In California, the MESA program has served the community for over twenty-five years assisting to decrease the shortage of STEM professionals in the state. Most recently, MESA has been serving the BC’s student population for 16 years. Currently, Bakersfield College MESA’s primary objective is to help community college students who are pursuing a STEM degree and come from economic and educationally disadvantaged backgrounds to transfer in a competitive way. However, the BC’s MESA program services are restricted to a tiny fraction of all eligible students. Current figures show that only one-hundred and twenty-five students can be accommodated due to limited allocation of funds from the state.
Over more than five decades ago, the MESA program began providing an academic model that has impacted and increased student persistence in the STEM disciplines. The program delivers interventions that aid students in overcoming the difficulties and obstacles presented to them during the STEM curriculum.

The MESA program serves those who are first-generation students, minority groups and those from low-income backgrounds. The first state legislative allocation of the MESA program was of $250,000 in 1979, conditional upon dollar- for-dollar matching donations from industry.

MESA was born out of the concern for the lack of opportunity for African American students. It was a grassroots movement that started on the heels of the Civil Rights Movement ("Miles Stones in MESA History," 2017).
Demographics

Ethnicity

MESA Student Ethnicity

In 2019-2020, the Bakersfield College’s MESA program demographics represent one of our equity focuses in the STEM guided pathway, and one of the major emphasis for MESA

State-wide on assisting students from historically underrepresented groups, which yields approximately a total of 68%
**Bakersfield College Overall & BC MESA Program**

MESA students' high retention and completion rate are indicators of quality undergraduate education, which includes the institutional guided pathways, faculty, staff, administrators and the academic support mechanism, such as the MESA program that are available at Bakersfield College. MESA student academic excellence in STEM yields an outstanding average of 90% in good academic standing and a course completion success of 81% for the past three years.

[Graph showing academic standing of Bakersfield College STEM students]

[Graph showing MESA vs Overall Campus Rates]

Data Charts from: CCCO MIS DataMart 2019
MESA Students:

- Attempt & complete 15+ units in the first term
- Complete transfer-level math and English in the first year
- Attempt & complete 30+ units in the first year
- Complete 9 of core the pathway units in the first year

Are connected to transfer check-points through intrusive and high-touch environment with experiential learning by STEM-disciplined experts

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**Completion of Math & English (First-Year Students)**

- Percentage:
  - 2014: 0%
  - 2015: 10%
  - 2016: 20%
  - 2017: 30%
  - 2018: 40%
  - 2019: 50%

- Data from: public.tableau.com

**Completion of Units (First-Term & First-Year)**

- Percentage:
  - 2014: 0%
  - 2015: 10%
  - 2016: 20%
  - 2017: 30%
  - 2018: 40%
  - 2019: 50%

- Data from: public.tableau.com
MESA

OBJECTIVES

Diversify the Workforce
Increase the number of economically and educationally disadvantaged students pursuing degrees in mathematics, engineering, science, and technology who are eligible to transfer to a four-year institution.

Collaborate with Transfer Schools
Implement efficient processes and practices and utilize existing college transfer centers to garner greater MESA student transfers to four-year institutions.

Transfer Readiness
Implement strategies to increase the rate at which MESA students are deemed transfer ready in science, technology, engineering, and mathematics (STEM) majors.

Create Community Leaders
Increase the leadership skills and raise the educational expectations of MESA students.

Ongoing Student Support
Establish partnerships with MESA Engineering Programs (MEP), MESA Schools Programs (MSP), California Alliance for Minority Participation, or similar programs in an effort to provide optimum student support services.

Excel in Academics
Improve the academic performance of MESA students.

Career Preparation and Placement
Strengthen relationships with educators, prospective employers in business and industry to establish student internships, scholarships and other career opportunities for MESA students.

Student Resources
Implement strategies to collaborate with campus programs such as Student Equity and Achievement (SB 860) and Student Success and Support Act (SB 1456) to leverage additional resources and opportunities for MESA students, and to ensure that MESA is integrated into the campus culture and infrastructure.
Other Outcomes

Industry Partners

Industry Relations that have yield monetary support, mentors, industry tours, scholarship and in-kind.

Government Panels

Governmental relations that have yield mentors, internships, job opportunities, professional development, grant awards, competitions.

Student Leaders

Student Leadership MESA students are always involved in leadership position at the BC campus in SGA, Clubs and other organizations. MESA has had more than 5 top officers in the last 5 years in SGA, and over 10 officers in the different clubs.

Student Opportunities

Fellowships and Research: Eisenhower, USA Jobs
MESA had student’s participation in STEM conferences and STEM competitions

Alumni Partners

Alumni support yield mentors, internships, job opportunities, professional development, grant awards, competitions.

Faculty Partners

Faculty support yielding mentors, tutor opportunities, professional development, university field trips
Impacts DUE TO COVID 19

Student Statements

Henry Rivera: "MESA gets me involved and able to stay up to date during the pandemic. Keep it up!"

Natalie Nunez: "I feel that MESA helps in that way that they are constantly reaching out to us students and helping us navigate school virtually and looking for ways to help students out the most they can."

Celeste Ramos: "I miss the interaction of course, I felt more motivated on campus, but Mesa has helped on helpful reminders."

Nick Avila: "MESA has helped because it is virtually available - creating more opportunities to succeed is super helpful."

What challenges does the student face when studying at home?

<table>
<thead>
<tr>
<th>Challenge</th>
<th>2020 Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliable internet connection</td>
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</tr>
<tr>
<td>A dedicated Study Area</td>
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<td>Access to Essential Hygiene</td>
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<td>Access to Home/Shelter</td>
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<td>Access to Academic Counselor/Advisor</td>
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</tr>
<tr>
<td>Other</td>
<td>22</td>
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</tbody>
</table>

Data from: MESA microsot.form