



FACULTY STAFFING REQUEST FORM

Qualitative Criteria

School: Math and Science

Department: Math and Science

Position Title (number of requested positions): 1 Professor of STEM (aSTEM Coordinator)

Number of FT Faculty in Fall 2021: 0

Number of PT Faculty teaching in Fall 2021: 0

Please submit your responses to the prompts below (no more than 800 words) to the Office of Academic Affairs by October 15, 2021 at 5 PM.

1. Potential Load and/or Potential Direct Student Contact: *(FTE, Courses, number of sections, student/counselor ration; no need to submit days/times of teaching schedule at this time):*

This position is to direct and coordinate Advancing Science, Technology, Engineering, and Math (aSTEM) which is a new program approved by SCC and funded through SEA funds which is designed to increase underrepresented STEM students' (USSs) success at SCC. This is a unique non-instructional full-time tenure-track faculty position at 1.0FTE that encompasses all peripheral faculty responsibilities. Similar programs have an average of 125 students in the program and that warrants an administrator. Some colleges have over 200 students in similar programs which would be much greater than 1.0FTE.

2. Availability of qualified hourly faculty to teach and servestudents:

From the estimated 35-40 weekly hours of responsibilities for this role and 67% load maximum for part-time faculty, there are no qualified hourly faculty to serve students. This is also a unique role where proper training and/or experience being in similar programs would be essential to USSs and SCC. Permanence is important to programs similar to aSTEM so hourly faculty in this role would be insufficient for stability and longevity of this program.

3. Why is it important to have a FT faculty in this role?

USSs at SCC have a lower enrollment percentage in STEM than in other disciplines (Table 1).

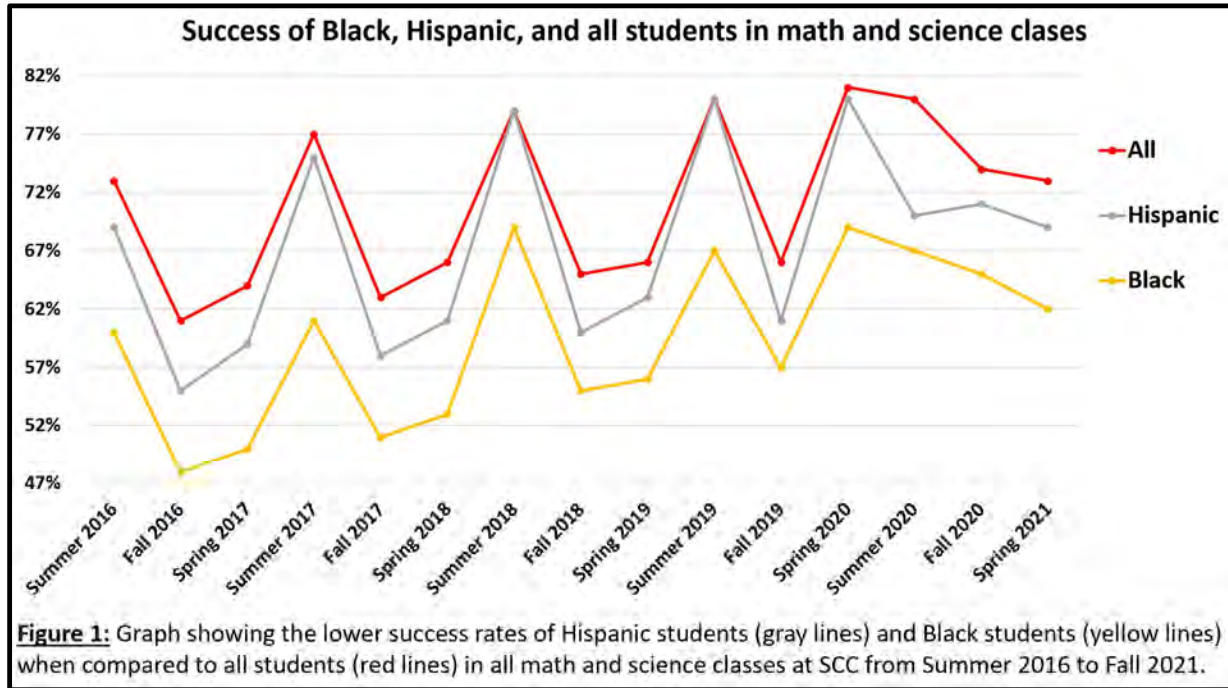
STEM* Enrollment By Demographic in Fall 2021								
Course Type	Am. Indian or Alaskan Native	Asian or PI	Black Non-Hispanic	Hispanic	Others	TWO OR MORE	White Non-Hispanic	Total
STEM Students**	3	250	80	123	29	391	263	1139
STEM %	0.3%	21.9%	7.0%	10.8%	2.5%	34.3%	23.1%	100%
Non-STEM Students**	47	1370	1186	1008	262	3044	2199	9116
Non-STEM %	0.5%	15.0%	13.0%	11.1%	2.9%	33.4%	24.1%	100%

*STEM Classes: BIO 2, 3; CHEM 1, 2, 3, 4; ENGR 1, 30, 45; MATH 2, 51, 20, 21, 22, 23, 40; PHYS 2, 4, 6, 7
 **Unique students, may be enrolled in other classes as well

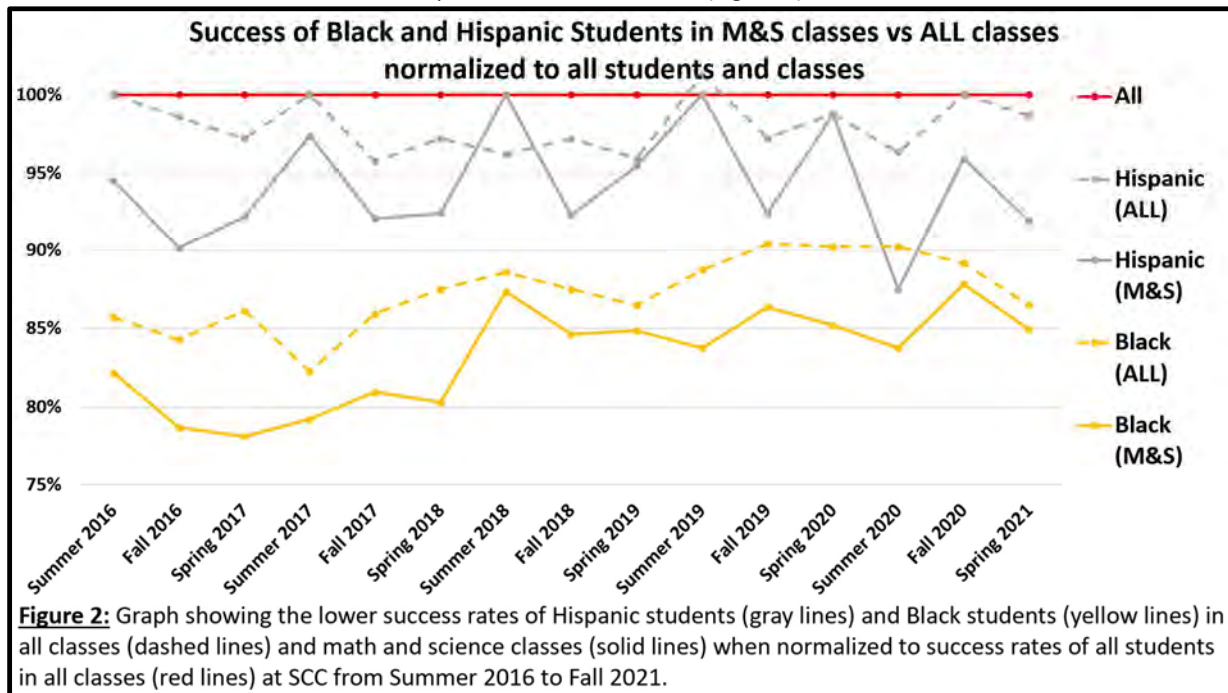
Table 1: Table showing the lower percentage of Black students (yellow) and American Indian or Alaskan Native students (blue) enrolled in STEM classes compared non-STEM classes in Fall 2021 at SCC.

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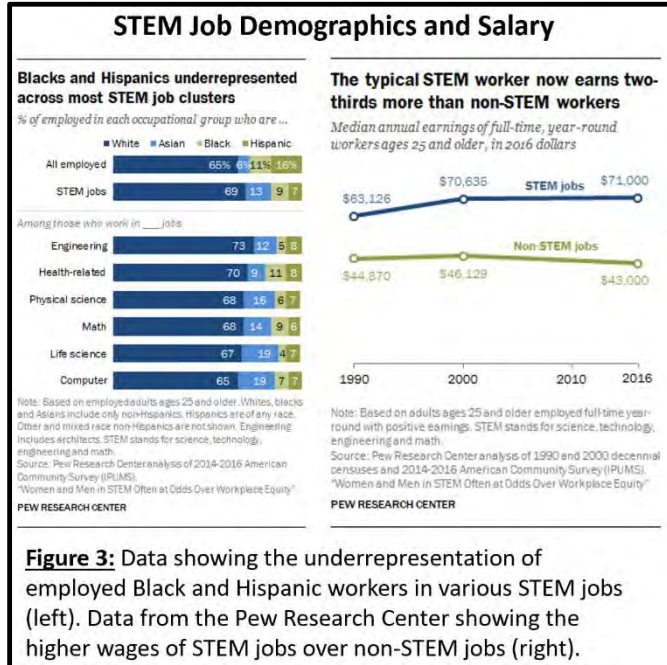
USSs have lower success rates in math and science classes when compared to all students enrolled in math and science classes since 2016 (Figure 1).



USSs have less success in STEM when compared to all classes at SCC (Figure 2).



Lower success of USSs leads to lower percentages of underrepresented STEM workers while STEM workers are also paid higher than non-stem workers (Figure 3).



MESA and TRIO at SCC had similar goals to aSTEM. MESA started at SCC in 1993 and had a successful thriving student population for many years. Starting in 2013, there was turnover in the MESA director position multiple times and eventually MESA was disbanded in 2017. SCC has failed to provide our USSs with an environment to succeed since that time. There have been great program directors but each have left the role for their original professor roles (release time) or better opportunities elsewhere. By making this a full-time tenure-track position, we can recruit and retain a candidate with long-term goals in helping our USSs students succeed.

4. Areas where additional expertise is needed:

This is a new program so this is definitely an area where additional expertise is needed. There needs to be someone that can connect with our underrepresented students and to create opportunities for underrepresented students which include a college-wide environment for them to succeed. We need someone that has experience and/or is trained in both STEM and in advocating for diversity, equity, and inclusion in STEM.

5. What will be the impact (students, program, College, other) if this position is not filled?

SCC is not meeting the needs of our USSs. If this position is not filled, SCC will continue to ignore the inequities in STEM education in Solano County which will lead to further inequities in the workforce. SCC should be THE place that USSs can go to make a future for themselves in Solano County. Unfortunately, USSs enroll at SCC and they have a greater chance of failure than the rest of the students. If this position is not filled, SCC would not be fulfilling its commitment to diversity, equity, and inclusion. SCC is the only community college in the area without a program to serve USSs. Having a full-time tenure-track position would ensure that the USSs always had an advocate and that they always had someone there for them to help them succeed.

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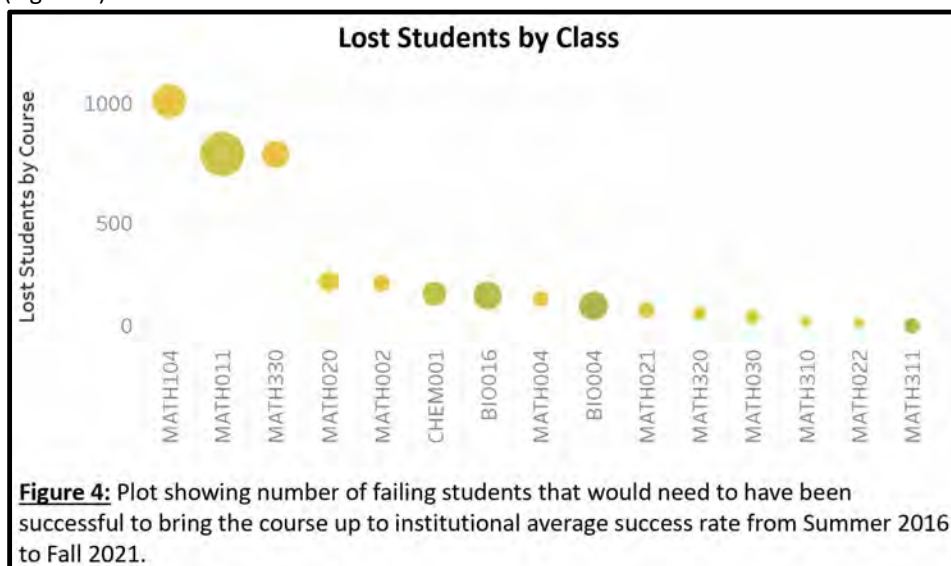
6. How does this position help fulfill the mission of the college and our commitment to antiracist practices?

SCC and aSTEM with the leadership of the director both seek to provide diverse, inclusive and equitable opportunities for USSs to succeed in college and the workforce. This also aligns directly with SCC’s antiracist practices by stabilizing the aSTEM program which will empower USSs in STEM by increasing their success in college and beyond.

7. Other compelling factors not identified in responses 1-7 above:

Although having a non-instructional faculty member in the math and science department is non-traditional, it is not impossible. Frederick Moore at City College of San Francisco (CCSF) has been the successful MESA Director at CCSF but is a FT faculty in chemistry with no instructional load (not release time). Frederick Moore is an alumnus of SCC and of MESA, earned his PhD from UCSF, and now a faculty member at CCSF. USSs in MESA at CCSF have high transfer rates to UC Berkeley.

Since 2016 there have been ~2,500 lost students in algebra and statistics courses. This is the “number of failing students that would need to have been successful to bring the courses up to institutional average success rate” (Figure 4).



When MESA was thriving at SCC, MESA students worked as tutors and peer facilitators for personalized academic workshops that increased success rates of the entire college. The lack of the availability of tutors during these last few years may have led to less successful students and eventually less revenue for SCC.

A permanent aSTEM director will increase revenue at SCC. More successful USSs mean more degrees, transfers, certificates, etc. Additionally, through the Student Success Allocation, we would receive additional funds for the same outcomes attained by students who receive Pell Grants, and College Promise Grants which may be a percentage of our USSs. We will also have more successful students throughout the college because of the increase in tutoring availability.

We need to invest in our underrepresented STEM students at SCC. By filling this position, our USSs will benefit, the entire STEM student body would benefit, and SCC would benefit.



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The position was identified in a previous program review: Yes or **No**

If no, what changed necessitating a request for a full-time faculty member?

No one has proposed this ongoing need.