

A Synergistic and holistic approach to close the equity and achievement gap



Par Mohammadian, RPh, PhD

Faculty & Vice chair, Life
Scienc



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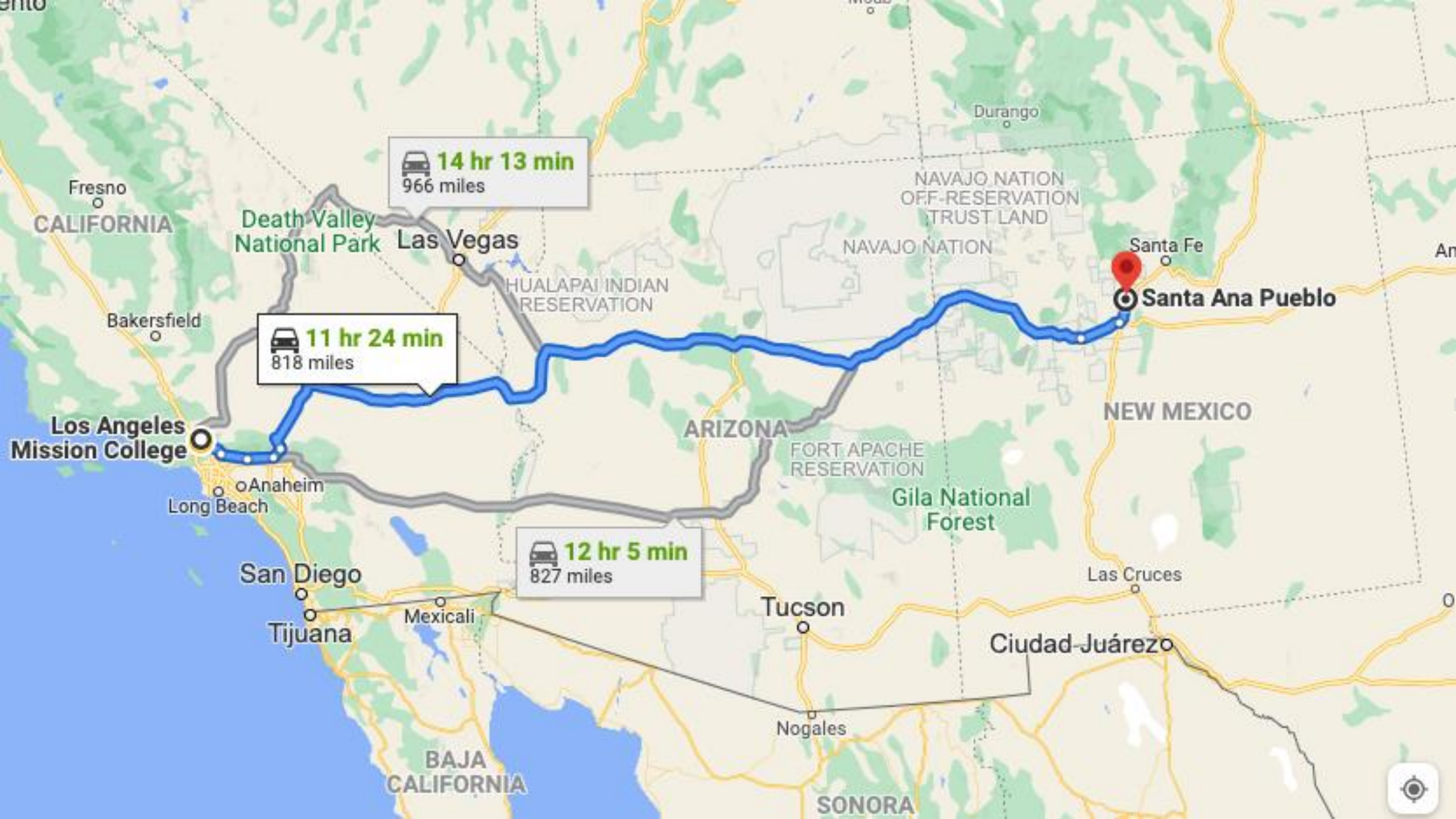
Carlos Gonzalez, MBA
Dean, Student Services



Los Angeles Mission College

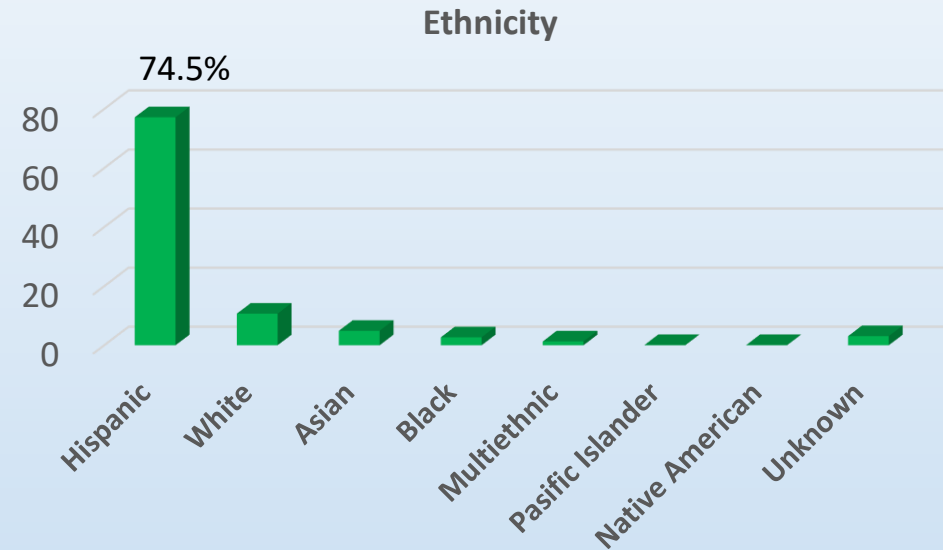
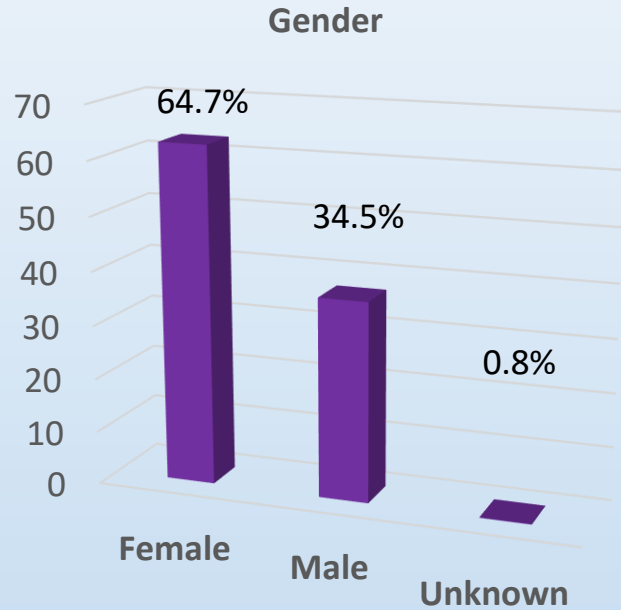
- Located in Sylmar, CA
- One of ninth colleges within the Los Angeles Community College District



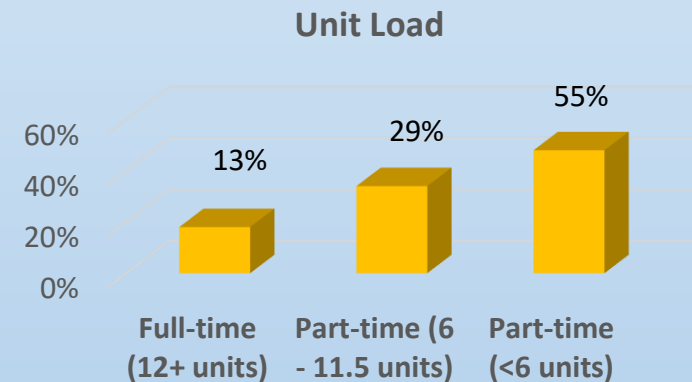


Student Characteristics

Spring 2021 (enrollment: 9196)



- First generation college students: Over 70%
- Unprepared in English: Over 80%
- Unprepared in Mathematics: Over 90%



Background

Every academic year, about 3000
students enroll in STEM majors at
LAMC

(2019-2020)

Transferred to CSU/UC systems (50)

15 in Biological Sciences
23 in Engineering & Computer Sciences
5 Mathematics
2 in Chemistry
5 in Physical Sciences



NSF HSI grant focuses on supporting Life Sciences majors to transfer to a four-year university.

Title III STEM focuses on increasing student enrollment, retention, success, and transfer in all STEM majors.

Both teams work closely to create a pathway for STEM students.

The pathway is based on a framework of four guided pathway pillars, 1) clarify pathways, 2) help students choose and enter pathways, 3) help students stay on path, and 4) ensure student learning.

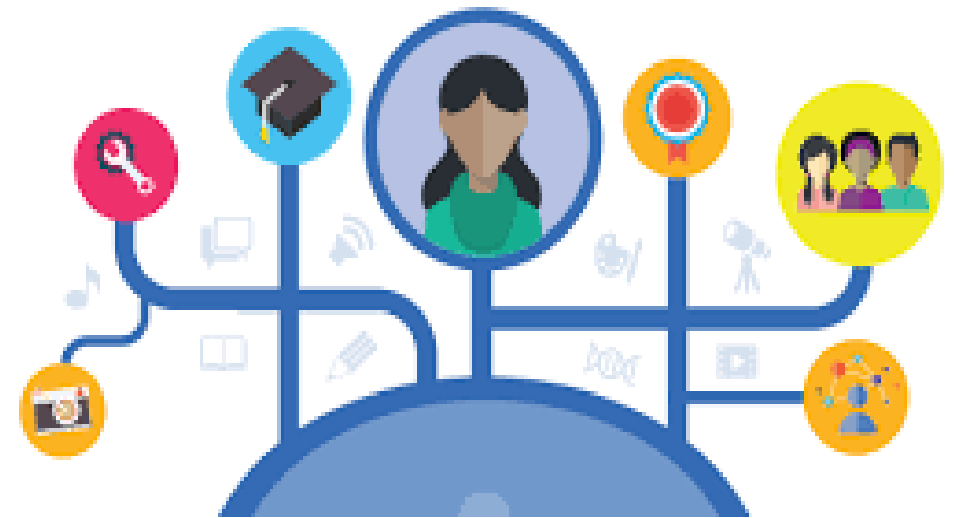
How did we start ...

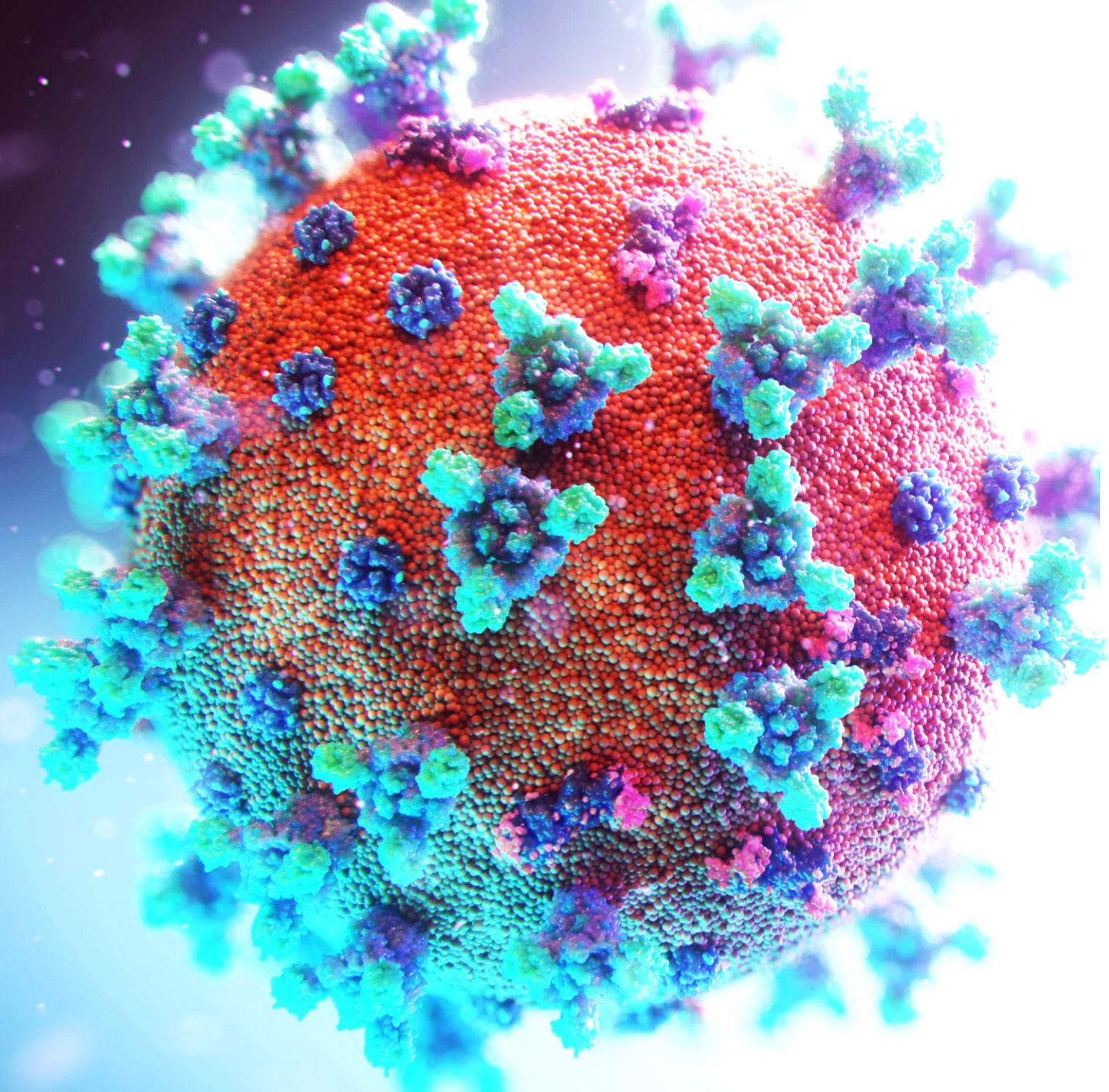


Tutoring & Workshops

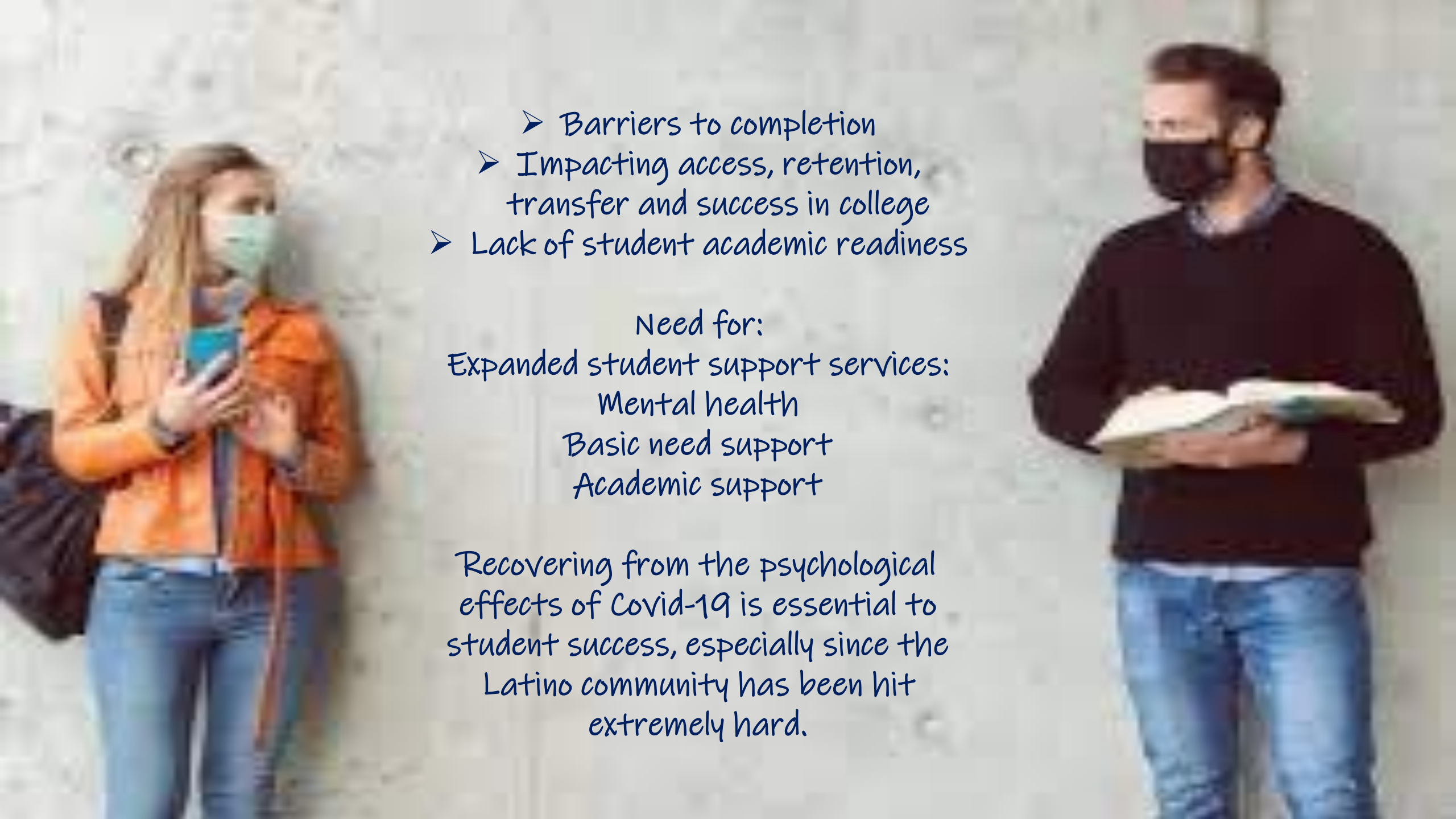
Traditional ...

ACADEMICALLY ORIENTED





- Depression, Anxiety, Stress
- Worry about the health of a loved one
- Difficulty concentrating
- Disrupted sleep patterns
- Decreased social interactions
- Concern about academic performance
- Post-traumatic Stress syndrome

- 
- Barriers to completion
 - Impacting access, retention, transfer and success in college
 - Lack of student academic readiness

Need for:

Expanded student support services:

Mental health

Basic need support

Academic support

Recovering from the psychological effects of Covid-19 is essential to student success, especially since the Latino community has been hit extremely hard.



Basic Needs &
Mental Health
Support



Vaccination &
testing events

Providing home
technology

Winter Math
Academy - Jan 14 –
Feb 6, 2020

Tuesday & Thursdays:
12:00 – 4:00 pm in
CMS 127

	12:00 - 1:30 pm Math workshop Shohreh Gojini & Math tutors (1:30 – 1:45: Break)	1:45 - 2:30 pm Science experiments / Mindset activities	2:30 - 3:15 pm Math workshop Shohreh Gojini & Math tutors	3:15 – 4:00 pm Group work Shohreh Gojini & Math tutors
Tuesday, 1/14/2020	Introduction; Pre-survey; Pre-Math test (60 min)	-Getting to know each other & -How to schedule your study time? (CMS 127) (Dr. Par)	Elementary Operation (I)	Elementary Operation
Thursday, 1/16/2020	Elementary Operation (II) Rational Expressions	- Reading Apprenticeship (CMS 127) (Dr. Par)	Rational Expressions	Rational Expressions
Tuesday, 1/21/2020	Exponents and radicals	Biotechnology (CMS 106) (Dr. Arora)	Exponents and radicals	Exponents and radicals
Thursday, 1/23/2020	Linear equation and inequalities	STEM services (Lou Balayan) Growth mindset (Dr. Par)	Linear equation and inequalities	Linear equation and inequalities
Tuesday, 1/28/2020	Quadratic polynomials, equations, and inequalities	Chemistry (CMS 210) (Dr. Fenton & Jose Lepe)	Quadratic polynomials, equations, and inequalities	Quadratic polynomials, equations, and inequalities
Thursday, 1/30/2020	Graphing and coordinate geometry	Microbiology/Biology (CMS 106) (Dr. Brown)	Graphing and coordinate geometry	Graphing and coordinate geometry
Tuesday, 2/4/2020	Logarithm and functions	Physics (CMS006) (Prof. Rains)	Logarithm and functions	Logarithm and functions
Thursday, 2/4/2020	Review/catch up	Certificate of perfect attendance; Introduction to BioScholar program (CMS 127) (Dr. Par)	Post-Math test (60 min)	Post-survey
Sign in sheets to be signed at every session.				

Summer Math
Academy - July 19 –
August 19, 2021

Tuesdays &
Thursdays: 1:00 –
3:30 pm Virtual

	1:00 - 1:50 pm Math workshop Shohreh Gojgini & Math tutors (1:50 – 2:00: Break)	2:00 – 2:30 pm	2:30 - 3:30 pm Math workshop Shohreh Gojgini & Math tutors
Tuesday, 7/20/2020	Introduction; Pre-Math survey (1 hr)	2:15-2:45: - Pre-survey -Scavenger hunt (Kahoot)	2:45-3:30 Elementary Operation
Thursday, 7/22/2020	Elementary Operation (II) Rational Expressions	-Introduction to BioScholar program/application	Rational Expressions
Tuesday, 7/27/2020	Exponents and radicals	- Reading Apprenticeship I	Exponents and radicals
Thursday, 7/29/2020	Linear equation and inequalities	- Reading Apprenticeship II	Linear equation and inequalities
Tuesday, 8/3/2020	Quadratic polynomials, equations, and inequalities	Dr. Arora - Biology/Biotechnology	Quadratic polynomials, equations, and inequalities
Thursday, 8/5/2020	Graphing and coordinate geometry	Angela Pan – STEM counselor	Graphing and coordinate geometry
Tuesday, 8/10/2020	Logarithm and functions	-Biology mentorship program / summer research	Logarithm and functions
Thursday, 8/12/2020	Word Problems	-Video: Physics/Chemistry Growth Mindset & Math Anxiety	Word Problems
Tuesday, 8/17/2020	Unit Circles & Triangles Properties	-Video: Honors Program -Video: STEM Counselor	Unit Circles & Triangles Properties
Thursday, 8/18/2020	Review/catch up	Post-survey Post-Math survey	-Certificate of perfect attendance

Supplemental materials using contextualized college algebra and trigonometry & provide instruction through weekly academic excellence workshops.



Faculty professional development workshops



- Math Anxiety & Reading Apprenticeship
- Culturally Responsive Pedagogy: Infusion of cultural elements in academics and student support services is critical to student retention, persistence, completion, and transfer - lack of personalized support systems has a negative impact on the students' sense of cultural identity, which, in turn, negatively impacts student success.



Why Should I Care? Strategies for Supporting Student Motivation Through Relevance

Stacy J. Priniski
Michigan State University

b Anti-Racism in Stem

Anti-Racism in STEM

Dr. Daniel Solorzano
Dr. Sonia Zarate

Los Angeles Mission College
February 4, 2021

Workshops



Faculty mentorship



Students are assigned to Biology faculty to guide them through their path to degree completion and transfer.

UCLA visit

BIO SCHOLAR PROGRAM

BIO SCHOLAR PROGRAM VISITS UCLA!

FRIDAY, NOVEMBER 19, 2021

Bio Scholar Program took its first field trip, a campus tour of UCLA. It's a new service the program introduced to its students and extended the invitation to all LAMC STEM students. We had ten LAMC students join us on Friday, November 19, 2021. Bio Scholar Program collaborated with UCLA Center for Community College Partnerships to make this trip possible. Our students were able to meet Frank Castorena Jr. who is the UCLA CCCP - Program Coordinator and Aurelia L. Rhymer who is the STEM & Umoja Program Coordinator. Aurelia and her team of peer advisors provided a great tour filled with valuable information for our LAMC students. Due to Covid-19 protocols guest are not allowed to enter the buildings, only UCLA personnel and students are allowed. We are hoping that next semester we will be able to enter building/labs to plan another trip for our students.

Standing in front of Royce Hall



Help students to get to know each other better & provide an opportunity to learn about the transfer process.

Summer research

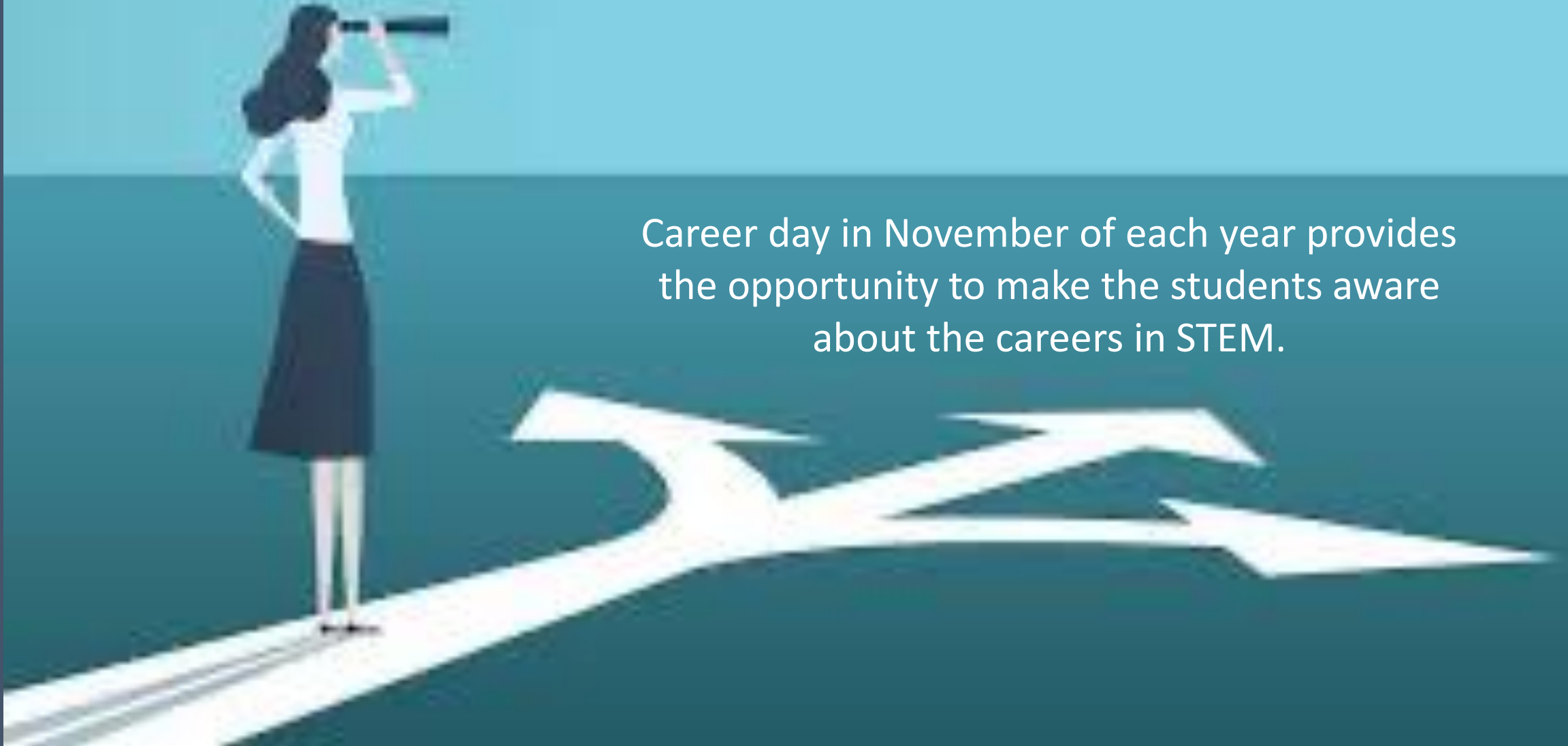
Students are matched with researchers at 4-yr universities or industry partners.

To better prepare for the assignments and a better match the researchers/industry partners will be invited to present their research to the students so they can be decisive about their choice of lab.

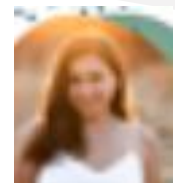
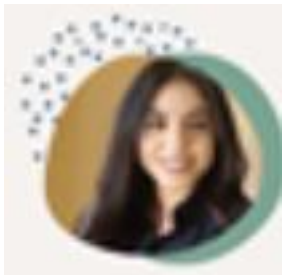


Career related activities

Career day in November of each year provides the opportunity to make the students aware about the careers in STEM.

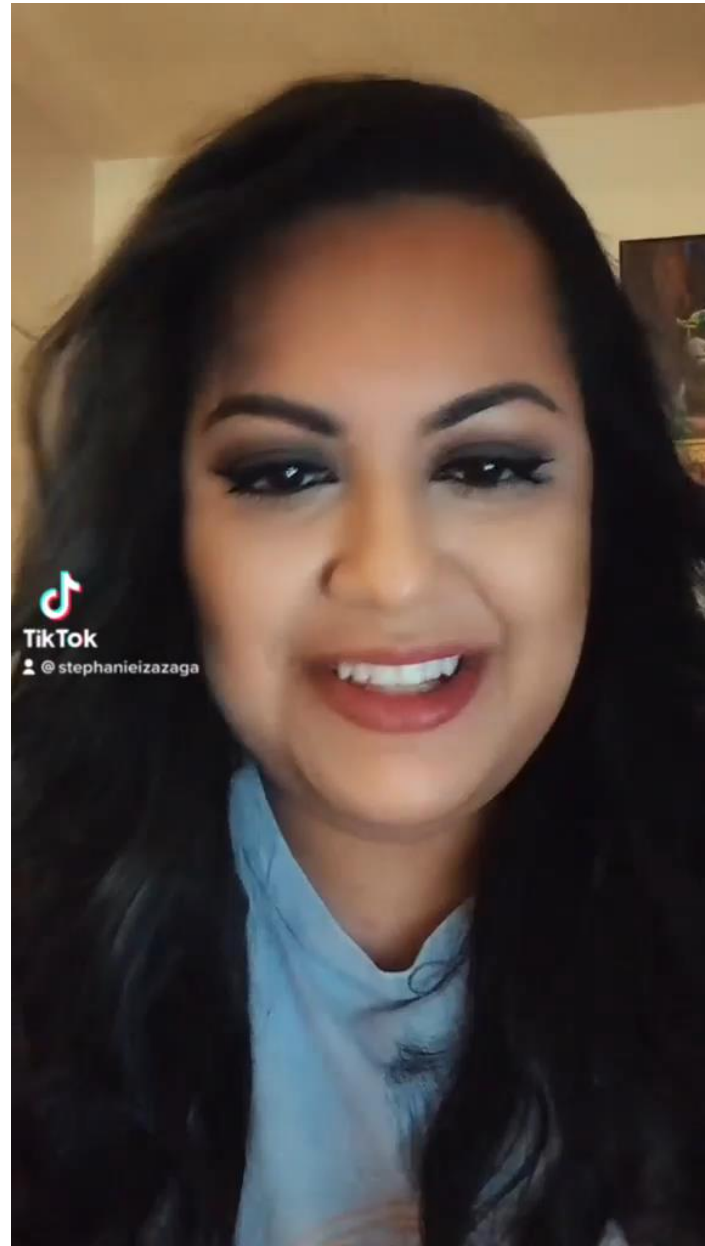


Outcome



Bioscholar

video



Conclusions

Holistic approach is needed to support students to continue.



Are the outcomes as we planned?



mohammp@lamission.edu