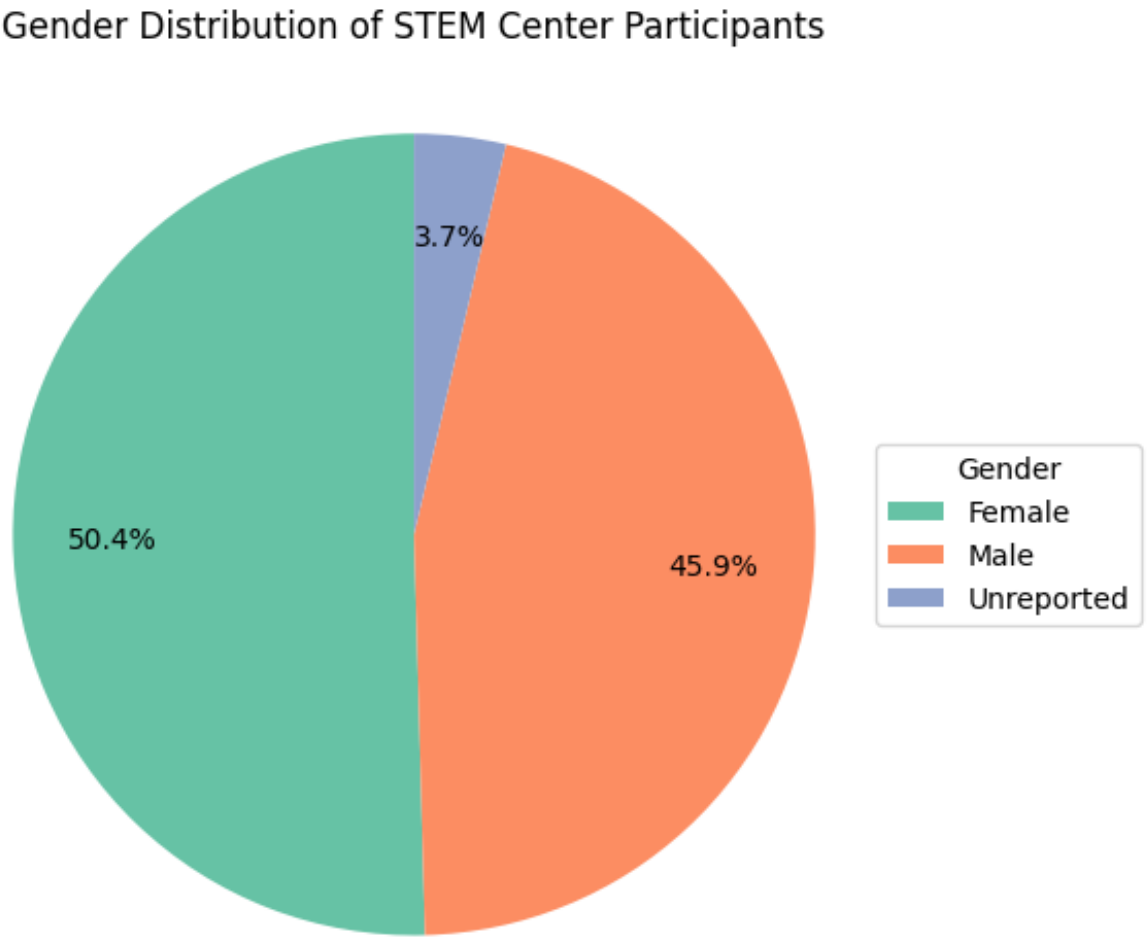
Black/African American and Pacific Islander students represent a smaller proportion of STEM Center participants, consistent with their overall representation at the college. However, their participation remains comparatively low. While small population sizes limit direct conclusions, these patterns highlight the importance of intentional outreach and partnership-based engagement strategies to further support access to tutoring services for historically underserved student groups.

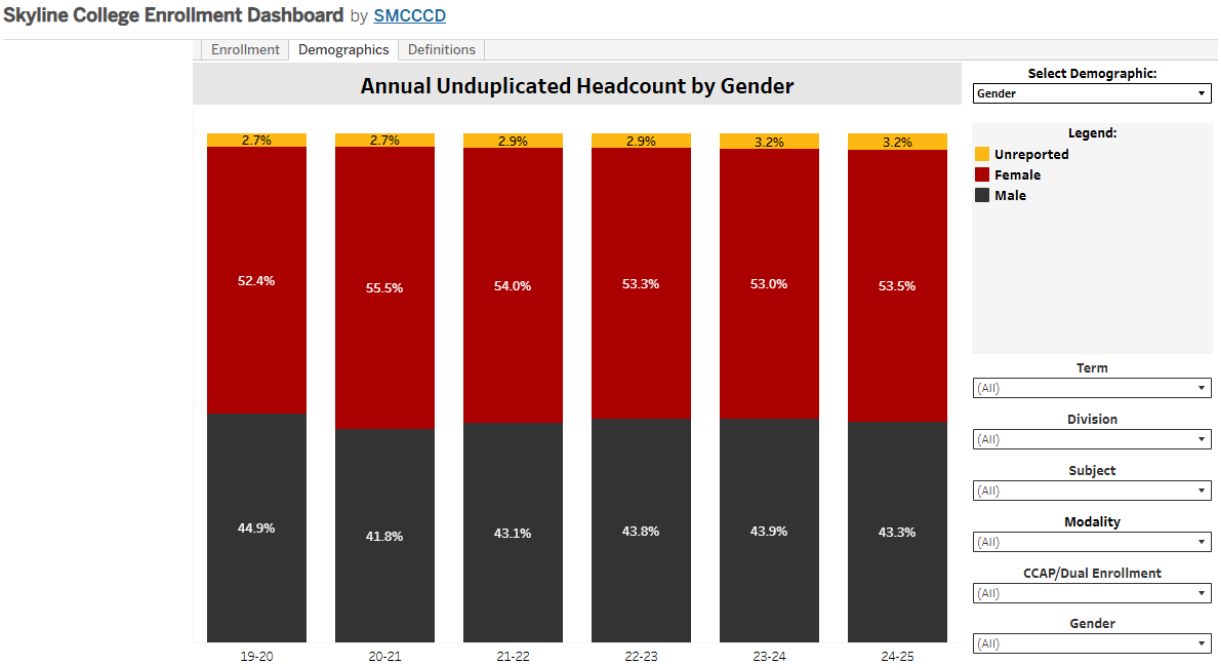
**Programming Implications:**

The STEM Center will continue to strengthen partnerships with campus success programs such as **MESA, Promise, and TRIO**, which serve students who may benefit from early and sustained academic support. In addition, collaboration with learning communities including **Umoja-ASTEP and Puente** provides opportunities to embed tutoring awareness, referrals, and programming within culturally responsive frameworks that support Black/African American and Hispanic/Latinx students. By aligning outreach and service delivery with these programs and communities, the STEM Center seeks to normalize tutoring utilization and reduce academic barriers.

**Gender Analysis:**

## SKY SS - STEM Center



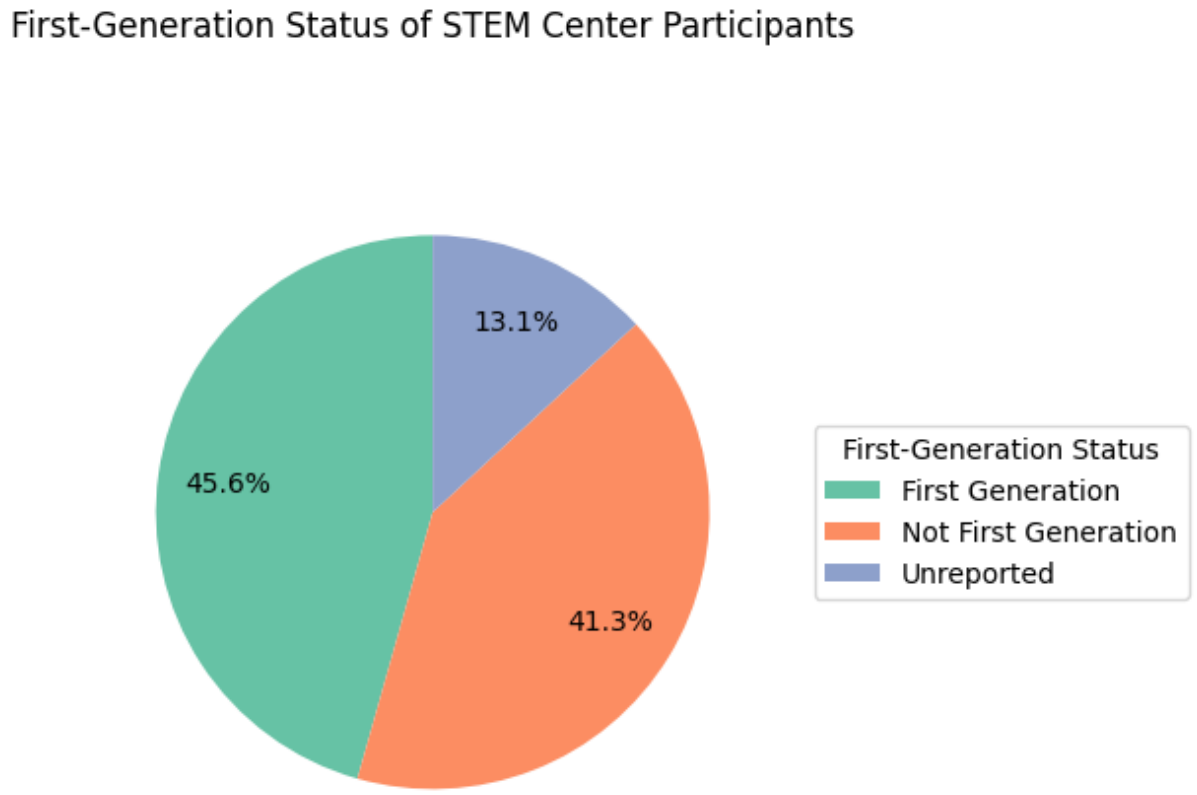




Gender disaggregation indicates that STEM Center participants closely reflect the overall College gender distribution, suggesting that current outreach and service delivery practices support equitable access across genders.

## SKY SS - STEM Center

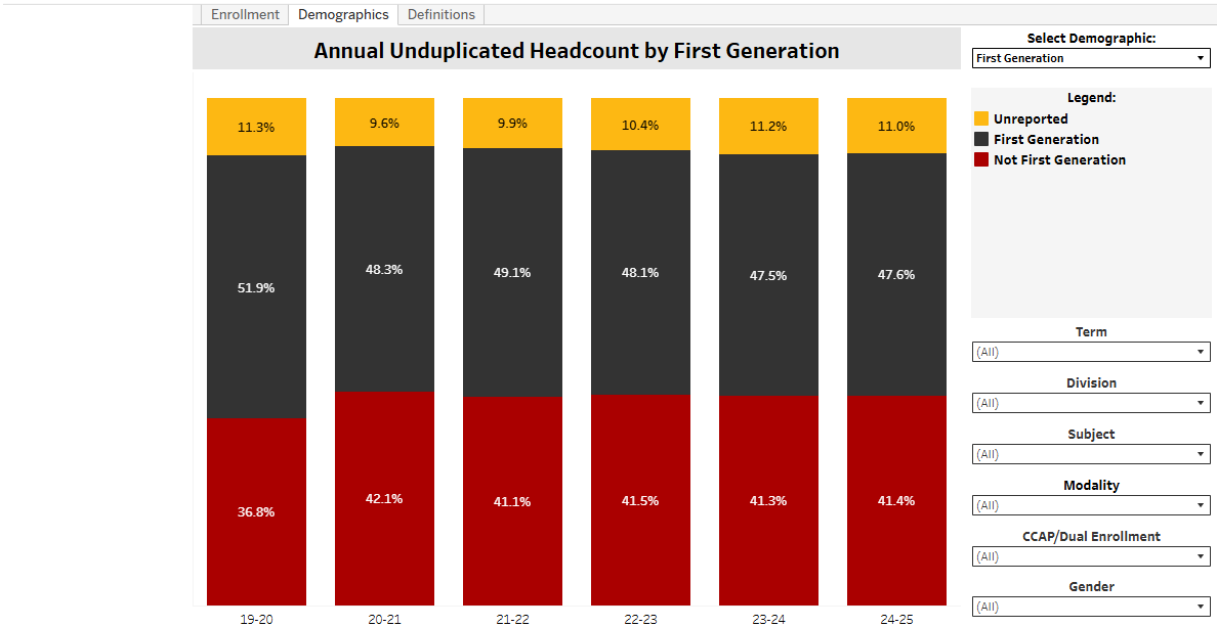
Gender disaggregation of STEM Center participants shows a relatively balanced distribution, with female students comprising approximately half of program users and male students representing slightly under half. This distribution closely aligns with the overall College gender profile across recent academic years. The similarity between program participation and institutional enrollment patterns suggests that the STEM Center provides equitable access across genders.

**First-Generation Status Analysis:**




The figure above indicates that nearly half of STEM Center participants are first-generation college students, a group that is widely recognized as facing additional academic and navigational barriers in higher education.

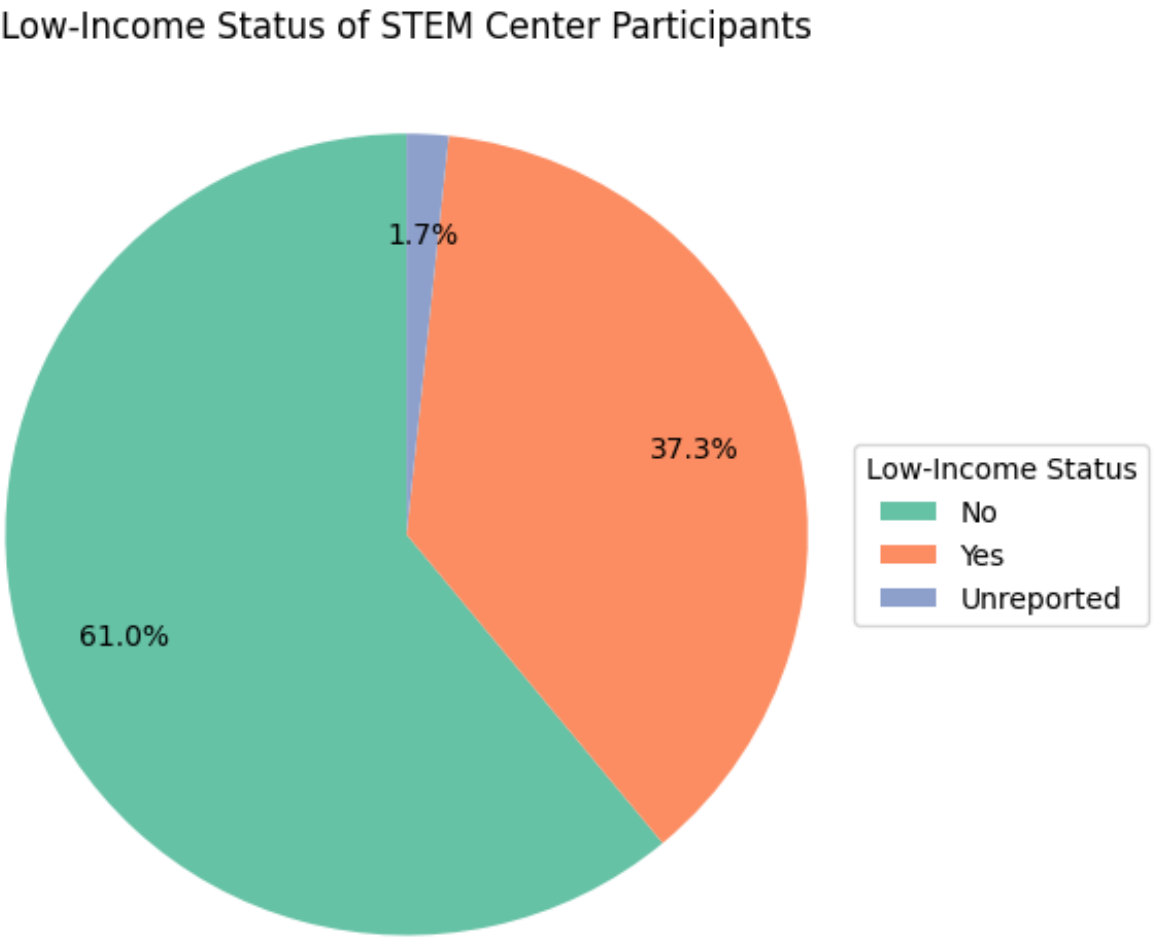
## SKY SS - STEM Center




Disaggregation by first-generation status indicates that first-generation students comprise approximately 46% of STEM Center participants, a proportion that closely aligns with the overall College population. This finding suggests that first-generation students are accessing tutoring services at rates consistent with institutional enrollment patterns.

To further strengthen equitable access and support sustained engagement, the STEM Center will continue to prioritize targeted outreach and collaboration with programs that primarily serve first-generation students, including Promise and Middle College. Partnering with these programs supports early awareness of tutoring services, referrals in high-demand STEM courses, and coordinated support for students navigating the transition into college-level coursework. These partnerships will help ensure that first-generation students are not only accessing services, but are able to engage consistently and effectively throughout the semester.

**Low-Income Status Analysis:**




This distribution shows that **more than one-third of STEM Center users identify as low-income**, highlighting the role of the STEM Center as a critical access point for students who may face financial, material, and transportation barriers to academic success. The substantial representation of low-income students among STEM Center participants underscores the program's role in supporting students with elevated financial need.

## Programming decisions

1. **Barrier-Free Academic Support**
    - The availability of free tutoring, study space, and whiteboards ensures that students are not limited by their ability to pay for external academic support or private study environments.
    - These services are especially critical for low-income students who may lack quiet or adequately equipped study spaces outside of campus.

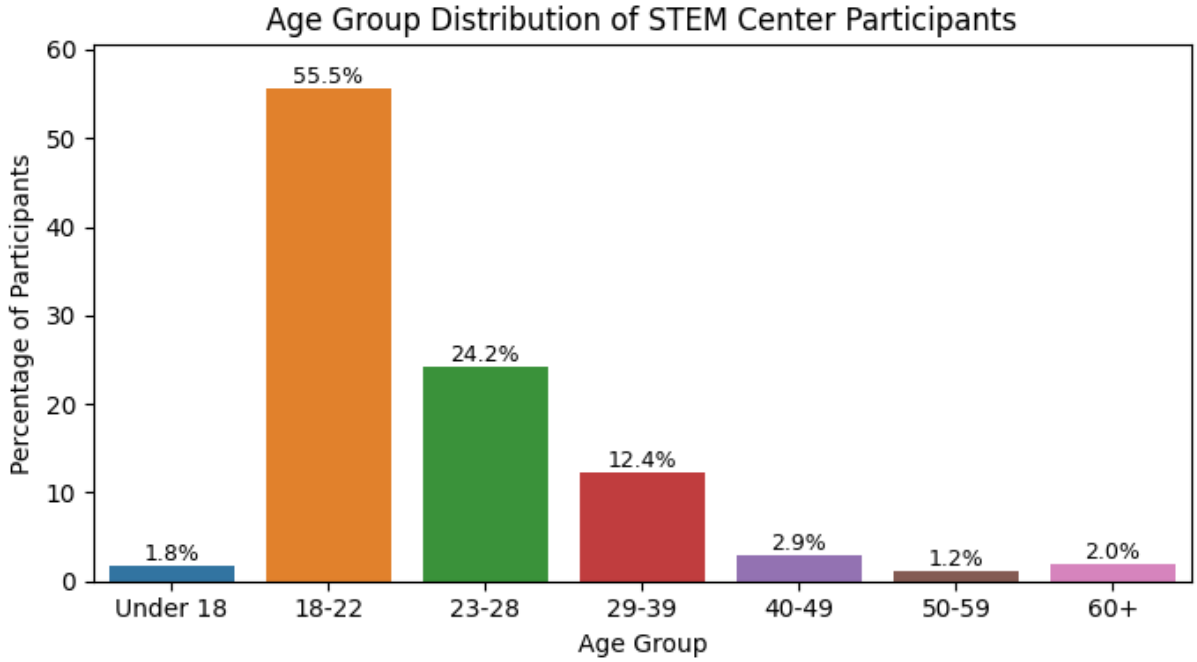
2. **Material and Resource Access**
    - The STEM Center's loaner calculators, chemistry and anatomy models, and other instructional materials reduce out-of-pocket costs associated with exam preparation and course supplies.

3. **Basic Needs and Student Persistence**
    - The provision of free snacks, in coordination with SparkPoint, supports students' basic needs and encourages longer, more sustained engagement with tutoring services.

- Addressing food insecurity and financial stress supports persistence, particularly during high-demand academic periods.

4. **Flexible and Virtual Service Delivery**
   - Virtual tutoring options support low-income students who face transportation challenges, work obligations, or caregiving responsibilities.
   - Offering multiple modalities ensures that access to academic support is not constrained by external circumstances.

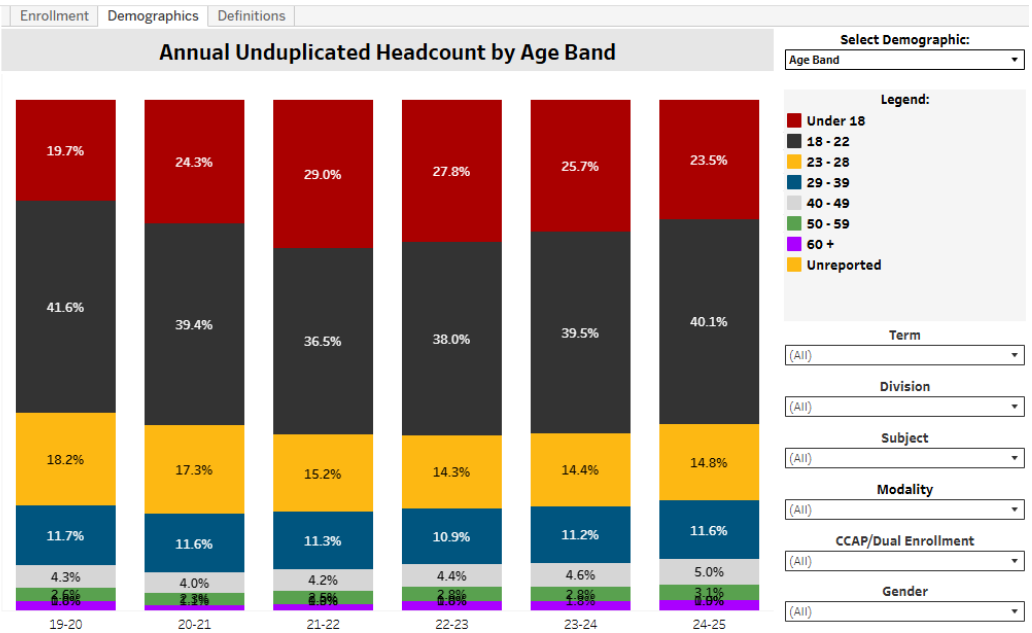
**Age Band Analysis:**




While the majority of participants fall within the traditional college-age range (18–22), a **substantial proportion of STEM Center users are nontraditional-age students**. Approximately **18.5%** of STEM Center participants are age 29 or older, indicating meaningful engagement from students balancing work, family, and other responsibilities.

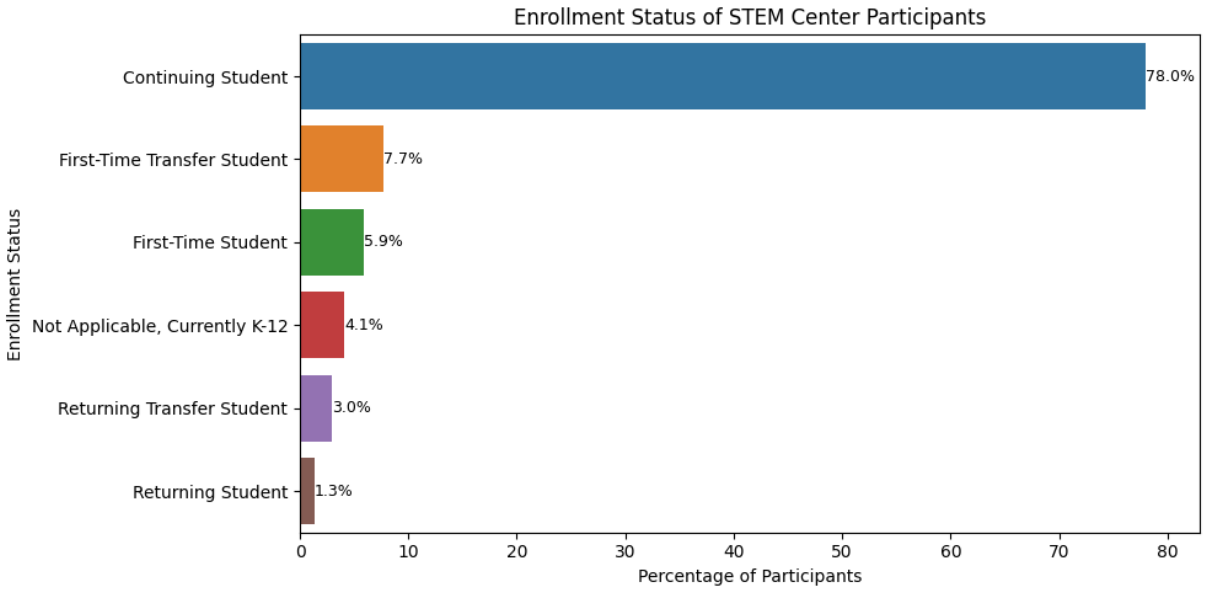
## SKY SS - STEM Center

**Skyline College Enrollment Dashboard** by SMCCCD




Compared to the overall College population, older students are underrepresented among program users, which may be partially influenced by reduced operating hours over the past two years. The STEM Center historically offered extended late evening hours. However, ongoing staffing overturns have resulted in a more limited schedule. These reduced hours may limit access for students enrolled in evening courses, full-time workers, and those with caregiving responsibilities, and also constrain access to study space and opportunities for peer connection.

**Enrollment Status Analysis:**




This distribution indicates that STEM Center usage is concentrated among students who are persisting across semesters rather than students at the point of initial entry. The predominance of continuing students among STEM Center participants highlights the importance of sustained, semester-long tutoring support rather than one-time interventions. Programming decisions should prioritize consistent staffing, ongoing embedded support in high-demand courses, and early-semester outreach to encourage repeat engagement among continuing students.

Enrollment status data indicate participants are primarily continuing and transfer-oriented students, informing programming decisions that emphasize sustained academic and career-focused support. In response, the

## SKY SS - STEM Center

STEM Center intentionally integrates career-building opportunities alongside tutoring, including Science in Action events in partnership with MESA, which connect students with STEM professionals and expose them to academic and career pathways. The Center also hosts technical workshops led by scientists across semesters to support transfer-level preparation. Historically, the STEM Center supported STEM learning communities such as Biology & Chemistry Scholars and Engineering & Technology Scholars, in partnership with Growth Sector non-profit, which connected students to internships and strengthened transfer outcomes. Currently, the STEM Center continues to promote internship and scholarship opportunities through a curated resource bank on its website, updated annually, to support students' academic persistence and transition beyond Skyline College.

**3.D. EQUITABLE ACCESS TO THE PROGRAM**

**Provide an analysis of how students, particularly historically disadvantaged students, are able to access the program. Specific questions to answer in your response:**

# EFFECTIVENESS

**4.A. PROGRAM STUDENT LEARNING OUTCOMES (PSLOs)**

**iv. Please check the boxes to indicate that the following tasks have been completed.**

**4.B. ADDITIONAL DATA DEMONSTRATING EFFECTIVENESS**

**4.C. STUDENT FEEDBACK**

**4.D. COHORT RETENTION, SUCCESS, AND/OR PERSISTENCE RATES**

**Identify cohorts and upload reports on the relevant success metrics for the program. Provide analysis of the data. Specific questions to answer in your response:**

# ACTION PLAN

**Using key findings based on the analysis from this CPR cycle, develop a multi-year plan designed to improve program effectiveness and promote student learning and achievement. Commit to three-to-five new and/or ongoing goals total. Enter goals via Step 2: Goals and Resource Requests.**

**5.A. CHALLENGES AND CONCERNS**

# Goals & Resource Requests

**Campus Collaborations**

Increased performance in self-efficacy PSLO, where STEM Center staff will be familiar with on-campus resources and feel comfortable connecting students of need with necessary program.

**Year Initiated**
2021 - 2022

**Goal Status**
Inactive

**Implementation Step(s) and Timelines**
Collaborate with parallel student support programs (The Learning Center, SparkPoint, EOPS, TRiO, Promise Scholars Program, Middle College, etc) on trainings and conduct a minimum of two collaborative trainings per semester.

**UPDATE**

**Goal Update Date**
03/01/2023

**Academic Year Updated**
2022 - 2023

**Goal Update**
On Schedule

**Goal Update Narrative**
Joint training established with TLC for ongoing Student Assistant professional development

**Resource Request**

**Division Name**
Science, Technology, Engineering, and Mathematics (STEM)

**Year of Request**
2023 - 2024

**Resource Type**
Student, Aides, Hourly, or Temporary Workers

**Resource Name**
Student Assistant salaries for STEM Center

**Resource Description**
STEM Center employs Student Assistants as tutors to support students seeking support to succeed in the course. Each semester, the STEM Center uses grant funding to support the salaries and benefits of 20 - 25 Student Assistants who are dedicated tutors for up to 30 - 35 courses in the STEM Division.

**Funds Type – Mark all that apply.**
Recurring Cost

**Briefly explain how this request helps to advance the goals and priorities of your program, the College, the District, and/or the California Community College Chancellor's Office.**
While being financially supported by the DOE/HSI Grant, the STEM Center deployed their team of Student Assistant tutors each semester to promote the STEM Center and it's services, direct student traffic to study spaces, coordinate individual/group tutoring sessions, facilitate workshops, and mentor peers. Their efforts yielded 10,000+ visits by 600+ students (Fall 2022 semester).

**Cost**
150,000

**Level of need, with 1 being the most pressing**
1

**FOR ADMINISTRATIVE USE ONLY**

# Goals & Resource Requests

**Resource Request**

**Division Name**
Science, Technology, Engineering, and Mathematics (STEM)

**Year of Request**
2023 - 2024

**Resource Type**
Other

**Resource Name**
Additional Physical Study Spaces

**Resource Description**
Increasing physical study space to make room for increase student needs of a space to study.

**Funds Type – Mark all that apply.**
Categorical

**Briefly explain how this request helps to advance the goals and priorities of your program, the College, the District, and/or the California Community College Chancellor's Office.**
STEM Center student traffic steadily increased over the last few semesters, since campus re-opening from the pandemic. 5845 total visits in Spring 2022 to 10841 total visits in Fall 2022. Spring 2023 reached 9292 total visits by week 11 of the semester and anticipated to surpass Fall 2022 traffic numbers. Student Club activities continue to grow alongside student visit traffic.

**Cost**
10,000

**Level of need, with 1 being the most pressing**
2

**FOR ADMINISTRATIVE USE ONLY**

**Enhanced STEM Course Success and Completion through Targeted Academic Support.**

The STEM Center aims to improve course success and completion in STEM by offering accessible and tailored academic support through the Peer Instructional Leader program. This program provides tutoring for 37 transferable STEM courses, including Mathematics, Biology, Chemistry, Engineering, Computer Information Science, and Physics, through a variety of tutoring formats: in-person, virtual, embedded, and open lab. The desired impact on students is to increase course pass rates by enhancing students' understanding of complex STEM material and ensuring that all students are aware of and able to access these valuable resources, meeting them where they are in their academic journey.

**Year Initiated**
2024 - 2025

**Goal Status**
Inactive

**Implementation Step(s) and Timelines**

## Goals & Resource Requests

- Expand the number of STEM courses supported by embedded tutors, prioritizing high-enrollment courses, particularly in Mathematics, to address the needs of students impacted by AB 1705 legislation.

- Provide tailored support for students impacted by AB 1705 legislation through analytical skill workshops, Academic Excellence Workshops (AEWs), designed to help provide them with contextualized math support in transferable STEM courses such as engineering, chemistry, biology, physics, computer science, and mathematics.

- Expand Open Lab accessibility by scheduling dedicated lab hours staffed with specialized, trained tutors to provide targeted support for students.

- Expand in-person tutoring hours focusing in a drop-in/subject specific model to accommodate students with varying schedules.

- Provide virtual tutoring sessions tailored to online STEM courses, ensuring students can access help from home or on-campus study spaces.

- Conduct training sessions for tutors focused on effective communication, cultural competency, and strategies to actively engage students in their learning. Offer an orientation at the beginning of each semester, followed by a mid-semester training to reinforce skills and address emerging needs.

**Mapping**

- SKY Strategic Goals: *(X - Highlight Selected)*

- **Antiracist and Equitable Institution:** Be an antiracist and equitable institution (**X**)
- **Student Support and Resources:** Ensure that all students have the support and resources needed to achieve their educational goals (**X**)
- **Thriving Environment:** Foster a thriving learning and work environment (**X**)

**Resource Request**

**Division Name**
Science, Technology, Engineering, and Mathematics (STEM)
**Year of Request**
2024 - 2025
**Resource Type**
Student, Aides, Hourly, or Temporary Workers
**Resource Name**
Funding for Peer Instructional Leaders Salaries
**Resource Description**

## Goals & Resource Requests

Funding for Peer Instructional Leaders' salaries and benefits to employ 20–25 student assistants as dedicated tutors, providing academic support for up to 37 STEM courses, including Mathematics, Chemistry, Physics, Engineering, Computer Information Science, and Biology. These tutors will serve up to 80 general sections each semester, distributed across the disciplines as follows: Biology (25), Chemistry (15), Computer Information Science (8), Mathematics (15), Engineering (5), and Physics (12).

This funding will support:
-Tutoring Hours: Providing an average of 170 hours of tutoring weekly during the regular semester and 50 weekly hours during the summer session, ensuring consistent academic support.
-Training: Covering 68 hours of tutor training per regular semester and 10 hours during the summer, including orientation and mid-semester training to maintain high-quality services.
-Academic Excellence Workshops (AEWs): Facilitating a total of 34 AEW hours during the regular semester, focusing on analytical and contextualized math support for transferable STEM courses.
-Service Expansion: Supporting embedded tutoring, open lab hours, in-person drop-in tutoring, and virtual sessions tailored to meet the diverse needs of STEM students.

**Funds Type – Mark all that apply.**
Recurring Cost

**Briefly explain how this request helps to advance the goals and priorities of your program, the College, the District, and/or the California Community College Chancellor's Office.**
This request directly supports STEM Center by enhancing course success and completion through targeted academic support. It aligns with the College's Master Plan Goal 3: "Ensure that all students have the support and resources needed to achieve their educational goals," by offering equitable and accessible academic services that empower students to succeed in their STEM pathways.

Funding for Peer Instructional Leaders' salaries will allow the STEM Center to sustain and expand its proven support model, originally developed under the DOE/HSI Grant, which has now concluded. This funding is particularly essential to address the growing needs of students impacted by AB 1705 legislation at Skyline College, where demand for foundational STEM support continues to increase. Peer Instructional Leaders play a critical role in providing tailored academic support that fosters student retention and engagement, directly advancing institutional priorities for equity, retention, and completion.

The following usage data from the past academic year highlights the STEM Center's significant role in supporting student success:
-Fall 2024: 5,494 visits, 494 unique visitors
-Spring 2024: 14,704 visits, 681 unique visitors
-Fall 2023: 13,668 visits, 717 unique visitors
-Spring 2023: 15,217 visits, 807 unique visitors

**Cost**
120,000

**Level of need, with 1 being the most pressing**
1

**FOR ADMINISTRATIVE USE ONLY**

# Goals & Resource Requests

**Increase Course Success in Math, Chemistry, Biology, CIS, and Engineering by 5% through tutoring usage and Improve Retention of PI-Service Users by 3% by Spring 2027**

The STEM Center goal is to increase course success in Math, Chemistry, Biology, CIS, and Engineering by 5% for students using the tutoring services and improve retention of students who use PI services by 3% by Spring 202. Ensuring that students continue receiving high-quality, peer-supported academic assistance in courses where they experience the most challenges. Stable support from trained PIs during peak hours will allow more students to get the help they need at the moment they need it.

By increasing the availability and consistency of support, students will:
- Receive timely guidance before falling behind.
- Strengthen skills in foundational STEM courses.
- Feel more confident when approaching difficult concepts.
- Experience greater belonging and comfort seeking help.
- Persist in their STEM pathways and complete required course sequences.

**Year Initiated**
2026 - 2027

**Goal Status**
Active

**Implementation Step(s) and Timelines**
Summer 2026
- Recruit PIs in high-demand subjects to ensure consistent availability during peak hours.

Fall 2026
- Provide PI professional development focused on tutoring strategies, communication, and culturally responsive support for first-generation and underrepresented students.
- Increase reliability of PI coverage, reducing gaps and ensuring at least one PI is available at all designated hours in core subject areas.
- Launch semester academic support, providing structured help sessions during the Fall semester.
- Coordinate closely with faculty to align PI support with course content, assignments, and exam timelines.
- Evaluate mid-year progress by comparing PI-user success and retention rates with the previous year.

Spring 2027
- Refine PI scheduling using insights from PRIE data to place more support at times where student outcomes show the most improvement.
- Strengthen collaboration with faculty through structured communication (Canvas shares, weekly check-ins, coordinated exam prep).
- Promote PI support more actively, addressing student feedback.
- Evaluate end-year progress by comparing PI-user success and retention rates with the previous year.

**Mapping**
- SKY Strategic Goals: *(X - Highlight Selected)*

- **Increased Student Enrollment:** Increase student enrollment by being responsive to communities we serve (**X**)
- **Student Support and Resources:** Ensure that all students have the support and resources needed to achieve their educational goals (**X**)
- **Thriving Environment:** Foster a thriving learning and work environment (**X**)

**Resource Request**

**Division Name**
Science, Technology, Engineering, and Mathematics (STEM)

# Goals & Resource Requests

**Year of Request**
2025 - 2026

**Resource Type**
Student, Aides, Hourly, or Temporary Workers

**Resource Name**
Peer Instructional Leader Program Support Funding

**Resource Description**
This funding will support tutor salaries and benefits to ensure adequate coverage for tutoring hours, embedded class support, and open lab assistance.

**Funds Type – Mark all that apply.**
One-time Cost

**Briefly explain how this request helps to advance the goals and priorities of your program, the College, the District, and/or the California Community College Chancellor's Office.**
This request advances our program goal to increase course success and retention by ensuring reliable tutoring and academic support across high-demand STEM courses. It supports the College and District priorities of improving student achievement and closing equity gaps, particularly in STEM pathways. It also aligns with the California Community College Chancellor's Office goals to increase completion and strengthen learning support services statewide.

**Cost**
100,000

**Level of need, with 1 being the most pressing**
1

**FOR ADMINISTRATIVE USE ONLY**

**Increase the number of students enrolled in CIS courses to use STEM Center services by 10%.**

This goal supports CIS students by encouraging them to build foundational problem-solving skills through active learning rather than relying primarily on AI tools. The Datathon data analysis and coding competition will provide an applied, collaborative, hands-on experience that builds coding confidence, increases belonging, and motivates students to seek support consistently throughout the semester.

**Year Initiated**
2026 - 2027

**Goal Status**
Active

**Implementation Step(s) and Timelines**
Fall 2026
- Run a workshop series in data analytics and programming where students work on problems with peer support.
- Develop targeted outreach to stem students highlighting alternatives of hands-on activities to develop coding skills.
- Partner with CIS faculty to promote the Datathon in classes.
- Host the Fall Datathon as the primary engagement event to bring new CIS students into the STEM Center.
- Collect student sign-ins and track how many Datathon participants continue using STEM Center services.

Spring 2027
- Evaluate CIS tutoring usage rates and compare them to confirm progress toward the 10% increase.
- Use PRIE data to refine outreach strategies and identify which CIS courses benefit most from tutoring.

**Mapping**
- SKY Strategic Goals: *(X - Highlight Selected)*

- **Student Support and Resources:** Ensure that all students have the support and resources needed to achieve their educational goals (**X**)
- **Thriving Environment:** Foster a thriving learning and work environment (**X**)

# Goals & Resource Requests

**Resource Request**

**Division Name**
Science, Technology, Engineering, and Mathematics (STEM)

**Year of Request**
2025 - 2026

**Resource Type**
Other

**Resource Name**
Funding for Fall Datathon Student Engagement Materials

**Resource Description**
This funding will cover essential event costs such as food, prizes, certificates, and swags to student engagement and participation.

**Funds Type – Mark all that apply.**
One-time Cost

**Briefly explain how this request helps to advance the goals and priorities of your program, the College, the District, and/or the California Community College Chancellor's Office.**
This request supports our goal to increase CIS student engagement by responding to the clear decline in CIS tutoring usage after AY 2022–2023, where visits dropped from over 180+ per course to fewer than 30 in most classes. Funding the Datathon will re-engage CIS students through hands-on, collaborative problem-solving and connect them back to STEM Center services. This aligns with College, District, and CCCCO priorities to strengthen STEM pathways, improve learning outcomes in high-demand fields, and increase equitable access to academic support.

**Cost**
2,000

**Level of need, with 1 being the most pressing**
1

**FOR ADMINISTRATIVE USE ONLY**