Accomplishments for 2016-2017

Academic Affairs – Academic Development, Math, Sciences, and Academic Services
Prepared by Stephen Waller, Dean of Instruction

BC Strategic Direction 1: Student learning

1) 16-17 Goal: Work with faculty chairs to increase available online/hybrid course options.

16-17 Outcome:
As seen in Graph 1A, the number of 100% Online sections of math courses were increased in Spring 2017 (BC red) and Summer 2017 (white) compared to the previous year. For Spring 2017, a section of MATH B6A, Calculus I, was added to the online offerings for the first time, but this was changed to an online MATH B22 section when only 5 students had enroll by the end of December 2016. Additionally, a few additional regular hybrid (HYBD) sections of math were run in Spring 2017. These hybrid sections had a regular once-per-week lecture meeting and the remainder of the work online. Hybrid sections that were scheduled 100% in the Math Learning Center using ALEKS were not counted in this data.

Graph 1A.

<table>
<thead>
<tr>
<th>Year</th>
<th>HYBD</th>
<th>ONLINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2016</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>2017</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
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Additionally, a hybrid version of ACDV B5A, Tutor Training & Practicum, was run for the first time in Spring 2017 at the Panorama and the Delano campuses. Curriculum approval was finalized in Spring 2017 to start offering ACDV B72, Basic Arithmetic & Pre-Algebra, in a hybrid and online format starting in Fall 2017.

Discussions were had with the faculty chairs for Physical Sciences and Biology to start planning for hybrid and potentially new general education science courses with a lab component using shippable kits, such as those through e-Science Labs.

2) 16-17 Goal: Work with faculty chairs to increase the number of math and science sections at Delano to reduce waitlists and provide new options for students on that campus.
16-17 Outcome:
Graph 1B below shows the trend for all Math, Sciences, and Academic Development sections offered at the Delano campus since Fall 2014 (20147 in dark gray). The Academic Development sections did not include those involved in supporting tutoring. The overall Fall (dark gray) and Spring (BC Red) have trended downward instead of upward and recently bounced back.

Graph 1B.

From Graph 1C, a downward trend in math courses at the Delano campus is event, while contrary, the trend for science courses has started to increase. The math trend is a direct result of the loss of math faculty specifically assigned to Delano. Thus, in Spring 2016, there were three fulltime math faculty, one regular and two temporary. However, in Fall 2015, there was only one regular and one temporary 1-semester fulltime faculty member assigned to Delano, and in Spring 2015, the campus only had one regular fulltime faculty. Although some sections could be covered using adjunct faculty and, in Fall 2017, a new regular fulltime faculty, staffing at Delano for math has not yet reached the same level as in 2014 and 2015. Options for more math sections at Delano will continue to be examined for Fall 2017.

Graph 1C.

The science (SCI) course trend for the Delano campus has recently started to increase through the hiring of a new Geography adjunct faculty member starting Summer 2017 and additional
physical sciences fulltime faculty, including one new temporary chemistry faculty member. This has allowed for more summer sections of Geography and Chemistry to be offered, and in Fall 2017, the general education Physics B2A course is scheduled. Therefore, some progress is being made to provide more science course options at Delano, and efforts will continue to add more Fall 2017 sections.

As a positive note, in Fall 2016, two additional sections of CHEM B2A were run in Delano at the Wonderful Academy, and these are not represented in Graphs 1B and 1C. Furthermore, in Fall 2017, both CHEM B2A and MATH B22 are being planned at Wonderful Academy.

In support of the Rural Initiative, Math courses were added in Shafter (1 new section of MATH B70) and FPU (6 sections in Spring 2017 compared to 2 sections in Spring 2016). Considering the expected demand for Calculus I on the west side of Bakersfield, MATH B6A was added to the Fall 2016 schedule and then the Spring 2017 schedule in hopes of attracting these students, but in both cases, these courses had to be cancelled when less than 5 students registered each time. A new plan was put in place during the 2016-17 academic year to build up a population of Calculus students at FPU through offering MATH B1A and B1B, Pre-Calculus I & II for the first time at this location. Since these sections were well enrolled, this will confidently allow the College to have a successful section of MATH B6A at FPU in Fall 2017. This math sequence will be continued for as long as there is demand at the FPU site for these courses.

3) 16-17 Goal: Work with faculty chairs to **increase the number of adjunct faculty by at least 12** from Summer 2016 through Spring 2017.

16-17 Outcome: **13 new adjuncts were hired** and 1 was reinstated after an 8 year absence.
- Five new Academic Development adjuncts were hired.
- Two new Biology adjuncts were hired, and one was reinstated after an 8 year absence. Of these new faculty, one was made temporary fulltime for Spring 2017, and one delayed her start to Fall 2017.
- One new Chemistry adjunct was hired to cover sections at Wonderful Academy, but she left the College after 2 weeks from a medical issue.
- Three new Math adjuncts were hired. Most of the load of these faculty were assigned to rural initiative locations including Shafter and FPU. All three are continuing, one as a regular fulltime faculty starting Fall 2017.
- Two new Physics adjuncts were hired for Fall 2016, and they were assigned to teach PHYS B2A to support the Baccalaureate program general education requirements. In Spring 2017, one of these adjuncts left in the middle of the semester, and the other adjunct increased his courses to include a section of Astronomy.

4) 16-17 Goal: Using Basic Skills funds and Title V funds, **restructure academic services to align with high priority needs for basic skills student success** in the College, while providing as much general support as possible across other programs and courses.

16-17 Outcome:
I secured an $1.5 million grant, Basic Skills and Student Outcomes Transformation, in July 2016, and this was backed up with funding from the Title V grant and Equity to initiate the “Extending the Classroom Initiative, ETC”. Three ETC areas were set up in the Center for Student Success to provide additional tutoring/supplemental instruction support for ACDV B72, ENGL B53, and MATH B60. Each of these courses followed a slightly different model for requiring or encouraging students to visit an ETC for help, as determined by the faculty teaching each course. These have had mixed results in student participation, and lessons learned will be detailed and addressed to allow these services to become the standard for successfully moving students through their developmental and college-level English and math courses.

A new Program Manager for Basic Skills was brought on board in February 2017 to help with this effort, and a new Director of Academic Support Services was hired in January 2017 to bring closer coordination of all academic support services at all sites and online.

**BC Strategic Direction 2: Student Progression and Completion**

1) **16-17 Goal:** Initiate student “meet the dean” sessions for students majoring in Mathematics and Sciences. This will provide students an opportunity to get some tips on success and to indicate where they need additional help to be successful.

**16-17 Outcome:**
Due to severe time limitations through the academic year, these were not organized. However, students were contacted via email to address issues with how they were registering or not registering for Fall 2017 courses. Students were given information on how to contact a STEM counselor, and they were encouraged to provide the Dean with feedback on any issues they were facing. This provided some direction to the students and some insight to real student issues. Additionally, some science and math faculty were provided with a memo from the Dean to distribute in their classes to specific students who were struggling with registration.

Additional, I participated in many STEM student events over the 2016-17 academic year, including getting killed in a Chemistry Club play. These interactions established meaningful connections and showed support for our science and math students.

2) **16-17 Goal:** To encourage student completions, work with fellow deans to expand specific articulation agreements to 4-year colleges for BC graduates with degrees in Biology, Mathematics, and Physical Sciences.

**16-17 Outcome:**
Meetings were held with CSU Bakersfield to detail AS-T transfer pathways. These created more communication and understanding across the institutions, but articulation of Chemistry courses remains an issue.

3) **16-17 Goal:** Develop a detailed pathway plan for Geology, including industry, professional organizations, high schools, and CSU Bakersfield involvement.

**16-17 Outcome:**
I collaborated with CSU Bakersfield to submit an NSF S-STEM grant proposal in Spring 2017. If awarded, this grant will provide ~$14,000 per year scholarships to BC students graduating from the Geology AS-T program to attend CSU Bakersfield to complete their Baccalaureate degree. Additionally, it will create connections to KHSD to encourage students to pursue Geology degrees at both institutions, and it will track the employment of students after completion of their BS in Geology.

4) 16-17 Goal: Personally complete DegreeWorks training.

16-17 Outcome:
With the College’s focus on implementation of the Starfish program, my time was shifted from DegreeWorks to assisting on Starfish Functional Team. This program is critical for the College’s success with the Guided Pathways initiative, since it will create the communication system needed to keep students on track and provide enrollment management information to more effectively plan course schedules multiple semesters out.

**BC Strategic Goal 3: Facilities and Technology**

1) 16-17 Goal: Provide recommendations to improve student enrollment tracking using software systems.

16-17 Outcome:
Specifically, I provided input on using Starfish as the College’s enrollment tracking and planning program.

2) 16-17 Goal: Establish required science employee safety training using the State GetSafetyTrained.com website.

16-17 Outcome:
A general GetSafetyTrained group of training modules were set up for the Chemistry faculty to use, and a safety manual was distributed to these faculty. I also worked with the District Office to get a fire extinguisher training session offered during the Fall 2016 Flex week, which was open to anyone in the College.

3) 16-17 Goal: Improve organization of the chemistry stockroom and laboratories.

16-17 Outcome:
GUI funds were shifted from less critical areas to purchase a new bin organizational system for the Chemistry stockroom. This allowed for better storage of materials. I also worked with the Laboratory Technician to have M&O redo the old wooden drawers and cabinet doors in the stockroom, so they no longer got stuck open.

4) 16-17 Goal: Reconstitute the Data Coaches initiative and training those members on how collect and analyze data.

16-17 Outcome:
I worked with Lesley Bonds to create a 2-day Data Coaching Retreat in August 2016. This attracted over 30 staff and faculty to become new Data Coaches, revitalizing this group, who
were then handed over to Janet Fulks to lead in Fall 2016. Topics covered KCCD data systems, report generation and presentation, and State online data banks for student success and career pathway tracking.

5) **16-17 Goal:** Provide workshops for faculty and staff on how to use Excel effectively.

   **16-17 Outcome:**
   I developed the content and materials for three Excel workshops ranging from beginner level to advanced topics in pivot tables and data lookup commands. I presented these to 30-50 faculty and staff during the Fall 2016 Flex week.

6) **16-17 Goal:** Apply for at least one science specific grant to improve the resources needed to attract and retain students.

   **16-17 Outcome:**
   In Spring 2017, I collaborated with CSU Bakersfield on an NSF S-STEM grant proposal for Geology, and I worked with our faculty to secure a 1-year no-cost-extension for our NSF A-Plus Scholars grant. I directed our Biology faculty to work with Cindy Collier to have the funds from the Strong Workforce grant to establish a new Anatomy & Physiology laboratory.

   Additionally, I assisted with the “Yes on Measure J” effort after work most days, including using vacation to help reach voters around Kern County. This was important for the construction of new science and math facilities at Bakersfield College over the next 5-10 years.

7) In 2016-17, I also served as a member of the BC Facilities and Sustainability Committee.

**BC Strategic Direction 4: Oversight & Accountability**

1) **16-17 Goal:** Work with the faculty chairs to ensure all program reviews and assessments are completed on time.

   **16-17 Outcome:** Done.

2) **16-17 Goal:** Work with the faculty chairs to create opportunities for faculty and students to participate in on-campus math and science general interest events, like national chemistry week and national pi day.

   **16-17 Outcome:**
   Events on campus were driven by faculty, chairs, and student clubs. These included a variety of interesting events, like Math Articulation Day, Physics Olympics and the MESA STEM & Pre-Health Conference.

3) **16-17 Goal:** Meet with adjunct faculty and new fulltime faculty to provide directions on how to be a successful educator.

   **16-17 Outcome:**
   These meetings were held with ~12 adjunct faculty beyond the normal evaluation process.

4) Additionally, I served as co-chair of the Accreditation Self-study Standard II.B Team.
BC Strategic Direction 5: Leadership & Engagement

1) 16-17 Goal: Develop a network of external high school and university connections for math and sciences at the administration level and encourage faculty-to-faculty connections.

16-17 Outcome:
In Spring 2017, the Math Articulation Day brought together high school faculty and CSU Bakersfield faculty to discuss how our math courses relate to each other.

2) 16-17 Goal: Expand dual enrollment and articulation agreements with high schools in partnership with CSU Bakersfield with a focus to meet the requirements of the College Futures grant.

16-17 Outcome:
• I worked with the Biology department and Physical Sciences departments to establish new dual enrollment courses in Biology and Physics at local high schools.
• A major effort was required to start and retain BC-instructed Chemistry classes at Wonderful Academy in Fall 2017.
• Preliminary conversations were had to re-ignite meetings to get a 12-grade math course established at KHSD high schools. This course will allow students to place directly into MATH B22, and it is still being developed.

3) 16-17 Goal: Participate on the SSSP & Equity Committee.

16-17 Outcome:
This committee did not meet. However, I worked with our ASTEP program to start planning to expand the Umoja Community to math in 2017-18. This will create a support group for African American students in ACDV B72 and MATH B60, following the success of the ASTEP program for ENGL B53 and B1A.