The arrival of the fall 2019 cohort represents a watershed moment for Graduation Initiative 2025; the success of these students will determine whether or not we achieve our ambitious goals. It also serves as a reminder that closing equity gaps does not happen by accident; it requires the entire campus to work intentionally to ensure that support is accessible and beneficial to the students who need it most.

Equity gaps do not simply emerge at the time students graduate; they are rooted in inequities that begin before students arrive on campus and continue throughout their college careers. Closing equity gaps requires faculty, staff, and administrators to understand the nuanced ways in which underserved students are hindered in their pursuit of a CSU degree, and to work together to provide the necessary support to ensure all students are successful in achieving their academic goals.

This summary report provides an opportunity for the Chico State community to review data and strengthen its efforts to eliminate equity gaps. To facilitate this process, the CSU Chancellor’s Office has launched an accompanying Equity Dashboard with detailed information about when and where equity gaps emerge for Chico State’s historically underserved students (HUS), as well as Pell-recipient, and first-generation students. Please keep in mind that this report focuses on academic factors for which we have data. However, observed academic issues often arise from non-academic influences including financial challenges, campus social climate, and campus engagement. The data presented in this report and in the dashboard convey what is happening, but it is up to each campus to determine why it is happening and how to address it. We encourage you to leverage this summary report to uncover new opportunities for eliminating equity gaps at Chico State University.

Summary of Findings

- At the same time that historically underserved populations have increased, Chico State’s 6-year graduation rates have reached all-time highs across all groups of students, indicating that the university’s efforts to increase completion rates are improving opportunities for all.
- Despite this improvement, Chico State’s equity gaps have persisted, suggesting that the campus must continue to identify opportunities to enhance support for historically underserved students.
- Equity gaps are prevalent in attrition patterns in first-time students’ first years of enrollment. Recent trends indicate that after two years, Chico State’s persistence rates among underserved students typically drop below levels necessary to achieve the campus’s 6-year graduation and equity gap goals.
- At Chico State, earning fewer than 2 non-passing grades (DFWs) in the first two years is the strongest predictor of 6-year graduation rates for historically underserved, Pell-recipient, and first-generation students.
- There are notable equity gaps in the rate at which Chico State students attain junior status within two years and in the rate at which those with junior status graduate within two years.
- Chico State courses with the largest GPA gaps between historically underserved students and their peers are concentrated in the natural and social sciences, math, and engineering.
Equity Gaps in the Chico State Context

At Chico State, more than half of the overall student population is comprised of students who are Pell recipients and/or identify as historically underserved or first-generation, with significant intersectionality among these group identities. In assessing equity gaps related to these populations, it is important to note that the categories of historically underserved students and Pell recipients are not perfect. For example, the definition of historically underserved excludes Asian sub-populations (such as Pacific Islander and Southeast Asian nationalities) that may resemble other historically underserved groups in academic preparation, socioeconomic status, and first-generation designation. Inclusion of these students in the non-historically underserved comparison group may act to minimize real-world equity gaps that exist for individual ethnicities, independent of categorization methodology.

Similarly, students who do not qualify for Pell grants (such as undocumented students) are included in the non-Pell group by definition. Counting as non-Pell those students who are economically challenged enough to deserve Pell support, but for other reasons do not receive it, may lead to an underrepresentation of actual equity imbalances. These caveats and limitations are important to consider as the Chico State community takes action to achieve its 2025 Graduation Initiative goals.

With this context in mind, Chico State’s historically underserved, Pell, and first-generation equity gaps for the 2007 through 2012 cohorts of first-time students are illustrated in the three figures below. While these trends provide a snapshot of Chico State’s historic and current equity gaps, disparities in graduation rates between historically underserved, Pell-recipient, and first-generation students and their peers do not exist in a vacuum. They are heavily influenced by an institution’s unique demographic landscape, geographic location, history, mission, and commitment to inclusion.

Chico State’s historically underserved, Pell-recipient, and first-generation populations have grown tremendously over the last decade. As illustrated in the two figures on the following page, among Chico State’s most recent first-time cohorts 43% of students are historically underserved (which reflects a 127% increase from 2008); 44% are Pell recipients (this represents a 100% increase from 2008); and nearly one-quarter are first in their families to attend college (56% increase). Fifteen percent of first-time students are members of all three groups, a 167% increase from 2008. vi
At the same time that historically underserved populations have increased, Chico State’s 6-year graduation rates have reached all-time highs across all groups of students, indicating that the university’s efforts to increase completion rates are improving opportunities for all. Indeed, graduation rates among historically underserved students have risen by 16 percentage points since the 2007 cohort.

Despite this improvement, Chico State’s equity gaps have persisted, suggesting that the campus must continue to identify opportunities to enhance support for historically underserved students to reach its 2025 equity gap goals.
Equity Gaps in Student Persistence

Chico State’s equity gaps are prevalent in attrition patterns during students’ first years of enrollment. Nearly three-quarters of all students who leave Chico State without graduating leave in their first or second year. Indeed, only 84% of historically underserved and Pell-recipient students in Chico State’s 2017 first-time student cohort returned in fall 2018, compared to 86% of their respective peers. First-year persistence gap trends between historically underserved students and their non-historically underserved student peers are reflected in the figure below.

Although attrition is at its highest in students’ first year of enrollment, persistence rates among Chico State’s historically underserved, Pell-recipient, and first-generation students drop another 13-14 percentage points in their second year. Based on historical trends, Chico State’s early attrition rates among underserved groups are such that the institution would need to graduate 88% of all historically underserved students still enrolled after year one in order to meet its 74% six-year graduation target and eliminate equity gaps. While this observation indicates that more work needs to be done, it is important to remember that Graduation Initiative 2025 operates under the moral imperative to better serve our students. In this spirit, even if all Graduation Initiative goals are not fully met, progress towards those goals represents real gains for our students. Additionally, because this analysis is based on data from the past 5 years, it does not take into account recent changes, such as Executive Order 1110, that the campus and system have implemented to promote equity.

After two years, persistence rates among underserved students typically drop below levels necessary to achieve Chico State’s ambitious 6-year graduation and equity gap goals. The figure on the following page is indicative of this historical pattern for the 2012 – 2018 first-time student cohort.
Early Academic Outcomes Contributing to Equity Gaps

At Chico State, earning fewer than 2 DFWs in the first two years is the strongest predictor of 6-year graduation rates for historically underserved, Pell-recipient, and first-generation students, and is the early academic outcome that holds the greatest promise for eliminating equity gaps. vi

As the figures below illustrate, there is a 13 percentage point gap between the number of Pell recipients and their peers who earn fewer than 2 non-passing (DFW) grades in their first two years at Chico State (see below chart, at left). However, graduation rates among Pell recipients who earn 0 or 1 non-passing grades in their first two years are 33 percentage points higher than for those who earned two or more non-passing grades (see below chart, at right). This pattern is also apparent among historically underserved and first-generation students.
Despite the strong connection between earning fewer than 2 non-passing grades in the first two years and graduating within six, only 45% of historically underserved, 47% of Pell-recipient, and 45% of first-generation students accomplished this objective.

**Receiving a non-passing grade early in one’s college career has a disproportionately negative impact on underserved students. Helping Chico State’s historically underserved, first-generation, and Pell-recipient students earn fewer DFWs in their first two years—and offering additional academic support to those who do earn non-passing grades—would go a long way toward eliminating equity gaps.**

**Gaps in Attaining Junior Status**

At Chico State, historically underserved, Pell-recipient, and first-generation students achieve junior status (equivalent to earning 60 semester credits) within two years at rates that are between 9 and 16 percentage points lower than their peers in the most recent year for which we have data. These rates vary considerably by college.

As the figure below illustrates, the College of Humanities and Fine Arts has the largest equity gaps among students attaining junior status within two years (21-36 percentage points). The Colleges of Natural Sciences, Engineering, Computer Science and Construction Management, and Behavioral and Social Sciences also have pronounced first-generation equity gaps (18-22 percentage points). Although recent policy changes (e.g., EO 1110) and enhancements to academic support offerings are aimed to address these early equity gaps, it is critical to identify additional opportunities (both academic and non-academic) to help underserved students reach the junior status credit threshold within two years.
Gaps from Junior Status to Graduation

While gaps in academic preparation likely contribute to disparities in attaining junior status within two years, equity gaps among those who have already attained junior status can be more difficult to explain. Nonetheless, historically underserved, Pell-recipient, and first-generation students who have attained junior status still graduate within two years at rates that are 11 – 16 percentage points lower than their peers, although there is substantial variation across colleges.

As illustrated in the figure below, with equity gaps ranging from 25 - 37 percentage points among historically underserved, Pell-recipient, and first-generation students, the College of Humanities and Fine Arts and the College of Agriculture have the largest junior-to-graduation equity gaps at Chico State. The College of Communication and Education also has pronounced junior-to-graduation equity gaps, especially between first-generation students and their peers.

Across the four colleges shown in the figure above, 62 historically underserved students with junior status missed graduating within 2 years by just one term. Providing additional support to help underserved students cross the finish line within two years will have a disproportionately large impact on Chico State’s ability to eliminate equity gaps in 6-year graduation rates.
Courses with the Largest GPA Equity Gaps

Equity gaps also exist within courses, some of which are far more pronounced than others. Courses with the largest GPA equity gaps for first-generation First-Time and Sophomore students, including those where large numbers of first-generation students earn non-passing grades, are concentrated in the College of Natural Sciences and the College of Behavioral and Social Sciences.

The top 5 GPA equity gap courses for first-generation First-Time and Sophomore students (in courses with enrollments of at least 50 students and the most recent term for which we have data) are shown in the figure below. (As noted previously, students who receive more than 1 DFW in their first two years are much less likely to graduate in 6 years.)

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Code</th>
<th>Achievement Gaps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food, Fiber, and Drugs</td>
<td>BIOL0105</td>
<td>1.39 Course GPA Gap</td>
</tr>
<tr>
<td>Power and Scarcity</td>
<td>ANTH0116</td>
<td>0.3 Course GPA Gap</td>
</tr>
<tr>
<td>Trigonometry</td>
<td>MATH0118</td>
<td>0.89 Course GPA Gap</td>
</tr>
<tr>
<td>Inq Into Earth and Env Sci</td>
<td>GEOG0104</td>
<td>0.84 Course GPA Gap</td>
</tr>
<tr>
<td>Juvenile Justice Process</td>
<td>POLI0257</td>
<td>0.77 Course GPA Gap</td>
</tr>
</tbody>
</table>

Courses with the most pronounced GPA equity gaps for historically underserved Juniors and Seniors—including those where large numbers of underserved students earn non-passing grades—are concentrated in the College of Engineering, Computer Science and Construction Management, as well as the College of Natural Sciences.
The top 5 GPA equity gap courses for historically underserved Juniors and Seniors (with enrollments of at least 50 students and the most recent term for which we have data) are shown in the figure below. Equity gaps for all Chico State courses (by student level) can be viewed in the Equity Dashboard’s course GPA gap page. Equity gaps for all Chico State courses (by college) can be accessed in the Graduation Initiative Dashboard’s course GPA gap page.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Code</th>
<th>Achievement Gaps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algorithms and Data Structures</td>
<td>CSC0311</td>
<td>1.49 Course GPA Gap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>79 Students</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>CHEM0370</td>
<td>1 Course GPA Gap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>56 Students</td>
</tr>
<tr>
<td>Precalculus Mathematics</td>
<td>MATH0119</td>
<td>0.91 Course GPA Gap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>54 Students</td>
</tr>
<tr>
<td>Intro To Technical Computing</td>
<td>MECH0208</td>
<td>0.85 Course GPA Gap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60 Students</td>
</tr>
<tr>
<td>Linear Circuits I</td>
<td>EECE0211</td>
<td>0.81 Course GPA Gap</td>
</tr>
<tr>
<td></td>
<td></td>
<td>96 Students</td>
</tr>
</tbody>
</table>
Suggested Actions

To achieve the 2025 Graduation Initiative’s ambitious equity gap goals, the Chico State community must continue to work together with a renewed sense of purpose, mobilizing resources and expertise to ensure that opportunities for excellence are available for all students, regardless of background. This section outlines several ways that Chico State faculty, staff, and administrators can work together to achieve this goal.

1) **Recognize the critical importance that advisors and other staff play in promoting the success of underserved students.**
   - Develop targeted, proactive advising and implement early alert systems that warn staff and faculty when a student is falling behind or is in danger of stopping out.
   - Leverage campus data to determine which support programs and strategies might be implemented, enhanced, or redesigned to help improve first-, second-, and third-year persistence among historically underserved, first-generation, and low-income students. These may include:
     - Enhancing tutoring and expanding peer mentoring for underserved students.
     - Developing and expanding summer programming designed specifically to support students from historically underserved communities.
     - Reimagining the first year of college to improve the quality of learning and student experience for students from historically underserved communities.

2) **Monitor participation data for various programs and services designed to improve student success.**
   - Ensure that program leaders regularly disaggregate data to determine whether their student support services are being distributed equitably, and that they implement strategies to foster more equitable participation.
   - Survey and/or interview students who stop attending to find out why.

3) **Implement initiatives aimed at ensuring an inclusive campus climate.**
   - Examine co-curricular activities to identify gaps in student engagement. Devise and implement plans that foster more equitable participation.
   - Examine campus culture and climate from the students’ perspective. Do historically underserved, first-generation, and Pell-recipient students feel a sense of belonging on campus? Do they have access to faculty, staff, administrators, tutors, and others who understand the issues they face and are familiar with the communities from which they come? Do faculty, staff, and students feel that the campus culture is committed to and supportive of diversity, equity, and inclusion?
   - Conduct regular focus groups with underserved students to gain a better understanding of their experiences at the institution. Combine findings from these gatherings with campus data to identify opportunities for the institution to better serve these students. Focus group facilitators should be trained to handle conflicts that might emerge when sensitive topics are discussed.
   - Dedicate resources to provide space, programming, and staff to support students from underserved communities.
• Implement programs to better inform and engage parents and families in their students’ education.

• If not already doing so, enhance new student and parent orientation programs by offering them in languages other than English.

• Examine campus culture and climate from the perspectives of faculty, staff, and administrators. Have campus employees been offered and undergone training to equip them with the knowledge, skills, and tools they need to handle issues around diversity, equity, and inclusion?

4) **Conduct analyses of the impact of Executive Order 1110 on your campus.**

• Is this change improving equitable outcomes for underserved students?

• What additional changes or supports are needed to ensure that this policy change produces the desired outcomes for students? Identify opportunities to further enhance courses and better support students who arrive in need of additional academic support.

5) **Encourage faculty to conduct analyses of degree requirements and course sequencing within majors to identify opportunities to better prepare students for courses that have high DFW rates.**

• For colleges and majors that see a disproportionate number of students migrating to other majors and colleges, encourage faculty and departments to explore the data and identify course sequences that help students meet requirements that are not major-specific (e.g., GE and service courses).

• Seek to understand the factors contributing to disparate outcomes in courses and majors with the largest equity gaps. Are they resulting from technical or academic bottlenecks that may have a disproportionate impact on underserved groups?

• Consider redesigning high-enrollment, low-success courses with significant equity gaps.

• Support faculty in the implementation of equity-minded pedagogies and in the creation and strengthening of faculty learning communities aimed at identifying and advancing strategies for closing equity gaps in the classroom.

6) **Focus on providing needed financial support for students from historically underserved and low-income communities.**

• Implement programs to increase students’ financial literacy to support them in making informed decisions when planning their course schedules and graduation timelines.

• Increase the number of student job opportunities on campus.

• Offer emergency funds, retention grants, and summer grants to students in need.

• Create initiatives to ensure the affordability of course materials.

7) **Explore nuances in the ways in which ethnicity, gender, first-generation designation, academic preparation, and financial hardship intersect at campus and college levels to influence student success.**

8) **Maintain a focus on equity.** Remember that the need to close equity gaps will not end in 2025; Chico State will continue to educate historically underserved students for many years to come. Your continued efforts to support equity are critical to those students as well as to the families and communities from which they come.
Endnotes

i The Equity Dashboard can be viewed at www.calstate.edu/equitydashboard.

ii The term “historically underserved students” or “HUS” refers to African American, Latina/o, and Native American students.

iii While not a formal goal of Graduation Initiative 2025, approximately one-quarter of Chico State first-time students are the first in their family to attend college. To close historically underserved and Pell equity gaps, it is essential to understand the additional challenges first-generation students face. Aligned with systemwide reporting, first-generation students are defined as those for whom neither parent attended college.

iv The authors employ the gender-neutral term “first-time students” throughout this report in lieu of “freshmen.”

v While this observation indicates that more work needs to be done, it is important to remember that Graduation Initiative 2025 operates under the moral imperative to better serve our students. In this spirit, even if all Graduation Initiative goals are not fully met, progress towards those goals represents real gains for our students. Additionally, the data available for this report do not capture the impact of recent policy and practice changes that hold potential for improving student outcomes. For example, Executive Order 1110 provides students with support courses and changes enrollment policies around continuation in ways that are expected to improve student outcomes and narrow equity gaps.

vi The Chancellor’s Office utilized Structural Equation Modeling (SEM) to identify the impact of 4 early academic milestones on graduation rates: earning fewer than 2 DFWs (grades of D, F, or unauthorized Withdrawal) within the first two years; reaching sophomore status within 1.5 years; taking a full load (15+ credits per term); and earning at least a 2.5 GPA in the first two years. The full methodology for this analysis can be accessed in the Equity Dashboard (calstate.edu/equitydashboard).

vii The percent change is calculated by subtracting the proportion of 2008 cohort first-time students who were historically underserved, Pell, or first in their family to attend college from the proportion of first-time students in the same three categories for the most recent cohort year. The difference is then divided by the proportion of 2008 cohort first-time students to get the percent change.

viii To capture outcomes of the campus’s most recent efforts to increase persistence, the data cited here utilize the most recent cohorts available (i.e., the 2017 first-year cohort for first-year persistence; the 2016 cohort for second-year persistence, etc.). To view persistence patterns within specific cohorts, visit the CSU by the Numbers Dashboard (calstate.edu/csubythenumbers).

ix There are also notable equity gaps in this measure when looking at 3- and 4-year timeframes.

x Equity gaps in attaining junior status and junior-to-graduation equity gaps for the entire campus can be found in the Equity Dashboard (calstate.edu/equitydashboard). It is important to note that major and college switching patterns may affect the junior-graduation timeline.