The CSULB Data Fellows project was extended into Year 3 this year, expanding in size and scope as the campus-wide significance of this project became evident. The number of participants increased, as did the types of activities and the range of questions and research, indicators of the project’s success in addressing its goals. This year’s Data Fellows teams and activities have continued to impact the way CSULB understands its students and itself as an institution.

Data Fellows Goals
These goals were laid out in Year 1 and have been carried forward:

- Foster a culture of ownership of data and solutions that drive change at the university and college levels.
- Empower Data Fellows to become experts on data and to cultivate broader understanding and application of available data in their Data Action Groups within colleges or units.
- Positively impact student success across the university.
- Deepen shared understanding of institutional questions.

Institutional Questions for Data Fellows to Address:
These questions were initially posed by Provost Dowell as Data Fellows began its first cohort in 2015, and have been added to as the project expands:

1. What can we do to understand and increase CSULB’s 4-year FTF and 2-year Transfer graduation rates in the context of best practices and policies at the national and state level?
2. What accounts for the persistent opportunity gaps and how can we eliminate those gaps?
3. How can we better understand attrition on the degree progress pathway, especially in Years 1 and 2? Who leaves? When and why?
4. How can we optimize course placement for freshmen in a way that maximizes success?
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**Data Fellows Year 3**
The third year of the Data Fellows project represented a significant expansion of the program in alignment with its goals. As the illustration below shows, Data Fellows moved from one single component – the Data Fellows Teams (orange circle) – to four types of activities that spanned the campus and engaged many more participants.

The Data Fellows webpage [www.csulb.edu/data-fellows](http://www.csulb.edu/data-fellows) was added as a way to share information about projects and presentations.

Syllabi for Fall 2017 and Spring 2018 are attached below. The overall structure for the year, as with the first two years, was to investigate data sources, apply them to college or unit projects, provide time for teams to work together, and share progress at the end of each semester.

In Year 3, with so many new Data Fellows and new teams, extra time was taken at the beginning of the year to discuss the Institutional Questions, and to review the basics of using Tableau and accessing data. During team work time, a second classroom was made available for teams to meet in a more quiet setting.

**Data Fellows Teams Year 3**
The Data Fellows teams each grew in number as additional members were added. Department Chairs joined teams from each college, and on some teams researchers were added. New teams were also added as interest grew in using data to explore student success issues.

<table>
<thead>
<tr>
<th>Data Fellows Teams</th>
<th>Years 1 &amp; 2</th>
<th>Year 3</th>
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</thead>
<tbody>
<tr>
<td>Number</td>
<td>34 Data Fellows</td>
<td>67 Data Fellows</td>
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<tr>
<td>Number of Teams</td>
<td>12 Teams</td>
<td>19 Teams</td>
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</table>
Data Fellows Teams

<table>
<thead>
<tr>
<th>Years 1 &amp; 2</th>
<th>Year 3</th>
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<tbody>
<tr>
<td>Academic Affairs</td>
<td>Academic Affairs</td>
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<tr>
<td>7 Colleges</td>
<td>7 Colleges</td>
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<tr>
<td>University Center for Undergraduate Advising (UCUA)</td>
<td>UCUA</td>
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<tr>
<td>Student Affairs</td>
<td>Student Affairs</td>
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<tr>
<td>Institutional Research and Assessment (IRA)</td>
<td>IRA</td>
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<tr>
<td>Academic Technology Services (ATS)</td>
<td>ATS</td>
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<tr>
<td>College of Continuing and Professional Education (CCPE)</td>
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<tr>
<td>Center for International Education (CIE)</td>
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<td>Graduate Studies</td>
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<td>Enrollment Services</td>
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<td>Latino Faculty and Staff Association (LFSA)</td>
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<tr>
<td>HSI-STEM Grant</td>
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<td>Academic Senate</td>
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Predictive Analytics Teams

In Spring 2017, a request for proposals was sent out to all faculty inviting proposals for research projects using IR data to understand and support student success. Three faculty groups were awarded funding, and conducted their research projects in 2017-18.

- Impact of Class Scheduling at CSULB on 4- and 2-year Graduation Rates, by Burkhard Englert (COE) and Chung-min Lee (CNSM)
- Shooting for a Better, Fast, and More Efficient System: A Study on Students' Timely Progress to Graduation, by Xuemei (Sherry) Su (CBA), Ming Chen (CBA), and Hongyu Chen (CBA)
- Rising Tides & Changing Trends: Utilizing Survival Analysis and Qualitative Inquiry to Examine Challenges to Freshman Timely Degree Progress, by Avery Olson (CEEE), Erika Baldwin (CEd), and Don Haviland (CEd)

Results of these projects were shared during a series of Open Forums in March and April 2018. Each team explored factors in students success through in-depth analysis of IR data.
Data Action Groups in Colleges and Units
Starting in Year 2, Data Fellows college teams were asked to work with their college faculty, staff, and leaders to find out what kinds of actionable data they needed on a regular basis, and also to encourage the establishment of data action teams within each college. These activities occurred differently across campus.

Identifying Actionable Data: Following conversations and informal surveys with staff and faculty in their colleges, Data Fellows teams submitted extensive lists of the types of data that colleges need in their routine work with students, planning, and reporting. This list of actionable data was sorted into four categories:
- Existing and usable right away;
- Existing, but may require additional training or access;
- Not existing, needs to be developed soon; and
- Not existing, not urgent, and will be addressed in a later phase.

The list was shared with Institutional Research (IR) and Enrollment Services (ES). Each of these offices looked through the categories and took action as needed. The list now serves as a reference for IR and ES, and has also allowed the Data Fellows planning team to note areas that can be addressed through the “Accessing Campus Data” workshops.

Data Action Groups in Colleges: As an extension of the Data Fellows project, most colleges now have a structure and a process for examining and using campus-wide data. This is a significant outcome of the Data Fellows project. Examples of the expanded work with data in each college illustrates the sustainability of this approach.
- Expanding the original Data Fellows team within the college to include researchers and graduate student assistants
- Identifying a staff position as a Data Analyst to support new data collection, analysis, and use in the college
- Establishing routine Undergraduate Data meetings with the Dean, Associate Dean, Department Chair, and Lead Advisor
- Meeting with all college staff and faculty to discuss Data Fellows and college-wide projects and goals
- Surveying students and sharing results with college leadership, staff, faculty

“Accessing Campus Data” Workshops
To make IR data and “Beach Data” available to anyone on campus, the Data Fellows coordinators and IR staff organized a new set of workshops – the “Accessing Campus Data” workshops. They were offered twice each semester, and held in a computer lab that allowed the IR team to lead the groups through the process of investigating student success questions.

Each workshop followed a similar agenda, with IR staff introducing different types of data:
- Admission Data
- Enrollment Data
- Course Data
- **Student Retention and Graduation Data**

Interest was high, and each workshop was attended by 30-40 staff and faculty. An additional benefit was that attendees met and worked with IR staff directly for the first time. And by learning about common terms and tools, participants began to develop a shared understanding that will likely continue to grow.

**Summaries of Team Outcomes and Projects Year 3**

**College of Engineering: Bottleneck Classes and Student Success**
COE team examined the impact of CE 205, which is an early requirement for 4 majors and a prerequisite for 6 courses. Approximately, 11% repeat, some for several times, significant delays in graduation. Their research revealed that the students who were not successful were challenged by problem analysis and understanding real world engineering problems, and not lack of preparation in pre-requisites. This revelation allowed the college team to realign pedagogy and tutoring with greater emphasis on practicing real-world problem solving skills.

**College of Continuing and Professional Education: Impact of Winter and Summer Self-Support Sessions on Graduation Rates**
CCPE team explored the impact of summer and winter sessions on FTF and Transfer graduation rates. Also, they explored if these programs disproportionally impacted Pell recipients, who typically did not have support in the summer. The initial analysis was not conclusive and further analysis is needed. Next year they plan to study groups of similar student cohorts, such as Pell students who took summer classes vs those who did not, and the courses they need, and impact on graduation rates.

**College of Health and Human Services: Removing Barriers to Timely Graduation**
CHHS designed a Student Success Survey to understand the different needs of pre-majors. This survey has helped realign student advising and internship services to better serve the students.

**College of Education: Understanding Liberal Studies student pathways**
CED team explored the graduation rates, retention, and persistence by plan (Liberal Studies, ITEP). In the past, Liberal Studies and ITEP data were not readily available by plan. IR and Enrollment Services have made significant progress in ensuring this type of data is available for each of the plans in College of Education.

**University Center for Undergraduate Advising (UCUA): Beach Learning Communities**
UCUA team focus was on better understanding of undeclared student needs and progress. This involved examining effectiveness of interventions with balanced course loading. Also, the team implemented a planning survey and focus group to learn more about effectiveness of interventions.

**Academic Senate: FTF and Transfers Experiences of DFW Grades in GE Courses**
The senate team studied the phenomenon of DFW grades in GE courses as an indicator of FTF success. They explore the impact on attrition after the first semester. They discovered that courses in Area B2 and D2 stand out as being particularly difficult for FTF to pass. This will be any area for further exploration in the future studies.
College of Business Administration: GI 2025
CBA is most concerned about student attrition in the first few years in FTF and transfer cohorts. Similar to CHHS and CLA, CBA also surveyed new students to understand their goals, perceptions, sense of preparedness, self-efficacy, external commitments, and reasons for leaving. Implementing interventions based on data, e.g. Mandatory Sophomore Advising Workshops are viewed to be critical in increasing retention.

College of the Arts: Retention, Attrition, Advising, and Longitudinal Study
COTA is examining retention data by multiple variables and finding a “murky middle” of 2.5 GPA students who are not retained in the college. COTA is also interested in improving the diversity of students pursuing Art majors. Examining enrollment of students of color in COTA in relation to demographics in CSULB and LBUSD is a priority. Furthermore, COTA is also conducting annual survey to better understand how students can take 15 units per semester to able to graduate in 4 years, which is a big challenge with design classes with long lab hours.

Graduate Studies: Improving Data on Graduate Students
Graduate data on student retention, graduation, and student success is not fully calibrated at the institutional level. Hence, this is a major effort to clean up data on graduate students at the university level and by program. The goal is to replicate the student success metrics currently available for undergraduate students. More progress is expected over the next year.

HSI-STEM Grant: STEM Transfers from Community Colleges
HSI-STEM team is most concerned about STEM transfers from Community Colleges. Streamlining pathways to STEM majors is a key strategy. Looking at best practices at Community Colleges where successful STEM transfers come from can help guide best practices.

Center for International Education: Trends in the Data for International Students
CIE team is examining the success of international students, just as we can study overall FTF and transfer students. Currently, data definitions for various international categories are not readily available. CIE is also exploring the impact of Study Abroad, which is currently not well coded in CMS. However, CIE is emphasizing the importance of linking data tools to look at the whole student journey.

College of Liberal Arts: Team Projects Extend Data Fellows Action and Outcomes
The CLA has published the first journal article based on Data Fellows work. The team is currently focused strengthening the data culture within college by cultivating data use among Department Chairs through Department Chair Data Workshops. CLA team has also conducted extensive analysis of their internship needs and opportunities. Lastly, CLA has a keen interest in understanding and tracking migration between colleges. This is critical since CLA serves and graduates many students who entered in other colleges.
College of Natural Sciences and Math: Success of CSULB Students in Introductory Statistics and Mathematics Courses

CNSM focused their efforts in efforts in improving low completion rate mathematics courses. CNSM team demonstrated that success builds on success for students in their first and introductory mathematics and statistics courses. Hence, success in the initial mathematics courses was critical for overall university student success. Analysis of Early Start Mathematics courses and GE B2 QR/Mathematics courses led to improved placement and targeted student support in the redesign project. This project used ALEKS and Early Start Math which lead to significantly higher course completion rates.

Division of Student Affairs: Exploration of CIRP (Cooperative Institutional Research Program) Freshman Survey Data as it Relates to GI 2025

DSA is studying the overall student expectations for work, graduation, engagement, plans to transfer using the CIRP historical datasets. Based on this analysis, DSA is exploring if CSULB is ready to offer the support structure necessary to meet the expectations.

Latinx Faculty & Staff Association: Generating a comprehensive demographic account of CSULB Latinx Students, Faculty, Staff

The Latinx team is exploring trends in Latinx student, faculty, and staff population with the goal of making these trends visible on campus and addressing potential disparities. Through their work with BeachData, the team identified demographics and also gaps that are important to attend to.

- Student population is up 4.3 percentage points in last 4 years
- Faculty population up 2.5 percentage points in last 4 years
- Gap between Latinx students and faculty has increased by 2.5 percentage points in last 4 years
- Staff population up 2.9 percentage points over last 4 years, but number of Latinx administrators has decreased
- Gap between Latinx students and staff up 2.2 percentage points in last 4 years

In Summary

This year the Data Fellows have made significant progress beyond our original inception. We have two critical observations.

First, as we have seen in the work already completed, we now have much deeper understanding of the factors that facilitate or impede student success in a particular college or for a specific group of students, but in the context of the campus-wide data. We can, in fact, extend our analysis to CSU-wide context via chancellor’s office dashboard. For example, when we listen to presentations we could ask how other campuses are performing in various graduation parameters. Are there any specific institutional characteristics that explain the differences? What are the specific circumstances on some campuses that resulted in larger or smaller progress in student success? These insights have strengthened our understanding of student success and at the same time unraveled the many the areas where we need more refined data tracking.

Second, our original idea of involving faculty, academic advisors, and administrators from each college, working as a “team”, resulted in a unique opportunity to look at data from various perspectives. This
was combined with a concurrent development of Tableau and with access to data of unprecedented granularity. Because of these interactions, both within college teams, and between the teams, we were all learning together how to use student-level data to generate actionable information and tools that improve outcomes for students. Of course, increasing the number of students who graduate is viewed as a by-product of deep and meaningful student learning. To best facilitate that learning, it is critical to identify students who are at risk of not succeeding in their course work, or at risk of dropping out, so that we can provide them with appropriate support services. This requires an authentic assessment of students’ strengths and risk factors, as well as a coordinated approach to providing support.

In summary, the overarching goal of Data Fellows is not only to foster a culture of data-informed decision making but in fact it is much broader. We want to flip the traditional question of whether “students are ready for college” to one about whether “institutions are ready for today’s students and how to provide services if they are struggling”. In this sense the Data Fellows program is really a part of the vision for inclusive excellence at the Beach.
Fall 2017 Syllabus

Day and Time: Fridays, 10:00 – 12:00 a.m.

Dates: Fall: 9/15, 9/29, 10/13, 10/27, 11/17, 12/1, 12/15

Location: AS 235

Coordinators: Dhushy Sathianathan, Dhushy.Sathiananthan@csulb.edu
Kris Slowinski, Krzysztof.Slowinski@csulb.edu
Cindy Grutzik, Cynthia.Grutzik@csulb.edu
Lizzet Rojas, Lizzet.Rojas@csulb.edu
Michelle Baik, Michelle.Baik@csulb.edu

Notes for Participants:
• Bring a laptop each time.
• Sign in each time.
• Please attend each session. If you cannot attend, please send someone in your place.

Purpose of the Data Fellows Program:
1. Foster a culture of ownership of data and solutions that drive change at the university and college levels.
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Institutional Questions Guiding Campus-wide Inquiry:
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(Note: All activities and schedules subject to change.)
# Fall 2017 Schedule

<table>
<thead>
<tr>
<th>DATE</th>
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<tbody>
<tr>
<td>Sept. 15</td>
<td>- Welcome</td>
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<td>- Introduction of Data Fellows</td>
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<td>- Introductory discussion on broad institutional questions</td>
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<td></td>
<td>- Teams/individuals select question to explore for next session</td>
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<tr>
<td>Sept. 29</td>
<td>- Group discussion on initial research on institutional questions</td>
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<td>- Teams develop goals for semester and types of data that will help you work toward those goals</td>
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<tr>
<td>Oct. 13</td>
<td>- Introduction/Update on Beach Data (Tableau)</td>
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<td>- Team work time</td>
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<tr>
<td>Oct. 27</td>
<td>- Introduction/Update on EAB</td>
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<tr>
<td></td>
<td>- Team work time</td>
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<tr>
<td>Nov. 17</td>
<td>- Introduction/Update on other data tools</td>
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<tr>
<td></td>
<td>- Team work time</td>
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<tr>
<td>Dec. 1</td>
<td>- Project Presentations</td>
</tr>
<tr>
<td>Dec. 15</td>
<td>- Project Presentations</td>
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</table>
CSULB FACULTY AND STAFF DATA FELLOWS FOR STUDENT SUCCESS

Spring 2018 Syllabus

Day and Time: Fridays, 9:00 – 11:00 a.m.

Dates: 2/9, 3/2, 3/16, 4/6, 4/20, 5/4, 5/11, 5/18

Location: AS 235

Coordinators: Dhushy Sathianathan, Dhushy.Sathiananthan@csulb.edu
Kris Slowinski, Krzysztof.Slowinski@csulb.edu
Cindy Grutzik, Cynthia.Grutzik@csulb.edu
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10. How can we optimize admissions while improving student success?

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### Spring 2018 Schedule

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<tr>
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| Feb 9    | Tableau Refresh and Practice (with Katerina Spralja and Jason Deutschman)  
Group Time                                       |
| March 2  | Tableau + EAB Integration (with Daniel Gleason and Kris Slowinski)  
Group Time                                           |
| March 16 | Survey Inventory & Tools (with Don Haviland, Misty Jaffe, & Selena Nguyen-Rodriguez)  
Group Time                                        |
| April 6  | TBD                                                                  
Group Time                                          |
| April 20 | Predictive Analysis Presentations (with Faculty-led Research Teams)   |
| May 4    | Team Presentations                                                   |
| May 11   | Team Presentations                                                   |
| May 18   | Team Presentations                                                   |