

**AN EVALUATION OF THE PATHWAYS AND CAREER EXPLORATION IN STEM
(PaCES) PROGRAM:
COHORT B (TIER 1 PROGRAMMING)**

Midpoint Brief

Prepared for:



at



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INTRODUCTION

Two community colleges in Los Angeles, Los Angeles Valley College (LAVC) and Los Angeles Pierce College, have implemented an NSF-funded program to support their STEM students: Pathways and Career Exploration in STEM (PaCES). Both community colleges are Hispanic Serving Institutions. Partnering with them in this program are the University of Southern California and BioscienceLA, an organization designed to promote the Southern California life sciences industry. The goals of the PaCES program are to:

- Increase STEM retention of underrepresented minority students
- Increase the transfer rate from 2- to 4-year colleges as STEM majors
- Inform changes and improvements of academic resources to support future STEM majors at 2-year institutions

In the 2022-2023, 21 students experienced the PaCES first year (Tier 1) programming. This group of students was called "Cohort B."

Methodology

In September 2022 (5 students), and March of 2023 (15 students) completed an **online pretest** survey; 1 student did not complete the pretest at all.

Toward the end of the spring quarter, in April of 2023, an **online posttest** survey was sent to the 21 students who participated in the program as part of Cohort B; all students completed the online survey. Note that this is considered the mid-point of the program as they can continue next year with the Tier 2 programming. Questions included satisfaction with many aspects of the program, impact on attitudes toward STEM, educational goals, career goals, and suggestions for program improvement. The survey included both quantitative and qualitative items.

Participant Demographics

Survey participant demographics from the pretest survey (N=20) are shown below.

Female	40%	African-American/Black	--
Male	55%	Asian-American/Asian	15%
Did not specify	5%	Hispanic or Latino/a/x	65%
		Native American or Alaska Native	--
First year	35%	Pacific Islander	--
Second year	40%	White	30%
Third Year	15%	Other	
Other	10%	<i>(check all that apply)</i>	
LA Valley College	90%	First-generation college	85%
Pierce College	10%		

This document provides a brief summary of the Cohort B data. They will be surveyed again at the end of the Tier 2 programming in the spring of 2024; full analyses and a summary report will be provided at that time. Complete mid-point data are provided in the Appendix.

KEY POINTS

Things to notice about this cohort:

- More than a third are first-year students, compared with none of Cohort A (largely second-year students), and none of the pilot group (largely third-year students)
- Most of these Cohort B students experienced only a month or two of the PaCES programming between pretest and posttest, since three-quarters of Cohort B joined the program in the spring.

As with the pilot group and Cohort A, the PaCES **program elements** scored well with Cohort B.

Even after only a month or two of the PaCES program, students feel better **connected** to the STEM community as a result of program participation.

Many of these students say that, as a result of PaCES, they plan to take part in a variety of **science educational activities**, including enrolling in a variety of STEM classes, applying for a summer internship, and seriously considering a STEM graduate program.

There is still room for the Tier 2 programming to impact these Cohort B students:

- The impact of the Tier 1 programming on **career goals** is less strong than on students experiencing the full Tier 2 programming. Note, however, that there is large drop in the proportion of students saying they are “undecided” in their career goal (45% vs. 14%).
- The impact of the Tier 1 programming on **STEM confidence** is less strong than on students experiencing the full Tier 2 programming.

STUDENT RATINGS OF PROGRAM ELEMENTS

Mid-point ratings:	Mean (0-10)	% 8,9, or 10	N
Science Field Trips	9.3	95%	20
Bio 185 Career/Research Symposia	9.2	100%	15
Counseling 40 at Pierce	9.0	100%	2
Participating in SACNAS	8.4	73%	15
College 101 at LAVC	8.2	67%	9
PaCES Program Overall	9.1	95%	21

PROGRAM IMPACT ON SENSE OF COMMUNITY/SUPPORT

<i>Please indicate how much you disagree or agree with the following statements: (asked before program and at mid-point)</i>	Before Program		Mid-Point	
	Mean (1-5)	% Agree+ Strongly	Mean (1-5)	% Agree+ Strongly
*I have STEM peers who support me	3.8	70%	4.2	76%
*I have a STEM mentor who supports me	3.5	45%	4.1	71%
*I feel a part of the STEM community at my college	3.6	55%	4.1	76%

*Statistically significant pre/post difference, $p \leq .01$.

IMPACT ON ATTITUDES TOWARD SCIENCE

<i>Please indicate how much you disagree or agree with the following statements: (asked before program and at mid-point)</i>	Before Program		Mid-Point	
	Mean (1-5)	% Agree+ Strongly	Mean (1-5)	% Agree+ Strongly
I plan to incorporate science into my career	4.6	90%	4.2	81%
Science is very interesting	4.6	95%	4.3	90%
Someone like me can succeed as a scientist	3.9	75%	3.9	71%
I'm aware of STEM research and internship opportunities for college students	3.4	55%	4.1	85%
I understand the types of careers that are available to scientists	3.5	60%	3.9	76%
I know the steps to take to pursue a career in science	3.3	45%	3.6	56%

†approaches statistical significance, $p = .09$.

IMPACT ON SCIENCE EDUCATIONAL ACTIVITIES

<i>Please indicate your level of interest in doing the following (1=Not at all, 2=A little, 3=Somewhat, 4=Very, 5=Extremely): (asked before program and at mid-point)</i>	Before Program		Mid-Point	
	Mean (1-5)	% Very+ Extremely	Mean (1-5)	% Very+ Extremely
Having a STEM internship/research experience during college	4.4	90%	4.2	71%
Taking STEM courses in college	4.6	95%	4.7	100%
Graduating from a 4-year college with a STEM degree	4.6	90%	4.5	86%
Transferring to a 4-year college	4.7	90%	4.5	86%
Pursue a higher education degree in STEM (Master's or Ph.D.)	3.8	60%	3.8	53%
Pursuing a post-graduate degree in the medical field (physician, nurse, pharmacist, physical therapy, etc.)	3.2	50%	3.0	38%

There were no statistically significant changes from pre- to posttest on these items.

IMPACT ON SCIENCE EDUCATIONAL ACTIVITIES

<i>Which of the following have you done as a result of your participation in the PaCES program? (asked at program mid-point)</i>	Definitely Won't Do	Probably Won't Do	Maybe Plan to Do	Definitely Plan to Do	Already Done
Enroll in a variety of STEM college classes			29%	29%	43%
Apply for a STEM summer internship		5%	43%	43%	10%
Consider a STEM academic pathway different from the pathway I had when I first started college	5%		33%	14%	48%
Seriously consider a STEM graduate program			43%	38%	19%

IMPACT ON STEM CAREER FIELD

What are your career goals? (asked before program and at mid-point)	Before Program	Mid-Point
Health professions/medical	45%	48%
University-based science researcher/professor	20%	19%
Science industry or biotechnology	40%	29%
Environmental science	30%	29%
Veterinary science	15%	14%
K-12 education	--	--
Government/public policy	10%	10%
Energy sector	5%	10%
*Undecided	45%	14%
Other, please specify	5%	5%

*difference between pre- and posttest, $p \leq .05$

IMPACT ON CAREER CHOICE

Thinking about your career plans with regards to STEM in general, where do you place your plans along this scale? (asked before program and at mid-point) (1=Definitely not, 5=Definitely)	Before Program	Mid-Point
Definitely NOT planning to have a career in STEM		
Probably not planning to have a career in STEM	10%	5%
Having a career outside of STEM that still incorporates STEM	20%	14%
Probably planning a career in STEM	30%	24%
Definitely planning to have a career in STEM	40%	57%
*Mean (1-5)	4.0	4.4

*difference between pre- and posttest, $p \leq .05$

Thinking about your career plans with regards to the medical field or health professions, where do you place your plans along this scale? (asked before program and at mid-point) (1=Definitely not, 5=Definitely)	Before Program	Mid-Point
Definitely NOT planning to have a career in the medical field or health professions	20%	14%
Probably not planning to have a career in the medical field or health professions	5%	10%
Having a career outside of the health professions that still incorporates the health professions	20%	19%
Probably planning a career in the medical field or health professions	40%	33%
Definitely planning to have a career in the medical field or health professions	15%	24%
†Mean (1-5)	3.3	3.6

†approaches statistical significance, $p = .06$.

IMPACT ON SELF-CONFIDENCE IN SCIENCE-RELATED ABILITIES

<i>How confident are you in your ability to do the following? 1=Not at all, 2=A little, 3=Somewhat, 4=Very, 5=Extremely (asked before program and at mid-point)</i>	Before Program		Mid-Point	
	Mean (1-5)	% Very+ Extremely	Mean (1-5)	% Very+ Extremely
Pursue a STEM major in college	4.1	75%	4.2	81%
Approach a science professor with a question	3.8	65%	4.1	81%
Transfer to a 4-year college	4.1	80%	4.1	85%
†Succeed in college-level STEM classes	3.5	50%	3.9	67%
Develop a transfer plan to a 4-year college	3.8	60%	4.2	76%
Participate in STEM opportunities beyond coursework while at a 4-year college	3.8	65%	3.9	62%
Quantitative thinking and problem solving	3.7	60%	3.9	62%
*Find STEM resources for transfer students at a 4-year college	3.1	25%	4.0	67%
Explain the scientific method	3.7	65%	3.9	67%
Communicating scientific concepts to the general public (friends/family without a scientific background)	3.6	55%	3.8	62%
Give presentations of scientific work	3.3	40%	3.4	48%
Writing up scientific research results	3.2	45%	3.3	47%
†Conduct science literature searches	3.1	30%	3.6	43%

**statistically significant difference between pre- and posttest, $p \leq .05$; †approaches statistical significance, $p \leq .10$.*

**APPENDIX A. PACES ONLINE STUDENT SURVEY COMPLETE DATA 2023
END OF YEAR 1 SURVEY, COHORT B
N=21**

When we ask about "STEM," we mean "Science, Technology, Engineering, and Mathematics."

1. Please indicate how much you disagree or agree with the following statements: (N=21)

<i>(rotated statements in online survey)</i>	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean (1-5)
Science is very interesting.	5%		5%	43%	48%	4.3
I plan to incorporate science into my career.	5%		14%	29%	52%	4.2
I understand the types of careers that are available to scientists.	5%	5%	14%	52%	24%	3.9
I know the steps to take to pursue a career science.	5%	10%	29%	38%	19%	3.6
Someone like me can succeed as a scientist.	5%		24%	48%	24%	3.9
I'm aware of STEM research and internship opportunities for college students.	5%		10%	57%	29%	4.1

2. What are your career goals? (check all that apply) (N=21)

19%	(1) University-based science researcher/professor
48%	(2) Health professions/medical
14%	(3) Veterinary science
29%	(4) Science industry or biotechnology
29%	(5) Environmental science
10%	(6) Energy sector
10%	(7) Government/public policy
--	(8) K-12 education
14%	(9) Undecided
5%	(10) Other, please specify*

*"nursing"

3. Please indicate your level of interest in doing the following:
(N=21)

<i>(rotated statements in online survey)</i>	Not at all interested (1)	A little (2)	Somewhat (3)	Very (4)	Extremely interested (5)	Mean (1-5)
Taking STEM classes in college				29%	71%	4.7
Having a STEM internship/research experience during college		5%	24%	14%	57%	4.2
Transferring to a four-year college			14%	19%	67%	4.5
Graduating from a four-year college with a STEM degree			14%	19%	67%	4.5
Pursuing post-graduate work in STEM (Master's degree, Ph.D.)		19%	29%	5%	48%	3.8
Pursuing a post-graduate degree in the medical field (physician, nurse, pharmacist, physical therapy, etc.)	24%	10%	29%	19%	19%	3.0

4. Thinking about your career plans with regards to STEM in general, where do you place your plans along this scale? In this case, "STEM" does NOT include the medical field or health professions. (N=21)

	(1) Definitely NOT planning to have a career in STEM
5%	(2) Probably not planning to have a career in STEM
14%	(3) Having a career outside of STEM that still incorporates STEM
24%	(4) Probably planning a career in STEM
57%	(5) Definitely planning to have a career in STEM

5. Thinking about your career plans with regards to the medical field or health professions, where do you place your plans along this scale? This could include a career as a physician, nurse, physical therapist, pharmacist, dentist, etc. (N=21)

14%	(1) Definitely NOT planning to have a career in the medical field or health professions
10%	(2) Probably not planning to have a career in the medical field or health professions
19%	(3) Having a career outside of the health professions that still incorporates the health professions
33%	(4) Probably planning a career in the medical field or health professions
24%	(5) Definitely planning to have a career in the medical field or health professions

6. How confident are you in your ability to do the following? (N=21)

<i>(rotated statements in online survey)</i>	Not at all confident (1)	A little (2)	Somewhat (3)	Very (4)	Extremely confident (5)	Mean (1-5)
Pursue a STEM major in college			19%	43%	38%	4.2
Succeed in college-level STEM classes		10%	24%	33%	33%	3.9
Quantitative thinking and problem solving		10%	29%	24%	38%	3.9
Explain the scientific method	5%	5%	24%	29%	38%	3.9
Conduct science literature searches	5%	5%	48%	14%	29%	3.6
Give presentations of scientific work	10%	5%	38%	29%	19%	3.4
Write up scientific research results	14%	5%	33%	33%	14%	3.3
Approach a science professor with a question		5%	14%	48%	33%	4.1
Communicate scientific concepts to the general public (friends/family without a scientific background)		10%	29%	33%	29%	3.8
Develop a transfer plan to a four-year college			24%	29%	48%	4.2
Transfer to a four-year college	5%		10%	48%	38%	4.1
Find STEM resources for transfer students at a four-year college			33%	33%	33%	4.0
Participate in STEM opportunities beyond coursework while at a four-year college		5%	33%	29%	33%	3.9

7. Please indicate how much you disagree or agree with the following statements: (N=21)

<i>(rotated statements in online survey)</i>	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean (1-5)
I have STEM peers who support me			24%	24%	43%	4.2
I have a STEM mentor who supports me			29%	33%	38%	4.1
I feel a part of the STEM community at my college			24%	43%	33%	4.1

8. Which of the following have you done as a result of your participation in the PaCES program? (N=21)

<i>(rotated statements in online survey)</i>	Definitely Won't Do (1)	Probably Won't Do (2)	Maybe Plan to Do (3)	Definitely Plan to Do (4)	Already Done (5)
Apply for a STEM summer internship		5%	43%	43%	10%
Enroll in a variety of STEM college classes			29%	29%	43%
Consider a STEM academic pathway different from the pathway I had when I first started college	5%		33%	14%	48%
Seriously consider a STEM graduate program			43%	38%	19%

9. The PaCES program.. (N=21)

5%	(1) ...did not meet my expectations
57%	(2) ...met my expectations
38%	(3) ...exceeded my expectations

10. Please indicate your level of agreement with the following statements: (N=21)

<i>(rotated statements in online survey)</i>	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)	Mean (1-5)
The program was a worthwhile way to spend my time.				48%	52%	4.5
Participating in the program will help me with my career.				48%	52%	4.5
I would recommend the program to other students.				33%	67%	4.7
My fellow students in the program will provide support to me as I continue my studies.			14%	52%	33%	4.2

For these items, please rate each aspect of the program from 0 to 10, with 0 as the worst score and 10 as the best. Then explain why you chose that rating. If you did not participate in that component of the program, please choose "NA" (not applicable).

11. The Counseling 40 class at Pierce (tools to enhance your success with STEM classes)

Mean=9.0, N=21 (2 ratings)

Worst										Best	NA
0	1	2	3	4	5	6	7	8	9	10	
								50%		50%	19

Please explain your rating:

10 Very great.

12. The College 101 class at LAVC (tools to enhance your success with STEM classes)

Mean=8.2, N=21 (9 ratings)

Worst										Best	NA
0	1	2	3	4	5	6	7	8	9	10	
						11%	22%	33%		33%	12

Please explain your rating:

- 10 it was very useful for students and gave a lot of helpful information
- 10 College 101 at LAVC was incredibly helpful in enhancing my success in my STEM classes in several ways. First and foremost, it taught me the importance of active listening. As a STEM student, it's crucial to pay close attention to lectures, discussions, and instructions. College 101 helped me develop active listening skills, allowing me to better absorb and understand complex scientific concepts and instructions from professors. This, in turn, greatly improved my performance in my STEM classes. Secondly, College 101 provided me with valuable guidance on how to effectively communicate with counselors at the school about my academic problems. As a STEM student, I sometimes faced challenges or needed assistance with course selection, scheduling, or academic planning. College 101 taught me how to articulate my concerns, ask questions, and seek help from counselors in a professional manner. This enabled me to proactively address any academic issues I encountered and seek appropriate support, which was instrumental in my academic success. Furthermore, College 101 helped me become better at speaking. Strong communication skills are essential in STEM fields, whether it's presenting research findings, participating in group discussions, or explaining complex concepts to peers or professors. College 101 provided opportunities for me to practice public speaking, refine my communication abilities, and build confidence in expressing myself effectively. These improved speaking skills have been invaluable in my STEM classes and will continue to benefit me in my future academic and professional endeavors. Additionally, College 101

emphasized the importance of improving my academic studies. It provided me with study strategies, time management techniques, and resources for academic success, such as effective note-taking, test preparation, and research skills. These enhanced academic skills have helped me excel in my STEM classes by improving my ability to comprehend, analyze, and apply scientific concepts. Lastly, College 101 emphasized the importance of completing assignments and tasks on time. Meeting deadlines is crucial in STEM fields, as it reflects professionalism, responsibility, and commitment to excellence. College 101 provided me with tools and techniques for managing my time effectively, prioritizing tasks, and staying organized, which has allowed me to consistently complete my work on time, avoid procrastination, and excel in my STEM classes. In summary, College 101 at LAVC has been instrumental in enhancing my success in STEM classes. Through active listening skills, effective communication with counselors, improved speaking abilities, enhanced academic studies, and timely completion of assignments, College 101 has provided me with invaluable skills and knowledge that have positively impacted my STEM education and will continue to benefit me in my academic and professional journey.

10 Learned new stuff

8 Help understand the foundation of the area

8 Professor Fay was a great professor, but most info I was taught I had learned in my Counseling 020 course during my first semester. If this were my first semester, it would have been very useful

8 Was helpful in assessing possible careers and our individual path

13. The Bio 185 Career and Research Symposia in the spring quarter

Mean=9.2, N=21 (15 ratings)

Worst										Best	NA
0	1	2	3	4	5	6	7	8	9	10	
								33%	13%	53%	6

Please explain your rating:

- 10 It's the best course that I have taken.
- 10 I've gained a lot more knowledge about the field I'm looking into
- 10 great opportunities
- 10 I had a great experience with this class. I got to interact with new people who have similar interests as me. I also got to sop different career paths to consider in the future.
- 10 As a student who has participated in the Biology 185 Career and Research Symposia in the spring quarter, I can confidently say that this program has been incredibly beneficial for me. It has provided me with invaluable insights into new programs and opportunities that I can pursue to advance my education and potentially increase my earning potential. By staying informed about the latest developments in the field of biology, I have been able to make informed decisions about my academic and career pathways, leading to enhanced prospects for success.
- 10 Great!
- 9 I got to explore and really look into different aspects of science.
- 8 I enjoyed the presentations and internship opportunities
- 8 The class provides resources for students who might be unaware opportunities that are being provided.

14. Science field trips (Natural History Museum, water treatment...)

Mean=9.3, N=21 (20 ratings)

Worst										Best	NA
0	1	2	3	4	5	6	7	8	9	10	
							5%	15%	25%	55%	1

Please explain your rating:

- 10 There are the best experiences that I received and guide me to my major.
- 10 Very informative trips, showed me alternative paths in stem with promising ability to contribute to society.
- 10 Amazing to see what you can do in STEM that applies to daily life
- 10 I love road trips and learning about different fields of science
- 10 I got to see a lot and ask a lot of questions
- 10 All of the field trips have been so fun. Learning about the different careers has also been helpful in expanding my career options.
- 10 The field trips to the Natural History Museum and the Pure Water Treatment Plant were both incredibly beneficial for me, as they provided me with firsthand learning experiences that enriched my knowledge and understanding of important topics. At the Natural History Museum, I had the opportunity to learn about rare gems and dinosaurs that have been discovered over the years. The exhibits were informative and engaging, allowing me to learn about the geological processes that form gems and the fascinating history of dinosaurs. It was a unique and eye-opening experience that expanded my understanding of Earth's natural history and the wonders of the natural world. Similarly, the field trip to the Pure Water Treatment Plant was equally educational and eye-opening. I learned about the intricate process of treating and purifying water to ensure it is safe for human consumption and protects natural bodies of water. I gained insights into the various technologies and methods used to reduce organic material and pollution from wastewater, as well as the efforts to minimize waste that is released into the ecosystem. This field trip helped me appreciate the importance of water treatment in preserving our natural resources and safeguarding the environment. Overall, both field trips were valuable learning experiences that not only expanded my knowledge but also allowed me to see firsthand the practical applications of scientific concepts. They were engaging and educational, providing me with a deeper understanding of topics related to geology, paleontology, environmental science, and water treatment. I am grateful for these opportunities as they have enriched my learning and broadened my perspective on the natural world and our role in protecting it.
- 10 Learn new things about certain stuff.
- 9 I really liked going and learning about geology at the natural history museum but it felt a little rushed. The water treatments center was educational but I wish there was more hands on activities.

- 9 I get to learn other STEM fields that I have not considered or know about. These field trips explain a lot of these people's experiences with STEM and how it affects their career.
- 8 I learned so much but I'd like it more if it was a little bit more organized.
- 8 It was an interesting experience gaining insight into those careers

15. Participating in the SACNAS chapter

Mean=8.4, N=21 (15 ratings)

Worst										Best	NA
0	1	2	3	4	5	6	7	8	9	10	
					7%		20%	27%	14%	33%	6

Please explain your rating:

- 10 Members are amazing
- 10 Hearing the speakers from SACNAS always keep me motivated. I enjoy hearing everyone's different stories of how they are succeeding in their careers.
- 10 Good.
- 9 I really want to participate in SACNAS
- 9 It met my expectations.
- 8 The speakers are good to hear from
- 8 The SACNAS Chapter explains their purpose. I have just recently joined. I do not know much yet but I like there is protocol and a schedule. Each month, a speaker from a program explains their experience with the program and their curriculum.
- 5 I have never been a student government kind if student, the process is too slow for me and I find it hard to commit

16. The PaCES program overall

Mean=9.1, N=21

Worst										Best	NA
0	1	2	3	4	5	6	7	8	9	10	
							5%	24%	24%	48%	-

Please explain your rating:

- 10 The best program I have been to, I've been to the classes and field trips and it was worth it.
- 10 I really liked looking into the different opportunities open to students
- 10 It met my expectations.
- 10 the professors are amazing
- 10 Overall this program has brought so much joy and motivation to me. It makes me want to keep pushing myself harder, despite how difficult my STEM courses can be. It feels good to be part of program like PaCES, because I know I have a group of mentors and peers ready to help me with anything. I'm very thankful for the PaCES program.
- 10 The PACEs program has had a profound and positive impact on my educational career. Through this program, I have been able to secure funding for my college education, which has alleviated financial stress and allowed me to focus on my studies without the burden of excessive student loans. This financial support has been invaluable in helping me pursue my academic goals and set a strong foundation for my future success. Moreover, the PACEs program has exposed me to a wide range of STEM careers and opportunities. Through workshops, seminars, and mentorship programs, I have gained insights into various STEM fields, their applications, and the skills required to excel in them. This exposure has been instrumental in helping me explore different career paths, understand my strengths and interests, and make informed decisions about my future career choices. Furthermore, the PACEs program has also emphasized the importance of helping others and giving back to the community. Through community service projects, volunteering opportunities, and outreach programs, I have learned the value of using my knowledge and skills to make a positive impact on the lives of others. This has instilled in me a sense of social responsibility and has deepened my understanding of the role of STEM professionals in addressing societal challenges and making a difference in the world. Additionally, the PACEs program has provided me with guidance and mentorship, helping me navigate the path to success. The program has offered valuable resources, advice, and support in areas such as academic planning, career development, and personal growth. This guidance has helped me make informed decisions about my educational and career goals and has equipped me with the tools and strategies needed to achieve them. In conclusion, the PACEs program has been a tremendous asset in my educational career, offering financial support, exposing me to STEM careers, promoting community engagement, and providing guidance and mentorship. The program has positively impacted my academic journey by helping me fund my education, broadening my career horizons, instilling a sense of social responsibility, and guiding me towards a successful path in

life. I am grateful for the opportunities and support offered by the PACEs program, and I am confident that it will continue to shape my educational and professional endeavors in a meaningful way.

10 Good

9 I like the idea and the opportunity they gave us to be able to participate on informative field trips without having to pay.

9 Amazing program

8 This program gives me a chance to begin thinking about the next step towards my career. I have not been in this program for long but it is a start. I like the field trips being offered. I also like the exposure to these opportunities I have not heard about.

7 The classes and field trips are all very early

17. How have your ACADEMIC/EDUCATIONAL goals changed as a result of this program? How did the program influence these changes? Please be specific and give examples.

Taking this program helped me, and gotten ideas.

I originally wanted to pursue an education strictly at a UC once I transferred. However, after getting to meet with professionals and graduate students who came from such varied institutions and educations I am more open now to the idea of attending various institutions.

I was considering taking a year break, however, this program has made me want to stay

I already knew my academic and educational goals before joining the program.

I now feel inspired to pursue graduate school as well as look into internships.

The field trips made me realized certain areas of the STEM field I like and which ones I don't. An example is that I liked the minerals more than I expected too, and I didn't like the water process at all.

This program showed careers in the science field that were interesting and gave me more options of what to do in the future.

I've slowly become even more motivated to continue working on a very challenging major by listening to those that have succeeded before me. I listened to graduate students talk about how they spent additional years in undergraduate level of school just to pass. Telling that some students can't realistically pass university in just 4 years.

N/A

I feel more confident that I can be successful within a STEM career. It reinforced my belief to study chemistry and engineering, even as my courses get harder.

As result of the program I was able to see a new perspective on what my career can be in stem. For example going to the waterworks.

It's hasn't. I'm just glad to be a part of the program.

Previously, I wasn't considering going to graduate school. Now, I have learned that having a masters or PhD makes you stand out in job opportunities.

My goals have mostly remained the same but I do feel like there are more routes available for me to go down.

I started as a Nursing major but switched to a Bio major after careful consideration. PaCES helped me become more aware of the wide variety of career opportunities in the STEM fields.

This program helps me understand the big picture of why I need so many science based classes. Especially with chemistry being such a tough subject, it is a crucial part of becoming a STEM major and being in the field. When I went on the field trips, the speaker of the trip gave us an insight about their experience with their major and how it got them to where they are. My academic goals

are to get the help and resources I need now, in order to succeed in STEM field.

This program made me more interested in pursuing a STEM career but I still plan to stay a nursing major.

As a result of the PACEs program, my academic and educational goals have been significantly influenced, setting me on the right track towards my aspiration to become a nurse. The program has provided me with invaluable guidance and resources that have helped me make informed decisions about my academic path and course selections. Through the mentorship and support offered by the PACEs program, I have gained a better understanding of the educational requirements and career pathways in nursing. The program has helped me identify the prerequisites and recommended courses for nursing programs, and has guided me in selecting the right classes to fulfill these requirements. This has allowed me to stay on track and ensure that I am taking the necessary steps towards achieving my goal of becoming a nurse. Furthermore, the PACEs program has also provided me with opportunities to connect with nursing professionals, participate in nursing-related workshops, and gain insights into the nursing profession. This exposure has deepened my interest and passion for nursing and has reinforced my commitment to pursuing a career in this field. In addition, the program has also emphasized the importance of academic excellence and has encouraged me to strive for academic success. The program has offered academic support, study resources, and workshops on time management and study skills, which have helped me develop effective study habits and excel in my coursework. This has not only prepared me for the rigor of nursing programs but has also instilled in me a sense of discipline and dedication towards my academic pursuits. Overall, the PACEs program has been instrumental in shaping my academic and educational goals, putting me on the right track towards becoming a nurse. It has provided me with the guidance, resources, and support needed to make informed decisions about my coursework, excel academically, and stay focused on my career aspirations. I am grateful for the opportunities and assistance offered by the PACEs program, and I am confident that it will continue to play a pivotal role in my journey towards becoming a successful nurse. The PACEs program has been a driving force in shaping my academic and educational goals, providing me with a wealth of resources, dedicated teachers, and invaluable support from counselors. The program has offered a wide range of tools and opportunities that have influenced my academic trajectory and helped me stay focused on my goal of becoming a nurse. One of the key aspects of the PACEs program that has influenced my educational path is the abundance of resources it provides. From study materials, textbooks, and online resources to workshops and tutoring services, the program has equipped me with the necessary tools to excel in my coursework. These resources have been invaluable in helping me understand complex concepts, prepare for exams, and

improve my academic performance. Moreover, the dedicated teachers in the PACEs program have played a crucial role in shaping my academic goals. They have provided me with mentorship, guidance, and expertise in my chosen field of nursing. Their commitment to teaching and passion for their subject matter have inspired me to strive for excellence and pursue my academic and career goals with determination. Furthermore, the unwavering support of the counselors in the PACEs program has been a driving force in my academic journey. The counselors have offered personalized guidance, advice, and support at every step of my educational career. From helping me plan my course schedule to providing career guidance and assisting with financial aid, their expertise and dedication have been instrumental in keeping me on the right track towards my goal of becoming a nurse. Finally, the PACEs program has had a profound influence on my academic and educational goals. The abundance of resources, dedicated teachers, and unwavering support from counselors has provided me with the tools and guidance needed to navigate my academic journey successfully. I am grateful for the opportunities and assistance offered by the PACEs program, and I am confident that the skills and knowledge I have gained through the program will continue to positively impact my educational and career endeavors in the field of nursing.

This program has a lot of new stuff / resources I can use that can improve my academic goals.

18. How have your CAREER goals changed as a result of this program? How did the program influence these changes? Please be specific and give examples.

I have taken many classes at valley and it's my 4th year at valley college in the summer I will be busy because I will take summer classes, and it will be chemistry classes in the summer.

When I started, I wanted to pursue a career in the medical field because I wasn't sure about what else there was in science besides medicine R&D and disease research. Now I know that science can range from things like water filtration to developing powders capable of rendering lead particles ineffective.

I can't say I attribute this to the class, but I have decided on my own to change career goals to become somewhat outside of STEM. However, I still plan on having a STEM education and using it in my life, just not as a full time career.

I also already knew my career goals before joining this program. They have stayed the same.

My career goals are still undecided but I feel more informed. It also helped me take out some options. Like when they talked about chemistry explanations, I wouldn't like it unlike the biological explanations that would fascinate me.

It has made me aware of the science community and how individuals are passionate to dive deeper into research.

No, I am still very determined to graduate and move onto dental school.

N/A

I started off as a nurse major then realized I had an affinity for science

They have not changed

My career goals have changed to be more about something I am interested in. I was going to original do a career that did not satisfy me.

It hasn't. I'm just glad to be a part of the program. I joined I little while ago so not a lot has happened.

I still would like to pursue a career in STEM, specifically in the environmental science. This program has shown me a particular career I may be interested in. Which is being a geologist. Meeting with the geologist from the Natural History Museum really sparked a curiosity to learn about rocks and stones.

My career goals have also mainly remained the same, but I feel more educated about the different possibilities of careers I can choose from.

Like I said above, before exploring STEM career paths I was planning on going into nursing. My goal now is to go to grad school, get my PhD, and work in research/academia.

As of now, my career goals have not been determined yet. I am still in the process of figuring out what to focus on. However, this program did influence my thoughts on how to start somewhere. I had no resources before this program but now, I have a chance to learn more about internships and opportunities. I also learn different aspects of STEM fields such as civil engineering or astrophysics. They are not my field of interest but I get know more about more about them.

I don't think my career goals have changed much but I am thinking of perhaps getting another degree.

My career goals have changed as a result of this program because at first I didn't know what I wanted to do and was lost and after joining this program it helped set me on track and get back on my feet academically.

This program has a lot of new stuff / resources I can use that can improve my academic goals.

19. How did the COVID pandemic influence your educational path, if at all?

The covid pandemic affected me and it's not just me several people got affected when covid happened and also the classes changed into online, and taking classes online it's not the same and its awful to take it online.

I think the pandemic really pushed the idea of needing scientists in order to help develop methods of fighting global threats like viruses. My goal before was to take classes in order to become a doctor, however now I want to take classes that will help me become a researcher.

I decided to go to community college instead of going straight to a four year. this was the best decision for me!!

it didn't really, I already had an idea of what I wanted to do years prior.

I feel like having access to online classes is helpful, however, the learning experience isn't the same.

It didn't affect me, I have always been undecided on my path.

It didn't

The COVID pandemic gave me time to reflect that I want to succeed in life. During this phase I started to take my own self seriously and started to succeed and I believe it was a calling to go get an even higher level of education.

N/A

I was able to quit my job to make the transition into a STEM major It really demotivated me, and made me not apply to any universities at all. I almost didn't attend LAVC at all

None

It didn't.

The COVID pandemic influenced my educational path greatly. I graduated high school that year (2020), therefore I started going to LAVC when it was only remote classes. This made me become very anti-social because I was staying home a lot more. I wasn't really motivated to keep going to school either because I wasn't sure what I wanted to do with my education. Nonetheless, I managed to keep pushing through and I'm glad I've made it this far.

The pandemic didn't really influence my educational path that much.

N/A

I do not think the COVID pandemic influenced my educational path. I would like to say that it gave me a lot to think about how much health care workers or scientists put themselves to work in a time that probably was not expected of them. However, a lot of them still worked hard to get themselves where they are now. Overall, I would say the most influential thing that led me to study biology was school.

I think that COVID made my educational journey more difficult due to classes being online.

The Covid pandemic influenced my educational path because during Covid everyone was getting really sick and one day I became interested in the field of nursing and learned that nurses did all kinds of things such as give patients the care they need and educate people on their health care and needs.

It did not

20. What suggestions do you have for improving the program in the future?

I feel like it would be nice to have more group activities to break ice with each other better.

As I said before, just more organization so we seize the time and have less problems.

More frequent meetings

Not so early classes and field trips also more to do in the program, possibly.

A suggestion I came up with is meeting once a month or once a week to have homework help. As in, have a place to do our schoolwork and also get help at the same.

More meetings/field trips/speakers would be great.

I think that having or meeting with people in specific STEM careers would be helpful.

I think everything about the program is perfect.

Not at the moment, everything fine

I do not have any suggestions at the time.

Nothing I can think of

None! I think the program is great the way it is.

N/A

Nothing

N/A

N/A

n/a

None

I don't have any suggestions to really give.