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Student and Support Services

2022 - 2023 Self-Study

Three-Year Program Review

The STEM Success Learning Community (STEM SLC) Counseling and Student Development

Statement of Collaboration

The program staff listed below collaborated in an open and forthright dialogue to prepare this Self Study. Statements included herein accurately reflect the conclusions and opinions by consensus of the program staff involved in the self-study.

Participants in the self-study

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Authorization

After the document is complete, it must be signed by the Principal Author, the Department Manager, and (when appropriate) the Dean or appropriate Immediate Management Supervisor (IMS) prior to submission to the Program Review Committee.

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Gilbert Contreras (Dec 21, 2022 12:51 PST)

Dec 21, 2022

VPSS, Dr. Gil Contreras

1.0 Mission and Goals

Mission, Vision, Core Values and College Goals drive all college activities. The Program Review committee would like to understand the connection of your program to the Mission, Vision, Core Values and College Goals. Summarize how your program supports each area.

Mission:

The STEM Success Learning Community (STEM SLC) is a first- year and beyond program that assists new and returning students as they navigate Science, Technology, Engineering, and Mathematics (STEM) majors and career pathways. The program, first created in Fall 2016, provides wraparound services within a supportive learning environment. The central focus of our efforts is to promote success and to support the academic and career goals that our students establish. The program revolves around the collaboration between the Counseling and Student Development, Natural Sciences, and Mathematics and Computer Science Divisions on our campus. Within this collaboration, we offer cohort-based curriculum that pairs entry level STEM coursework in Math and Chemistry with a Career and College Success Counseling course in order to maximize peer to peer connection within flexible pathways in STEM. Students who participate in the program receive STEM specific counseling, embedded tutoring in Math and Chemistry cohort sections, exposure to student clubs and extra-curricular activities, as well as the opportunity to connect with peers that have similar majors and career goals. The majority of STEM SLC students have the academic goal to transfer to a university and our program works to expose them to degree and certificate opportunities that exist at our campus on their way to transfer. It is open access during our application period, and we have worked to create multiple entry points throughout the academic year to expand our services to more students on campus. Through our activities that focus on personal, academic, and career development, we foster an including environment that connects students to each other and our college community. The ultimate goal of the STEM SLC is to provide students with a supportive community that inspires self-efficacy and lifelong success. It is our hope that this will translate to them becoming responsible leaders and in our local communities as they complete their goals and transition out of Fullerton College.

Vision:

Through counseling support, academic intervention strategies, and exposure to community organizations related to STEM, the STEM SLC provides wraparound services to its participants. The Mission of the STEM SLC is “Connect, Support, Complete.” Within this mission, we facilitate efforts to connect students to our campus community and to each other, to support them inside and outside of the classroom, and to inspire completion of academic and career goals. Overall, our program works to empower its students to take a proactive approach to their educational pathways- an approach that encourages the development of leadership skills as well as a sense of responsibility for our campus our local communities. We hope that by making an impact on each individual, it will inspire a positive and lasting change that resonates throughout our students’ lives.

Core Values:

The STEM SLC embodies the Core Values of Fullerton College in multiple ways. First, the program promotes community through our cohort style courses. Our goal is to ensure that students build supportive relationships from their first semester until they transition out of our college. This sense of connection to peers with similar goals and pathways promotes success in

academics, personal lives, and future careers. The connections created through our courses and extra-curricular activities also promote resiliency and persistence through the rigorous pathways associated with STEM. Furthermore, the STEM SLC values diversity and promotes equity in our recruitment process and within our counseling courses to allow equal access and a safe space for students to make progress towards their goals. Our counselors and discipline faculty also advocate for lifelong learning and encourage students to aim for excellence in each semester as they work towards completion. Examples of the wraparound services we provide include: Winter and Summer Math and Science Boot Camps, tutoring and supplemental instruction connected to each cohort course, and consistent counseling follow up each semester. Partnerships in our local communities, such as CSU Fullerton's Project Raise, Microsoft Corporation and Cal Poly Pomona's Summer Undergraduate Research Experience (SURE) allow students to foster relationships with faculty at other campuses and the opportunity to conduct research and complete internships within their appropriate fields. We also work collaboratively with our High School Outreach program to maintain relationships with our local high school partners. At our campus, collaboration and consistent communication between Counseling Faculty and Discipline faculty also keeps academic and personal success at the center of our efforts. Lastly, with our counseling course and support at the core of our program, we emphasize helping our students take charge of their academic, personal, and career related goals.

College Goals:

Goal 1: Promote Success for Every Student

Counselors meet with each student in the STEM SLC once each semester (at minimum) within individual counseling appointments. This allows space for our counselors to evaluate student progress, connect to campus resources, and to create abbreviated and comprehensive educational program plans related to individual goals. Degrees, and transfer options, along with retention and completion are promoted and tracked within the program. Central to our efforts is providing an environment where students learn how to be successful in college. No matter what level of preparation they have as they step onto our campus, our learning community is set up to provide opportunities for students to come to a better understanding of what success looks like in their individual pathways. Our counseling philosophy is to create educational plans for students that allow for opportunities for academic growth and success to occur as they progress through multiple levels of STEM curriculum. This mindset of success starts in the first semester through our Career and College Success course and is reiterated through the extracurricular events that our program facilitates.

Goal 2: Cultivate a Culture of Equity

The STEM SLC application process is open to all students. The cohort model works best with first-time students, yet entry into the program is available to all students on our campus (new and returning) who require our cohort courses in their academic pathways. We are intentional during onboarding in being transparent about expectations and program requirements so that students make informed decisions when opting into our services. Within the classroom and in our counseling appointments, faculty the diversity our students bring to the program and adjust teaching strategies to promote the strengths of each individual. Overall, we hope this creates a safe space and opportunity for students to learn more about and celebrate diversity amongst their peers.

Goal 3: Strengthen Connections with Our Community

Local outreach and recruitment efforts occur on a rolling basis to increase awareness of our program and its benefits with our high school partners. Additionally, counseling faculty help promote the program each semester through dual enrollment counseling courses. Our counselors reach out to members of the local community to create partnerships related to academic and career success. As an example, every semester, we invite STEM career professionals to panel discussions with our students to discuss the pathways that they have followed in STEM. We are intentional about making sure our guest speakers come from diverse backgrounds and ask them to share their experiences in a way that, hopefully, allows our students to connect to the paths they have taken. By seeing successful professionals from similar backgrounds that work in our communities, we hope it inspires our students and motivates them as they pursue the completion of their goals.

Goal 4: Commit to Accountability and Continuous Quality Improvement

A commitment to accountability, reflection, and continuous improvement is central to the STEM SLC. All students who opt-into the program sign a Student Agreement, which outlines expectations of progress, participation, and a commitment of adherence to our college's code of ethics. On the faculty side, each discipline faculty member who teaches a cohort class receives a "STEM SLC Instructor Guide", which outlines expectations of follow up and collaboration. Additionally, we strive to ensure that decisions made for program improvement are driven through continuous data collection. Collaboration with our Office of Institutional Effectiveness has been central to these efforts. We collect quantitative and qualitative data, collaborate frequently to evaluate areas of success and for growth, and work tirelessly to implement change each academic year. Surveys are collected at the end of each year as well as when students exit the program, and the information is used to help us continually adapt our practices. We are committed to this process and have now collected enough data to assist in establishing specific outcomes to elevate the successes we have experienced over the last six years.

2.0 Program Description/Data & Trends Analysis

2.1 Describe the purpose, components, and staffing of this program.

The purpose of the STEM SLC is to provide comprehensive, "high touch", support in a cohort-based learning community for students pursuing STEM majors and pathways. As a Counseling support program tied to STEM, wraparound services are delivered through career and academic counseling each semester in order to provide our students with consistent support. As part of this, our full-time counselor/coordinator works closely with faculty in Mathematics and Chemistry in order to schedule cohort sections each Fall and Spring. The counseling support provided occurs throughout the 12-month calendar, with efforts being dedicated to recruitment, cohort section enrollment, progress evaluation, career development, transfer planning, and workshop development and implementation, amongst others. Additional resources that are part of the STEM SLC include Hornets Tutoring, which provides embedded tutors for each Math and Chem section, as well as Professional Experts who are Math faculty that offer boot camps for our students in Winter and Summer. Up until now, funding for a portion of our adjunct counseling as well as Hornets Tutoring and our professional experts has been supplemented by categorical resources. These resources have not been consistent each year and the Title V Career Pathways grant, which has supported these efforts for the last three years, is ending in Spring 2023. For the program to move forward with its current level of support a consistent funding source will need to be established.

2.2 Staffing – complete the table below. Please list the total number of personnel in each type of position in the department/program. Within each classification in the first column, please list the position titles. For confidentiality, **do not** include the names of any people in the position.

CURRENT STAFF					
Classification (Include position titles)	# Of staff in each position title	Percent of employment	Months per year of employment	Source of funding (General / Categorical)	FTE
Managers					
Dean of Counseling	1	100%	12		1
Faculty (full-time)					
Coordinator/Counselor	1	100%	12		1
Faculty (Adjunct)	2.5	67%	12	SEA	1.68
				Title V/SEA	
				SEA	
Total FTE					3.68

2.3 Other Resources

OTHER RESOURCES				
Please list each position by classification in the department/program	Services Provided	Number of Hours	Overall Cost	Source of funding (General / Categorical)
Hornets Tutoring	Embedded Tutoring Support for Math/CHEM cohort Sections	6 sections per semester (~\$3200/section)	\$38,400	Categorical- Title V Grant ending Spring 2023

OTHER RESOURCES				
Please list each position by classification in the department/program	Services Provided	Number of Hours	Overall Cost	Source of funding (General / Categorical)
Student Hourly- 2 Positions Paid Summer Undergraduate Research Experience	Enhances experiential learning and gives opportunities for students to research within their field of study	200/student	\$9000	General, One-Time Funds
Total Hours & Costs			\$47,400	
			Total FTE	

2.4 Utilize the data provided in the tables above in a discussion of the appropriateness of the staffing levels of this program.

Our current staffing has allowed us to provide consistent follow-up counseling support to our students each semester. With that said, as we have grown each year, we have had to seek out funding sources to supplement the additional resources needed. A portion of this has been paid for by a Title V Career Pathways grant as well as through categorical funds through SEA. Specifically, these funds have been used to pay for additional adjunct counseling hours and the cost of Hornets Tutoring. With the restructuring of SEA funds and end of the Title V grant, we will need to secure funding sources to guarantee the STEM SLC can move forward, at the very least, with its current level of staffing. Additionally, note in the chart above that we adopted a practice of hiring students in our program to complete undergraduate research at a local university in the summer. This venture speaks to our program outcomes and provides experiential learning, which is a critical component to success in STEM. It is not, however, without cost, and we are currently using one-time funds to supplement these positions, the amount of which can be seen in the chart above. Overall, our long-term goal of institutionalizing the program and all of the support tied to it will require a commitment from our campus to increase the funding we receive. Ideally, this would include hiring another full-time counselor/coordinator, more adjunct counselors, as well as a program assistant dedicated at 50% to the STEM SLC.

2.5 How many students are served? How has this number changed since the last review?

The STEM SLC currently has 196 active students. This is the first review submitted for our program, yet we have grown significantly since our inception in Fall 2016. The first cohort had 26 participants and we now consistently have 70-80 new students opt-in to our program each Fall. Please see below for a snapshot of our participants, which includes ethnicity, median GPA, units accumulated, and major choice. A statistic of note is that the STEM SLC has consistently been comprised of a large number of LatinX students as well as close to 50% of female students, representation that is much higher than national data in STEM regarding

those categories. Success is central to our mission and it is apparent in the median GPA shown for our active students. Additionally, when it comes to major choice, our top five majors encompass multiple pathways in STEM. These majors do not fully encompass the wide range of career choices that our students pursue, yet represent how the program supports a variety of STEM related fields. We hope to continue to support our diverse population at the college while also being intentional about increasing representation for students from backgrounds who are historically underrepresented in STEM majors and careers.

Cohort Demographics		Cohort Characteristics	
Female (%):	45%	Students	196
Asian / Asian ..	17%	GPA: Under 2.0	12
Black / Africa..	1%	Median Units E..	29.0
Latinx	64%	Median GPA	3.3
Two or More	8%	Current Term (Top 5 Majors)	
Unknown	2%	Engineering	45
White	8%	Biology AS-T	42
		Computer Science	27
		Biology	18
		Chemistry AS-T	7

2.6 Since the previous Program Review Self-Study what significant changes have occurred that impact the services of this program?

Though a review has not previously been submitted, significant changes have occurred since the start of the program in 2016. These include:

- Increase in student population and demand
- Growth from one cohort consisting of 26 students to consistently filling two full cohorts of 70-80 students each Fall (represented in the 196 active students listed in 2.4)
- Staffing Changes
- Adjunct counseling faculty changes in 2018 and 2022
- Lack of consistency in faculty who teach the cohort sections of Math/Chemistry
- Increase in adjunct counselors required to facilitate follow up support and educational planning via counseling appointments
- Recruitment Timeline
- We updated our policies to recruit mid-year in order to provide multiple entry points into program for returning students to join and access our resources. Previously we only onboarded students in Summer for the subsequential Fall semester.
- Funding source changes
- CSUF Project RAISE grant ended in Fall 2019
- Provided Hornets Tutoring Support
- Title V Career Pathways Grant will end in Spring 2023
- Paid for additional Adjunct Counselor hours
- Supplemented Hornets Tutoring Support

- STEM SLC Mentor Program
- Pilot began Fall 2022 with adjunct counselor as point person working with former STEM SLC participants who have volunteered to mentor current students
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- *Covid 19 and Remote Counseling and Learning*
- Students in our program struggled significantly with the move to remote learning from Spring 2020-Spring 2022. For a learning community that is driven by the interaction between its participants, the shift to remote learning presented multiple obstacles for our students, counselors and discipline faculty. Some of these obstacles included:
 - Access to support resources
 - Persistence from semester to semester and motivation to attend in a remote environment
 - Low participation in virtual workshops
 - Availability of embedded tutoring support and low participation
 - Confidence in Math and Science lab skills in progressing to higher level courses when transitioning back to campus this semester

Our counselors and faculty worked to mitigate these obstacles through counseling interventions, supplies giveaways, virtual career, and academic workshops, and offering consistent office hours so students had opportunities to connect with us. Our transition back to campus has been incredibly positive for our participants. We have witnessed increased participation across the services offered and students have reported that they are excited to be back in class. With that said, we know that support offered in our Math and Chemistry courses needs to be elevated. The data we collect every academic year shows gaps in Calculus I success rates and we plan to increase the interventions strategies we provide before each semester begins and during each term.

2.7 Describe any laws, regulations, trends, policies and procedures or other influences that have an impact on the effectiveness of your program.

AB 705 has had a significant influence on the way the STEM SLC operates. Direct placement into college level Math and the removal of remedial coursework (e.g. Math 040- Intermediate Algebra) has increased the number of students in our program who are starting at College Algebra as the first course in their pathway. With this, we have experienced growth in our number of participants, which has come with it an increase in the complexity of the needs inside and outside of the classroom. Combined with the move to remote learning due to Covid 19, success in Math has dropped significantly. STEM SLC students are persistent, however, as shown in our Five Year Outcomes Report (see 2.8) and have shown resilience in repeating courses if success is not achieved in their first attempt. With AB 1705 being signed into law this Fall, the numbers of participants who are taking Calculus as their first Math course at our college will increase in the coming years. Knowing that success rates are low in this area, our counselors and Math instructors are currently working to examine the support we offer and will continue to adapt our practices based off the growing needs of our participants.

2.8 Provide any other data that is relevant to your self-study, for example, if you collected data to assess an outcome.

Data collected for the STEM SLC's "Five Year Outcomes" report, published by OIE in Spring 2022, indicated the following key takeaways:

1. Students in the STEM SLC had higher rates of degree attainment and transfer when compared to other students from the comparison group.
2. Unit accumulation among STEM SLC students is still relatively high for award earners – nearly 12 units (approximately 4 courses) over the goal set in the Vision for Success.
3. Although females make up a little over half of the students at Fullerton, they are stubbornly underrepresented in STEM majors. The comparison group reflected this trend with roughly one-third of the cohort identifying as female. In contrast, the STEM SLC has been effective at recruiting female students into the program with 45% of this cohort identifying as female.
4. Students in the STEM SLC were more likely to continue pursuing their academic goals at Fullerton College than students in the comparison group as demonstrated by less students discontinuing their education at Fullerton before obtaining a degree or certificate.

Based off the data and key findings, we developed Outcomes I and IV and will assess and analyze them for the next Program Review Cycle. Here is a link to the full Five Year Outcomes report:

<https://ie.fullcoll.edu/wp-content/uploads/sites/27/2022/02/STEM-SLC-Outcomes-2016-2021.pdf>

Additionally, data was collected to look at success rates in cohort specific courses over the last 3 years. The tables below compare STEM SLC students in our cohort specific sections with non-STEM SLC students in non-cohort classes from Fall 2019-Spring 2022. The data indicates that success rates in Chemistry for cohort students in cohort classes has been equal to or higher than that of the comparison group. Success rates in Math, however, has not shown higher success rates for cohort students across the board. Specifically, success in Calculus I, a major course for almost all STEM pathways, has been significantly lower for students in our program. When disaggregated by gender and ethnicity, there are disparities in the success rates for our female students and those in campus-wide disproportionately impacted groups. Success in Calculus II, however, is significantly higher for students in the STEM SLC. From our Five Year Outcomes report, we know that cohort students have higher persistence rates and transfer faster than their non-cohort counterparts. Students are retaking their classes and are eventually passing them, yet there is definite room for growth in promoting higher levels of success in first-attempts of both Calculus I and College Algebra. Increasing success in these areas for our female students as well as those in our DI groups will improve overall program success as well as heighten the likelihood of degree completion in STEM related majors at our campus and at the university level. Calculus is, many times, seen as a gatekeeper to STEM success as it is central to so many pathways. Knowing that our STEM SLC students will take it at some point in their careers and with the soon to be implemented placement structure of AB 1705, strategies to support success at this level must be adopted in our program as well as campus-wide.

Math/Chemistry Success Rates for Cohort Students in Cohort Classes vs Non-STEM Students in Non-Cohort Classes: Fall 2019-Spring 2022

OVERALL COURSE SUCCESS RATES

	STEM STUDENTS IN STEM CLASSES	NON-STEM STUDENTS IN NON-STEM CLASSES
CHEM 107	60.2%	59.7%
CHEM 111A	61.8%	62.8%
CHEM 111B	67.7%	61.3%
MATH 141	39.6%	44.8%
MATH 142	62.5%	53.0%

MATH 143	45.0%	31.6%
MATH 141/143	41.2%	43.8%
MATH 151	29.5%	50.7%
MATH 152	65.2%	57.9%

OVERALL MATH COURSE SUCCESS RATES BY GENDER

**Includes Math 141, Math 142, Math 143, Math 151 and Math 152 Courses*

	STEM STUDENTS IN STEM CLASSES	NON-STEM STUDENTS IN NON-STEM CLASSES
Male	50.0%	48.6%
Female	32.1%	51.0%
Non-Binary / Transgender	0.0%	48.6%
Unknown / Not Reported	57.1%	55.3%

OVERALL MATH COURSE SUCCESS RATES BY ETHNICITY

**Includes Math 141, Math 142, Math 143, Math 151 and Math 152 Courses*

	STEM STUDENTS IN STEM CLASSES	NON-STEM STUDENTS IN NON-STEM CLASSES
American Indian	--	53.3%
Asian	65.7%	64.9%
Black	25.0%	35.5%
Filipino	46.7%	59.9%
Latin a/o/x	36.9%	41.6%
Pacific Islander	--	41.7%
Two or More	88.9%	56.0%
Unknown	47.4%	58.7%
White	47.5%	56.4%

OVERALL CHEM COURSE SUCCESS RATES BY GENDER

**Includes CHEM 107, CHEM 111A, and CHEM 111B Courses*

	STEM STUDENTS IN STEM CLASSES	NON-STEM STUDENTS IN NON-STEM CLASSES
Male	65.8%	62.0%
Female	56.6%	60.2%
Non-Binary / Transgender	50.0%	56.3%
Unknown / Not Reported	87.5%	59.4%

OVERALL CHEM COURSE SUCCESS RATES BY ETHNICITY

**Includes CHEM 107, CHEM 111A, and CHEM 111B Courses*

	STEM STUDENTS IN STEM CLASSES	NON-STEM STUDENTS IN NON-STEM CLASSES
American Indian	---	50.0%
Asian	83.0%	73.1%
Black	--	37.7%
Filipino	70.0%	75.0%
Latin a/o/x	54.1%	54.4%
Pacific Islander	--	42.9%
Two or More	55.6%	65.8%
Unknown	60.9%	67.4%
White	78.9%	63.5%

3.0 Strengths, Weaknesses, Opportunities, Challenges (SWOC)

3.1 Based on your analysis in 2.1 through 2.8, what are the strengths of your program?

In examining the services we provide, we feel that our strengths lie in the following areas:

- Assisting first time students in their transition to college
- Providing wrap-around counseling services (career and academic) to all students through Counseling courses, follow-up appointments, and various workshops
- Creating an inclusive environment through team-building activities
- Empowering students to make well-informed decisions regarding major/career choice through academic counseling
- Maintaining consistent follow up with discipline faculty that teach our cohort sections regarding student progress
- Tracking student progress each semester, storing information in our Tableau Dashboard, and making data driven decisions for counseling follow up services
- Ensuring students have up-to-date information regarding degree, certificate, and transfer requirements
- Providing a Counseling Support Course that inspires lifelong learning- (COUN 151 Career and College Success)
- This course offers students with a forum to connect with other cohort members in a supportive environment led by one of our STEM counselors. Topics covered contribute to overall success in college. These include: career exploration and development, the college experience, motivation, time management, study skills, self-assessment, goal-setting, amongst others.
- Completing Comprehensive Educational Plans for each student within the first year
- Persistence rates compared to our campus-wide population
- Direct access to STEM gateway courses (i.e. CHEM 107/111A, Math 141/143, Math 151)

- Access to one-on-one STEM specific counseling
 - Increasing student awareness of resources and opportunities related to STEM on campus and in the community

3.2. Based on your analysis in 2.1 through 2.8, what are the weaknesses of your program?
Based on our analysis, we acknowledge the following as areas for growth:

- Limited Funding
 - We have yet to have a consistent funding source since the program began in 2016. As a result, we have utilized several resources across our campus as well as secured supplemental funding from two different grants. We have been fortunate to receive one-time funds for the last two years. but in order to elevate our current practices and eventually grow our reach to more students on campus it is necessary to have a consistent funding source.
- Lack of Clerical Support- Admin I
 - Our full-time and adjunct counselors spend a significant amount of time performing clerical and administrative duties as part of our follow-up services with our students. This time spent takes away from actual counseling hours that could be dedicated to appointments and student follow up. Having an Admin I dedicated to Counseling Special Programs, e.g. STEM SLC, Puente, Re-Entry, would significantly benefit our counselors and increase the amount of follow-up services that SLC students in our program receive.
- Success rates in gateway courses, specifically in Math 151- Calculus I.
 - As seen in section 2.8, there is a disparity in Calculus I success for cohort students when compared to their non-cohort peers. The disaggregated data highlights even more of a disparity for students who identify as female and those in our LatinX population. Knowing this, targeted efforts need to be made to increase support and success in Calculus I across our program, as well as specifically for students in the underrepresented groups identified.
- Embedded Tutoring Attendance
 - Remote learning due to Covid 19 created a disconnect for our students in seeking out and using the support services provided through Hornets Tutoring. The online forum creates challenges for those pursuing STEM pathways, especially for students who need additional support throughout the semester. With our move back to campus this semester, we are encouraging and seeing higher levels of attendance in embedded tutoring sessions and hope to incentivize students so that these levels increase moving forward.
- Varying entry points for Math and Chemistry that prohibits a traditional cohort styled approach to STEM coursework
 - Students join our program with differing levels of exposure to Math and Chemistry in high school as well as varying amounts of college credit. Our cohort courses offer multiple options for these levels, yet this sometimes creates a lack of consistency in how students connect with their peers. Our COUN 151 course is central to mitigating this lack of consistency, yet with more and more dual enrollment opportunities for courses in COUN at our local high schools, there is a concern that less students will be available to opt-in to our cohort model.

- Complexity of STEM pathways and major coursework involved for transfer eligibility
 - Though Math is central to almost all STEM pathways, Chemistry is not a requirement for some. For example, students pursuing Computer Science most likely do not need Chemistry for their pathway and will not take it as part of our cohort model. Additionally, as students progress to their second year of study, major specific courses in STEM that are outside of Chemistry and Math (e.g. Biology, Physics, Computer Science) take precedence for scheduling and create obstacles in keeping the cohort together. As seen in our demographics table, our students follow multiple pathways in STEM and we are exploring ways to keep cohort students together in their pathways when coursework required is outside of our traditional model.
- Inconsistent Summer and Winter Boot Camp Availability
 - Natural Science Boot Camps are typically offered every Summer and Winter to help students prepare for their classes in the upcoming semesters.
 - Math support occurs through instructor led Boot Camps that did not occur from Spring 2020-Spring 2022, due to Covid/remote instruction, but were reinstated starting Summer 2022.
 - Additionally, students have the option to participate in the Math Success Program, formerly FC MILES, to prep for their Math courses in the upcoming semester

With the move back to campus, the three support efforts mentioned above are returning to being offered consistently, yet we know that funding/staffing is always an issue for them. The Math Boot Camps, specifically, are central to our program's plan for increasing success in Calculus I and we hope that a consistent funding source will be identified in the upcoming months as we move to Summer 2023.
- Minimal resources for a formal peer mentoring program
 - The SLC Mentor Program began this Fall (2022) and was made available solely to first-time students in our program. Our mentors are former STEM SLC students who have since graduated or are in progress to graduate with bachelor's degrees in various STEM pathways. One of our adjunct counselors is currently coordinating efforts with our mentors and we plan to conduct qualitative surveys to evaluate best practices moving forward. Adjuncts work less than 23 hours/week and follow up with mentors has been slow. In order for this program to expand, counselors will need more time to dedicate to follow up with mentors and mentees.
- Lack of consistency amongst professors who teach cohort sections
 - Math and Chemistry faculty opt-in to teaching cohort sections and are assigned, many times, based off the schedule of courses. Having consistent faculty who teach our classes can help increase consistent collaboration as well as more efficient movement towards achieving program outcomes. It also provides our students with an understanding that we are all on the same page, working together to help them achieve success.

3.3 Based on your analysis in 2.1 through 2.8, what opportunities exist for your program?

In taking the information from our initial data collection efforts as well as student surveys conducted at the end of each academic year, we have identified areas for improvement.

With more staffing and follow up availability, we know that we can directly affect the high touch contact we have with our students in the hopes of improving the overall quality of their experience. There is a definite opportunity for growth and to increase the success of all of the students who join our program. This venture will require an examination of the structure of our coursework as well as the intervention strategies that we use (Counseling courses, early progress checks, math/science boot camps, academic progress reports, etc.). Additionally, though the data does not show high levels of success in Math at this time, we know that our students are persisting and completing their academic goals faster than their non-cohort peers (re: Five Year Outcomes Report). This highlights that we are at a critical point of progress for the way that our program operates. In elevating our services and increasing support for Math, there can be a trickle down of success across the board for our students. With Calculus I being a gateway for so many pathways in STEM, higher success rates will stimulate opportunities for more efficient transfer and strengthen persistence/resilience in completing STEM pathways. This gives the STEM SLC the unique opportunity to create and implement more efficient academic and counseling related interventions as students transition out of high school and into FC.

3.4 Based on your analysis in 2.1 through 2.8, what challenges exist for your program?

Challenges that currently exist for our program are as follows:

- Staffing
 - Need for more counseling coverage throughout year
 - Consistent faculty in STEM SLC sections of Math and Chemistry
 - Program Assistant for clerical follow up: Currently our coordinator/counselor and adjunct counselors facilitate all clerical duties
- Follow up appointment availability
 - Our full-time counselor/coordinator's schedule consists of faculty obligations outside of those dedicated to the program
 - Adjunct faculty hours vary throughout the week and efforts are split with other special programs or for wider STEM student population
 - One adjunct faculty is assigned, intentionally, to conduct appointments with non-cohort STEM students. This is in an effort to provide more opportunities for students to receive STEM-specific counseling throughout the semester, yet the demand is much larger than what one part-time counselor can facilitate.
- AB 1705 will require direct placement into Calculus I
 - Calculus I has been identified as level of Math in need of additional support
 - AB 1705 is requiring direct placement into Calculus, even without prerequisite knowledge, so additional support efforts will become a necessity across our campus.
 - Direct placement may present immediate challenges that will need to be assessed and mitigated in our program and campus-wide
- Onboarding and Potential Change in Registration Dates

- Program opt-in and cohort course enrollment present our staff with challenges every summer. We rely heavily on our Counseling colleagues to help us fill our cohort through Group Advising and HS Outreach events as well as through referrals from COUN 140, offered via Dual Enrollment. Finding students who need our current level of courses and are willing to opt-into the cohort model takes time and considerable follow-up effort. Additionally, with the potential restructuring of our campus-wide registration periods, our onboarding efforts will need to be increased and happen earlier in the Spring while, simultaneously, providing support and access to appointments for continuing students.
- Potential competition with Guided Pathways FYE program. This has yet to come to fruition, yet we hope that the STEM SLC will not lose out on students who want to participate in our program because of similar support offered through FYE.
- Retention from Fall to Fall, specifically in students being persistent in sticking to a STEM major/pathway.
 - With the data showing low success rates in Calculus I, we know that increasing successful completion is a significant challenge for our program. We hope that as we restructure the interventions that are implemented, we will witness higher levels of success in Calculus, as well as an increased number of students who continue on a STEM pathway at the university level after they leave our college.

4.0 Outcome Assessment

Note: Sections 4.9 and 4.10 are new. Please review before filling out your outcome tables below.

4.1 List your outcomes and complete the expandable table below.

Note: This is the first PR submission for the STEM SLC. As such, the outcomes below have yet to be assessed. Outcomes were created based off data collected and highlighted in section 2.8. Responses will be provided for sections 4.2-4.10 based off our ability to properly speak to the questions given.

	What are your program outcomes?	When was the Assessment Completed?	When did you analyze the data?	When were changes made?	Number of Cycles Completed
1.	“New” STEM SLC students who start the program in a Fall semester will persist to the following Spring semester at a rate of 90% or higher and 80% from Fall to Fall.	N/A	N/A	N/A	N/A

2.	“New” STEM SLC students who enroll in STEM Cohort Sections (CHEM 107, CHEM 111A, CHEM 111B Math 141/143, Math 142, Math 151, 152) will succeed at a rate that is higher than non-cohort students in non-cohort sections	N/A	N/A	N/A	N/A
3.	“New” By the end of the fourth term of participation, 75% of all participants and 100% of active students will have a Comprehensive Student Educational Program Plan (CSEPP) on file.	N/A	N/A	N/A	N/A
4.	“New” STEM SLC students will transfer at a higher rate compared to non-cohort STEM students.	N/A	N/A	N/A	N/A

4.2 Assessment: Complete the expandable table below.

	Intended Outcomes	How will you determine if the outcome is met?	How will you collect the data?	Can this data be disaggregated at the student level?	What will the results show?
1.	STEM SLC students who start the program in a Fall semester will persist to the following Spring semester at a rate of 90% or higher and 80% from Fall to Fall.	Fall to Spring Retention Rates will be >90%. Fall to Fall Retention Rates will be >80%.	Program data collected and reported in Tableau dashboard collection compared to FC campus data via KPI Dashboard.	Yes	Results will indicate how wraparound services and program efforts create an environment where our students want to continually participate in as they pursue their academic goals.
2.	STEM SLC students who enroll in STEM Cohort Sections (CHEM 107, CHEM 111A, CHEM 111B Math 141/143, Math 142, Math 151, 152) will succeed at a rate that is higher than non-cohort students in non-cohort sections	Collected at the end of every academic year, success rates will be analyzed from cohort students who take cohort	Data collected via Banner	Yes	Results will show success rates in classes after intervention strategies have been implemented. This will highlight how dedicated Math Boot Camps, access to Math Success

		classes vs non-cohort students in non-cohort classes. The outcome will be met if cohort students show higher success rates when compared to their non-cohort counterparts.			Program, embedded tutoring through Hornets Tutoring, and program follow up by counselors and instructors are promoting success for students in our program.
3.	By the end of the third term of participation, 75% of all participants and 100% of active students will have a Comprehensive Student Educational Program Plan (CSEPP) on file.	Collect data at the end of third term year for all participants and compare for those that are active vs non-active.	Data collected via SARS and DegreeWorks	Yes	Data will indicate the types of educational plans that are being created by our counselors and at what point during our students' academic journeys. Comprehensive Student Educational Program Plans require a firm understanding of intended major and career goals. In a potential three-year pathway to goal completion/transfer, having a CSEPP after the third term speaks to the program's ability to help students navigate career and major exploration as well as provide clear and concise guidance.
4.	STEM SLC students will transfer at a higher rate compared to non-cohort STEM students.	Comparison of transfer rates for cohort students vs non-cohort students	Chancellor's Office Data	Yes	Results will show how our program's participants are able to complete their academic goals at a higher rate than non-cohort counterparts. This also speaks to counseling efforts as well as persistence rates.

- 4.3 How has assessment of program outcomes led to improvements in services provided to students by this program? N/A
- 4.4 How has assessment of outcomes led to improvements in student learning and achievement? N/A
- 4.5 What challenges remain to make your program outcomes more effective? N/A
- 4.6 Describe how the program's outcomes are linked to the [college's goals](#).

Program Outcomes focus on student success related to persistence, course level success, understanding of academic pathways, and transfer readiness. As such, they are directly tied to our college's goals as they promote success, cultivate a culture of equity, strengthen connections, and encourage a sense of accountability and continuous improvement. We have been intentional in identifying specific areas for growth that can potentially create more equitable outcomes for students, specifically in disproportionately represented populations in STEM majors and careers. We hope that when outcomes are assessed in the next PR cycle, the data collected will highlight this commitment to the college's goals.

- 4.7 Describe how the program's outcomes support the achievement of the [institution level SLOs](#).
Program Outcomes support achievement of the following institution level SLOs:

Critical Thinking and Information Competency: Students will be able to think critically by analyzing data in addressing and evaluating problems and issues in making decisions.

Solve Problems: Students will be able to recognize whether or not a problem exists, identify components of a problem or issue, create a plan of action to resolve an issue, and monitor, evaluate and revise the plan as necessary.

STEM SLC students participate in career development exercises that are tied to their academic and personal goals. They are required to think critically about their intended pathways and make informed decisions each semester regarding educational planning and their progress towards completion.

Personal Responsibility and Professional Development: Students will be able to demonstrate self-awareness, social and physical wellness, and workplace skills.

Our COUN 151- Career and College Success- course as well as program events and workshops give the opportunity for students to learn and develop both personally and professionally. STEM SLC students are challenged to self-reflect each term upon their progress towards goal completion as well as to contribute to our cohort through participation in our events. By the time that students leave our program and college, they will have had the opportunity to heighten their level of self-awareness and increase their understanding of the skills necessary to compete in the 21st century economy.

- 4.8 A. What methods are used to assess the program's success in serving the student population that interacts with your program? N/A

4.9 At least one outcomes listed in 4.1 should address the following:

A. List the outcomes that focuses on individual student learning or actions.

Outcome II: STEM SLC students who enroll in STEM Cohort Sections (CHEM 107, CHEM 111A, CHEM 111B Math 141/143, Math 142, Math 151, 152) will succeed at a rate that is higher than non-cohort students in non-cohort sections.

B. Identify methods to assess outcomes in such a way that the data can be disaggregated.

Course success rates for cohort students in cohort sections compared to non-cohort students in non-cohort sections will be disaggregated and analyzed.

C. Identify a process for using outcome assessment data to improve student services programs

Data will be used as a basis for collaboration with discipline faculty as well as academic support programs and services on campus. Evaluating success in each course level and the support tied to it will be critical in understanding its contributing factors.

D. Identify a process for assessing outcomes and collecting data that can be used to build dashboards (where applicable).

We currently have a STEM SLC dashboard in Tableau and the data associated with this outcome will be stored there.

4.10 Outcomes Equity Analysis

A. Looking at the one outcome from 4.9, do you find significant differences by race, ethnicity, gender, and other categories? Describe here what the data shows. What strategies will you use to close the attainment gaps among groups of students? What kinds of professional learning would help?

Disaggregated data indicates an attainment gap in Chemistry and Math success rates for LatinX students as well as those who identify as female. This gap is present, specifically, in our cohort-based courses and is an immediate cause of concern for our program. Strategies to close this gap include:

- Increasing engagement in program activities, specifically boot campus and pre-intervention support that occur before each semester begins
- Providing earlier progress checks with students to connect to support as soon as possible during the semester
- Discussing pathways with students earlier to increase understanding of course requirement and two-year vs three-year pathways
- Incentivizing participation in one of the tutoring services offered through our program or academic support center
- Connecting with students earlier during recruitment periods to increase sense of connectedness, break down barriers to participation, and heighten awareness of available support

Additionally, professional development aimed at a better understanding of success in STEM pathways for underrepresented populations would be incredibly valuable in helping our stakeholders better cultivate program efforts and support.

5.0 Evaluation of Progress Toward Previous Strategic Action Plans

N/A- Unable to complete this section as this is our first submission for PR. Goals have been established and will be evaluated for the next PR submission.

6.0 Strategic Action Plans (SAP)

Using the tables below, list the strategic action plans (SAPs) for your program. These plans should follow logically from the information provided in the self-study. Use a separate table for each SAP.

SAPs for this three-year cycle:

STRATEGIC ACTION PLAN # 1	
Strategic Action Plan Name:	Increase Math success in College Algebra and Calculus I
List College goal/objective the plan meets:	College Goal #: 1 Promote Success for Every Student Objective #4: Increase completion of courses, certificate, and degree programs, and transfer readiness College Goal # 4: Commit to Accountability and Continuous Quality Improvement Objectives #1-3
Briefly describe the SAP, including title of person(s) responsible and timeframe, in 150 words or less.	As identified in our data collection, success rates in College Algebra and Calculus I present an area for improvement in our program. We hope that by increasing the support offered for Math as well as by tracking participation we will be able to increase overall success for students in our program. Resources are being requested for supplies (calculators, course packet, etc.), Hornets Tutoring, and Professional Experts to conduct Math Boot Campus. Additionally, collaboration between counselors and Math faculty will need to increase throughout each semester.
What <i>Measurable Outcome</i> is anticipated for this SAP?	Outcome #1, STEM SLC students who start the program in a Fall semester will persist to the following Spring semester at a rate of 90% or higher and 80% from Fall to Fall. Outcome # 2, STEM SLC students who enroll in STEM Cohort Sections (CHEM 107, CHEM 111A, CHEM 111B Math 141/143, Math 142, Math 151, 152) will succeed at a rate that is higher than non-cohort students in non-cohort sections
What specific aspects of this SAP can be accomplished without additional financial resources?	Intentional and consistent collaboration between counselors and Math faculty regarding the structure of our follow up/support can be accomplished without additional financial resources.
If additional financial resources would be required to accomplish this SAP, please complete the section below. Keep in mind that requests for resources must follow logically from the information provided in this self-study.	
Type of Resource	Requested Dollar Amount
Potential Funding Source	

Personnel	Professional Experts- Math Boot Camps: \$3,300/ year Hornets Tutors \$20,000/ year	General, SEA, Enrollment and Re- Engagement Funds
Facilities		
Equipment		
Supplies	Calculators, Printed Packets, Pencils, Notebooks, etc: \$10,000/year	General, SEA, Enrollment and Re- engagement Funds
Computer Hardware		
Computer Software		
Training	Professional Development for instructors and counselors: \$4000/ year	General, SEA, Enrollment and Re- engagement Funds
Other		
Total Requested Amount	\$37,300/year	

STRATEGIC ACTION PLAN # 2	
Strategic Action Plan Name:	Increase opportunities for connection and support for cohort students in their second year and beyond
List College goal/objective the plan meets:	College Goal #:1 Promote Success for Every Student Objective #4 : Increase completion of courses, certificate, and degree programs, and transfer-readiness College Goal #2: Cultivate a culture of equity Objective 4: Foster a sense of belonging where all students are welcome...
Briefly describe the SAP, including title of person(s) responsible and timeframe, in 150 words or less.	Traditionally, events and workshops offered by the STEM SLC are tailored to students in their first academic year. Those that remain active in the program in their second and third years receive consistent counseling follow up and access to cohort courses, yet do not, typically, attend events because of capacity issues on campus or due to attendance at previous events with similar themes. To increase a sense of belonging and overall persistence, our program can do better in creating events that cater to the needs of this portion of our student population (e.g. transfer workshops, career development follow up, etc.). In supporting this SAP, it would also be beneficial to have a designated hub on campus where STEM SLC students can meet, receive tutoring, and collaborate with counseling and discipline faculty all in one place.

What <i>Measurable Outcome</i> is anticipated for this SAP?	<p>Outcome # 3, By the end of the third term of participation, 75% of all participants and 100% of active students will have a Comprehensive Student Educational Program Plan (CSEPP) on file.</p> <p>Outcome #4, STEM SLC students will transfer at a higher rate compared to non-cohort STEM students.</p>	
What specific aspects of this SAP can be accomplished without additional financial resources?	SEA funds being allocated to adjunct counseling can help accomplish this without additional financial resources. With uncertainty around how these funds will be allocated, we are including the cost of 1 adjunct counselor/year below (23 hours/week/49 weeks).	
If additional financial resources would be required to accomplish this SAP, please complete the section below. Keep in mind that requests for resources must follow logically from the information provided in this self-study.		
Type of Resource	Requested Dollar Amount	Potential Funding Source
Personnel	Adjunct counselor \$73,000	SEA
Facilities	STEM SLC Hub (dedicated space on campus)	
Equipment		
Supplies	Hospitality/Supplies for events \$5000/ year	General, SEA, Enrollment and Re-engagement Funds
Computer Hardware		
Computer Software		
Training		
Other		
Total Requested Amount	\$78,000/ year	

STRATEGIC ACTION PLAN # 3	
Strategic Action Plan Name:	Expand Opportunities for Undergraduate Research/Experiential Learning/Transfer Exposure
List College goal/objective the plan meets:	<p>College Goal #: 1 Promote Success for Every Student Objective #: 2 Enhance workforce training opportunities Objective # 3: Improve student critical thinking skills Objective 4: Increase completion of courses, certificate, and degree programs, and transfer readiness</p> <p>College Goal # 3: Strengthen connections with our community Objective 2: Create and expand relationships with local businesses and civic organizations</p>
Briefly describe the SAP, including title of person(s)	Through increasing opportunities for undergraduate research, transfer exposure via campus tours, and attaining internship opportunities we plan to strengthen the connection our students

responsible and timeframe, in 150 words or less.	have to their major/career choices. These opportunities will take students out of Fullerton College and put them in environments with STEM professionals in our local communities and transfer universities. Locally, we can also collaborate with discipline faculty to create research experiences on our campus (PE pay needed). Overall, increasing opportunities in this area can lead to students making more informed decisions on their transfer destinations and career pathways, as well as lead to higher success rates in STEM specific courses. Note: "Summer Undergraduate Research" cost is based off Cal Poly Pomona's Summer Undergraduate Research Experience program cost plus stipend provided to students to eliminate barriers related to participation.
What <i>Measurable Outcome</i> is anticipated for this SAP?	Outcome #1, STEM SLC students who start the program in a Fall semester will persist to the following Spring semester at a rate of 90% or higher and 80% from Fall to Fall. Outcome #4, STEM SLC students will transfer at a higher rate compared to non-cohort STEM students.
What specific aspects of this SAP can be accomplished without additional financial resources?	N/A.

If additional financial resources would be required to accomplish this SAP, please complete the section below. Keep in mind that requests for resources must follow logically from the information provided in this self-study.

Type of Resource	Requested Dollar Amount	Potential Funding Source
Personnel	Professional Expert Pay \$11,000/ year (4 PE contracts at 50 hours- \$55/hour)	General, Enrollment and Re- engagement Funds
Facilities		
Equipment	\$5000/year	General, Enrollment and Re- engagement Funds
Supplies		
Computer Hardware		
Computer Software		
Training		
Other	Summer Undergraduate Research \$20,000/year	General, Enrollment and Re- engagement Funds
Total Requested Amount	\$36,000/ year	

STRATEGIC ACTION PLAN # 4

Strategic Action Plan Name:	Hire a Program Assistant- Admin I (50%)	
List College goal/objective the plan meets:	<p>College Goal #1: Promote success for every student Objective # 4: Increase completion of courses, certificate and degree programs, and transfer-readiness</p> <p>College Goal #2 Cultivate a Culture of Equity Objective #3: Increase outreach to and recruitment of students from underserved populations</p>	
Briefly describe the SAP, including title of person(s) responsible and timeframe, in 150 words or less.	<p>Having clerical support will allow more intentional follow up from our counselors and more efficient outreach efforts to transpire. This will give more opportunities for students to gain support which can lead to higher levels of persistence, success in gateway courses, more effective tracking of educational plan creation, and an increase in transfer rates/degree completion. Note: The position is listed at 50% because we know that other Special Programs in the Counseling Division need the same type of clerical support. Sharing an admin assistant with one of those programs would still fit our program's needs.</p>	
What <i>Measurable Outcome</i> is anticipated for this SAP?	<p>Outcomes #1, STEM SLC students who start the program in a Fall semester will persist to the following Spring semester at a rate of 90% or higher and 80% from Fall to Fall.</p> <p>Outcome 2, STEM SLC students who enroll in STEM Cohort Sections (CHEM 107, CHEM 111A, CHEM 111B Math 141/143, Math 142, Math 151, 152) will succeed at a rate that is higher than non-cohort students in non-cohort sections</p> <p>Outcome 3, By the end of the third term of participation, 75% of all participants and 100% of active students will have a Comprehensive Student Educational Program Plan (CSEPP) on file.</p> <p>Outcome #4, STEM SLC students will transfer at a higher rate compared to non-cohort STEM students.</p>	
What specific aspects of this SAP can be accomplished without additional financial resources?	<p>We can continue to dedicate our counseling hours to the effort listed above, yet it would be more efficient for our program, in the long run, to add a program assistant.</p>	
<p>If additional financial resources would be required to accomplish this SAP, please complete the section below. Keep in mind that requests for resources must follow logically from the information provided in this self-study.</p>		
Type of Resource	Requested Dollar Amount	Potential Funding Source
Personnel	\$34,000/year	General
Facilities		
Equipment		
Supplies		

Computer Hardware		
Computer Software		
Training		
Other		
Total Requested Amount	\$34,000/year	

STRATEGIC ACTION PLAN # 5		
Strategic Action Plan Name: (formerly called short-term goal)	Increase outreach/recruitment efforts within our local high school districts	
List College goal/objective the plan meets:	College Goal #: 3 Strengthen Connections with our Community Objective # 1: Create and expand partnerships with local K-12 and higher education institutions	
Briefly describe the SAP, including title of person(s) responsible and timeframe, in 150 words or less.	Counselor, adjunct counselors, and discipline faculty can develop workshops and presentations for local high school students to maximize recruiting efforts and increase knowledge of STEM related careers for the upcoming academic year (2023-2024)	
What <i>Measurable Outcome</i> is anticipated for this SAP?	Establish partnerships with local high schools and direct pathway to participation in the STEM SLC	
What specific aspects of this SAP can be accomplished without additional financial resources?	Will require additional funding for activities. Much of this effort can, be completed without additional financial resources if time is allocated effectively for counseling faculty members.	
If additional financial resources would be required to accomplish this SAP, please complete the section below. Keep in mind that requests for resources must follow logically from the information provided in this self-study.		
Type of Resource	Requested Dollar Amount	Potential Funding Source
Personnel		
Facilities		
Equipment		
Supplies- Recruitment	\$2,000/ year	General, SEA, Enrollment and Re-engagement Funds
Computer Hardware		
Computer Software		
Training		
Other		
Total Requested Amount	\$2,000/ year	

7.0 Long Term Plans

Describe the long-term plans (four-six years) for your program. Please consider future trends in your narrative. Identifying financial resources needed for these plans is optional.

Long-term goals for the STEM SLC include:

- Establishing a consistent yearly budget which would guarantee our current practices can continue and our program can grow in the future
- Locating a space on campus for a “STEM SLC Hub”
 - This would establish a gathering space for students in the program to connect with each other and receive counseling and academic support services.
- Hiring an additional full-time counselor/coordinator as well as more adjunct counseling support dedicated to STEM pathways
 - This would allow for an increase in the number of counseling appointments available as well as ensure that the program is led through the lens of the wraparound services needed for overall student success in STEM.
- Expanding the support offered in cohort classes to non-cohort sections in Math and Science
 - Institutionalizing Hornets Tutoring, Math/Science Boot Camps, and STEM related tutoring services for each section offered.
- Creating a larger STEM program at FC coordinated in collaboration with STEM faculty to provide academic support, academic and career counseling, and increase opportunities for extracurricular involvement.
- Increasing paid research opportunities on campus and at local universities
- Formulating partnerships with local UC and CSU campuses for direct transfer pathways for STEM SLC students and the larger STEM student population

7.1 Describe in detail your need for additional resources as listed above (if applicable)

8.0 Self-Study Summary

This section provides the reader with an overview of the highlights, themes, and key segments of the self-study. It should not include new information that is not mentioned in other sections of this document.

The STEM Success Learning Community (STEM SLC) provides comprehensive counseling and academic support for first year and returning students pursuing pathways in Science, Technology, Engineering, and Mathematics. Since beginning in Fall 2016, the number of students served has consistently grown each academic year. We have established a process for how we support students from onboarding and enrollment to academic and counseling support, with the ultimate goal being completion. From 26 students in that first year to now 196 active students, our personnel has also grown to meet student needs. Our counselors work closely with our Office of Institutional Research to collect quantitative and qualitative data each year to make decisions on how to best disseminate our wraparound services. In writing this Program Review, we have identified areas of strength in how we support students as well as those for growth for specific ways that we need to move forward. The data shown in section 2.0 highlights these areas for growth in terms of Math and Chemistry success and persistence rates from year to year for participants. Furthermore, our Five-Year Outcomes Report (2016-2021) shows promising information related to the impact that our program is having for students who complete their academic goals with us. From this, we know that our students are transferring faster than their counterparts, yet also are having trouble with Math gateway courses. The takeaway is that STEM SLC

students are resilient in retaking courses and are eventually reaching success, yet disaggregated data shows that we need to do better in Math success for underrepresented populations in STEM (e.g. females, Latinx students).

Moving through our 7th year of operation, we know our strengths and have established outcomes that need to be assessed in order to better support our students. With that said, we have yet to secure a consistent funding source to support program efforts. Funding has varied from year to year from one-time “General” funds to supplementing resources from external grants. The most recent Title V Career Pathways grant has paid for embedded tutoring in each of our cohort sections and additional adjunct counseling hours yet is ending this Spring. Additionally, SSSP funds, which supported adjunct counseling hours, has been reallocated via the SEA committee and we are unsure if our adjunct counselor hours will be fully supported moving forward. Overall, this PR highlights the positive aspects of our efforts and the many ways that our program can expand. Examples include increasing Math support, giving students opportunities to participate in undergraduate research, establishing partnerships with local high schools, and increasing staffing to better provide the holistic support that we strive to ensure each student receives. We fully believe that the foundation of support we provide is valuable and can be further developed, with the right funding, to increase STEM success campus-wide. We hope that by gaining funding for the resources requested, as well as by continuing to make data-driven decisions based on assessing our outcomes, our next Program Review will highlight the need to institutionalize the pillars of support provided by the STEM SLC for all STEM students at Fullerton College.

Thank you for your time and consideration in reviewing our submission.

9.0 Publication Review

Publication	Date last reviewed	Is the information accurate?	URL of publication
STEM SLC Website	12/14/22	Yes	https://stem.fullcoll.edu/stemslc/
STEM SLC Canvas Page	12/14/22	Yes	https://fullcoll.instructure.com/courses/24040

Routing & Response Page

Originator → IMS → Program Review Chair → Appropriate President's Staff Member

Originator: *Electronically submit completed Program Review to Division Dean/IMS for review.*

Appropriate Immediate Management Supervisor (IMS): *Select one and provide response if necessary. Forward electronically to appropriate Vice President's Office.*

RESPONSE

Jennifer LaBounty	Dean	Dec 20, 2022
Printed name of IMS	Title	Date

I concur with the findings contained in this Program Review.

I concur with the findings contained in this Program Review with the following exceptions (include a narrative explaining the basis for each exception):

Area of exception:

I do not concur with the findings contained in this Program Review (include a narrative explanation):

Appropriate President's Staff Member: *Print Program Review, sign, and route both hard copy and electronic version to Program Review Chair.*

ACKNOWLEDGING RECEIPT

Printed Name	Signature	Title	Date



Fullerton College Mission Statement

MISSION

Fullerton College advances student learning and achievement by developing flexible pathways for students from our diverse communities who seek educational and career growth, certificates, associate degrees, and transfer. We foster a supportive and inclusive environment for students to be successful learners, responsible leaders, and engaged community members.

VISION

Fullerton College will transform lives and inspire positive change in the world.

*Approved by Fullerton College
President's Advisory Council and
accepted by President Schulz
May 2017.*

VALUES

Community

We promote a sense of community that enhances the well-being of our campus and surrounding areas.

Diversity

We embrace and value the diversity of our entire community.

Equity

We commit to equity for all we serve.

Excellence

We honor and build upon our tradition of excellence.

Growth

We expect everyone to continue growing and learning.

Inclusivity

We support the involvement of all in the decision-making process.

Innovation

We support innovation in teaching and learning.

Integrity

We act in accordance with personal integrity and high ethical standards.

Partnership

We work together with our educational and community partners.

Respect

We support an environment of mutual respect and trust that embraces the individuality of all.

Responsibility

We accept our responsibility for the betterment of the world around us.









FINAL 22-23 -STEM SLC Progam Review

Final Audit Report

2022-12-21

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