State of STEM Pathway at Bakersfield College

In Fall 2018, STEM was the second most selected pathway for first-time students, with only Health Sciences attracting more students. This can be attributed to the outreach efforts from STEM staff, as well as many STEM faculty who have helped with numerous activities at middle schools and high schools. This positive and active presence of BC STEM has built a continuous vision of BC as the place for STEM students to start their college education.

Five Year Trend, Disaggregated by Demographics

The number of first-time students in the STEM pathway have nearly doubled over the last 5 years, from 319 students in Fall 2014 to 631 students in Fall 2018.

The STEM pathway is mostly Hispanic/Latinx students, which is reflective of BC’s overall population.
The majority of first-time STEM students are 19 or younger. In Fall 2018, there was a slight increase in first-time students between the ages of 20-24.

Momentum Points

In Fall 2018, first-time STEM students had the highest percent of first-time students attempting 15+ units in their first term, when compared to the other 9 Learning and Career Pathways. Over the last 5 years, the percent of first-time STEM students attempting 15+ units in their first term has increased 7% (see graph below).

First-time STEM students attempting 30+ units in their first year has remained relatively stable over the last 5 years but is still the highest performing Learning and Career Pathway when compared to the other Learning and Career Pathways for this metric.
First-time STEM students completing transfer-level English and math in their first year went slightly decreased from Fall 2017 to Fall 2018. When examining completion of transfer-level English and completion of transfer-level math separately, first-time STEM students completed transfer-level math at the same rate as the previous year. In other words, first-time STEM students completed transfer-level English at a lower rate in Fall 2018; thus, lowering the overall percent for this metric.

Actions Taken to Advance the Momentum Points

The STEM Completion Coaching Team, predominantly through the full-time STEM Counselor and Ed Advisor, used Starfish to identify students who were not meeting the momentum points and contacted them via email and phone calls. The goal for STEM for 2018-19 was to focus on students who were
taking 15+ units in Fall 2018 and contact them about completing 15+ units in Spring 2019 to keep them on their pathway to timely completion of their degrees. Unfortunately, the percentage of students dropped for the 30+ unit momentum point, even after increasing the percentage of students completing 15+ units in Fall 2018.

In addition to the Completion Coaching Team meetings, multiple activities were held throughout the year for STEM students.

- The STEM Pre-Med Guided Pathways Conference: STEM faculty from BC, CSUB and UCLA and business professionals joined forces to provide college and career information for more than 300 high school students and their families. This day-long even included key note speakers from UCLA and medical professions. Critical to this meeting’s organization and success was the involvement of the College’s MESA program, which collaborated with the College’s Outreach and Counseling programs.

- STEM Celebrates Pi Day: Math faculty created the organization for the afternoon that involved faculty from across STEM with 30 tables of information and learning activities. Representatives from Counseling and Academic Support Services were present to provide students with academic information.

- Summer STEM Academies: One-week project academies were held that engaged high school and middle school students to inspire them to become future STEM majors.

Further, clear course sequences and requirements were created for STEM students to qualify to transfer to UCLA from BC’s Biology AS-T, Chemistry AS-T, Computer Science AS-T and Physics AS-T.

Looking Ahead at the Next 3 Years

Over the next three years the STEM Completion Coaching Team has the following goals:

- Increase the percentage of first-time STEM students
  - to 25% completing 15+ units in their first semester
  - to 20% completing 30+ units in their first year
  - to 20% completing transfer-level English and Math in their first year

- Create more communication materials for faculty to have available in classes to provide directions to STEM students where they are

- Utilize the AERA STEM Success Center as the hub for all STEM student needs