

California State University Louis Stokes Alliance for Minority Participation Senior Level II Year Four Report

Report Prepared for:

The CSU-LSAMP Program by the Institute for Social Research at California State University, Sacramento

June 2017

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ACKNOWLEDGEMENTS

As with any large scale, complex research effort, this study's success is due to the combined efforts of many individuals. While it is impossible to adequately thank all of those who made data collection and interpretation possible, the ISR research team would like to particularly recognize the following individuals who were essential to the successful completion of the project:

CSU-LSAMP Statewide Office:

- Dr. Lisa Hammersley, Co-PI., Lead Project Director
- Nicole Campos, Project Manager
- Camanch Camacho, Administration Support

The CSU Office of the Chancellor, including:

- Monica Malhotra, Deputy Director, Academic Research

The CSU-LSAMP Campus Coordinators and Staff.

This report was prepared for the National Science Foundation Directorate for Education and Human Resources and supported by NSF-HRD-0802628. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the National Science Foundation.

Table of Contents

EXECUTIVE SUMMARY	1
A. Overall Effectiveness of the CSU-LSAMP Alliance	1
B. The Senior Level II Project.....	2
INTRODUCTION	6
A. Data Sources and Methodology.....	6
B. Report Structure	7
SECTION i: OVERALL EFFECTIVENESS OF THE CSU-LSAMP ALLIANCE	8
A. Profile of CSU-LSAMP Participants	8
B. CSU Enrollment of Students from Underrepresented Minority Groups in STEM Disciplines	11
C. STEM Baccalaureate Degrees Awarded by the CSU to Students from Underrepresented Minority Groups.....	12
D. STEM Discipline Persistence and Graduation Rates for 1996-2014 CSU-LSAMP First Time Freshmen Participant Cohorts.....	13
Data sources and methodology	13
STEM discipline persistence rates.....	14
STEM discipline graduation rates	20
E. Persistence and Graduation Rates for 2003-2014 CSU-LSAMP California Community College Transfer Participant Cohorts.....	26
Data sources and methodology	26
Persistence rates for CCCT CSU-LSAMP participants.....	27
Graduation rates for CCCT CSU-LSAMP participants.....	28
F. Baccalaureate Degree Attainment for CSU-LSAMP Participants	30
G. Advancement to Graduate Programs for CSU-LSAMP Phase III and Senior Level Participants.....	31
SECTION II: THE SENIOR LEVEL II PROJECT	33
A. Senior Level II CSU-LSAMP Participants	33
B. Estimating the Level of Participation for URM-STEM Students	35
C. Activity Participation.....	37
D. Findings Regarding Short-Term Milestones.....	41
Progress toward the goal of engaging at least 2,300 “level-one” students annually	41
Progress toward the goal of supporting 500 students in textbook reimbursement programs annually	41
Progress toward the goal of engaging at least 250 participants in STEM summer bridge programs annually	42
Progress toward the goal of engaging 800 students in academic excellence workshops annually.....	42
Progress toward the goal of engaging 300 students in transition programs annually	43
Progress toward engaging 500 students in research activities annually.....	43
Progress toward engaging 40 students in international activities annually	44
Progress toward engaging 500 students annually in professional development activities	44
E. Findings Regarding Long-Term Outcomes.....	45
Progress toward increasing URM-STEM enrollment	45
Progress toward increasing URM-STEM baccalaureate degree production.....	46
Progress toward increasing the number of CSU-LSAMP students who graduate each year.....	47
Progress toward increasing the number of participants enrolling in graduate programs.....	49

Table of Tables

Table 1: Number of New CSU-LSAMP Participants by Phase and URM Category, 1994-2016	8
Table 2: Overall STEM Discipline Persistence Rates, 1996-2014 Cohorts	15
Table 3: Average STEM Discipline Persistence Rates for Latino/Latina, African American and Non-URM Cohorts by Phase.....	16
Table 4: Average STEM Discipline Persistence Rates, 1996-2014 Cohorts	20
Table 5: Average Six-Year STEM Discipline Graduate Rates by Phase for Latino/Latina, African American and Non-URM Cohorts, 1996-2009	22
Table 6: Fourth-through-Eighth-Year Average STEM Discipline Graduation Rates, 1996-2011 Cohorts	25
Table 7: Average CCCT Persistence Rates, 2003-2011 Cohorts	28
Table 8: Fourth-through-Eighth-Year Average CCCT Graduation Rates, 2003-2011 Cohorts.....	29
Table 9: Post-Baccalaureate Enrollment and Degree Attainment for Phase III, Senior Level I, and Senior Level II Participants	32
Table 10: Number of Senior Level II CSU-LSAMP Participants through 2015-2016 by URM-STEM Category	33
Table 11: Estimated URM-STEM Participation Rate, Senior Level II CSU-LSAMP through 2015-2016.....	35
Table 12: CSU System-Wide Undergraduate URM-STEM Enrollment, Fall 2010-2015	45
Table 13: CSU System-Wide URM-STEM Baccalaureate Degrees, 2010-2011 through 2015-2016	46
Table 14: Estimated Baccalaureate Degree Attainment for Senior Level I and Senior Level II CSU-LSAMP Participants	48
Table 15: Post-Baccalaureate Enrollment for Senior Level I and Senior Level II CSU-LSAMP Participants.....	49

Table of Figures

Figure 1: CSU-LSAMP Participant Racial/Ethnic Composition, 1994-2016	8
Figure 2: CSU-LSAMP Participant Gender, Class Level, Discipline and Campus, 1994-2016	9
Figure 3: Annual Number of CSU-LSAMP Participants, 1994-2016.....	10
Figure 4: Annual Undergraduate URM STEM Enrollment for All CSU Campuses, Fall 1994-Fall 2015.....	11
Figure 5: Annual Number of Baccalaureate STEM Degrees Awarded by All CSU Campuses to URM Students, 1993-1994 through 2015-2016.....	12
Figure 6: Overall STEM Discipline Persistence Rates, 1996-2014 Cohorts.....	15
Figure 7: Average STEM Discipline Persistence Rates for Latino/Latina, African American and Non-URM Cohorts by Phase.....	16
Figure 8: Average One-, Two-, and Four-Year STEM Discipline Persistence Rates by Phase for Latino/Latina and African American CSU-LSAMP Participants, 1996-2014 Cohorts.....	18
Figure 9: First-through-Eighth-Year Average STEM Discipline Persistence Rates, 1996-2014 Cohorts.....	19
Figure 10: Overall Six-Year STEM Discipline Graduation Rates.....	20
Figure 11: Six-Year STEM Discipline Graduation Rates for Latino/Latina, African American and Non-URM Cohorts.....	21
Figure 12: Average Six-Year STEM Discipline Graduation Rates by Phase for Latino/Latina, African American and Non-URM Cohorts.....	22
Figure 13: Average Six-Year STEM Discipline Graduation Rates by Phase for Latino/Latina and African American CSU-LSAMP Participants	23
Figure 14: Fourth-through-Eighth-Year Average STEM Discipline Graduation Rates, 1996-2011 Cohorts	24

Figure 15: First-through-Eighth-Year Average CCCT Persistence Rates, 2003-2014 Cohorts.....	27
Figure 16: Fourth-through-Eighth-Year Average CCCT Graduation Rates, 2003-2011 Cohorts	28
Figure 17: Results of Tracking Data Retrieval for CSU-LSAMP Participants through 2015-2016.....	30
Figure 18: Baccalaureate Degree Attainment for CSU-LSAMP Participants through 2015-2016	30
Figure 19: Estimated Post-Baccalaureate Enrollment and Degree Attainment for Phase III, Senior Level I, and Senior Level II Participants.....	31
Figure 20: Class Level at Program Entry for New and	34
Figure 21: Average Estimated URM-STEM Participation Rate by Race/Ethnicity, Senior Level II CSU-LSAMP through 2015-2016.....	35
Figure 22: Average Estimated URM-STEM Participation Rate by Discipline, Senior Level II CSU-LSAMP through 2015-2016.....	36
Figure 23: Average Estimated URM-STEM Participation Rate by Campus, Senior Level II CSU-LSAMP through 2015-2016	36
Figure 24: Number of Level-One Students Participating in Activities Supporting the Five Senior Level II CSU-LSAMP Objectives, through 2015-2016.....	37
Figure 25: Number of CSU-LSAMP Participants for Selected Activities by Year, through 2015-2016	40
Figure 26: Number of Senior Level II CSU-LSAMP Participants through 2015-2016.....	41
Figure 27: Number of CSU-LSAMP Students in Material Support Activities, Senior Level II CSU-LSAMP through 2015-2016.....	41
Figure 28: Number of Students Participating in STEM Summer Bridge Programs, Senior Level II CSU-LSAMP through 2015-2016.....	42
Figure 29: Academic Excellence Workshop Participants, Senior Level II, CSU-LSAMP through 2015-2016	42
Figure 30: Transition Program Participants, Senior Level II CSU-LSAMP through 2015-2016	43
Figure 31: Research Activity Participants, Senior Level II CSU-LSAMP through 2015-2016.....	43
Figure 32: International Activity Participants, Senior Level II CSU-LSAMP through 2015-2016	44
Figure 33: Participants in Professional Development Activities, Senior Level II CSU-LSAMP through 2015-2016.....	44
Figure 34: System-Wide Undergraduate URM-STEM Enrollment.....	45
Figure 35: CSU System-Wide URM-STEM Baccalaureate Degree Production	46
Figure 36: Estimated Number of CSU-LSAMP Participants who Graduated, Senior Level II CSU-LSAMP through 2015-2016.....	47
Figure 37: Estimated Number STEM and URM STEM Graduates, Senior Level I and Senior Level II CSU-LSAMP Participants through 2015-2016 (23 Senior Level Campuses).....	48
Figure 38: Estimated Post-Baccalaureate Enrollment, Senior Level I and Senior Level II CSU-LSAMP Participants through 2015-2016 (23 Senior Level Campuses)	49

Table of Appendix Tables

Appendix Table 1: Participant Characteristics by Entry Phase, 1994-2016	50
Appendix Table 2: Annual Number of CSU-LSAMP Participants, 1994-2016.....	51
Appendix Table 3: CSU Undergraduate Enrollment for All CSU Campuses by URM and STEM Categories, Fall 1994-Fall 2015	52
Appendix Table 4: Annual Number of Baccalaureate Degrees Awarded by URM and STEM Categories, All CSU Campuses 1993-1994 through 2015-2016.....	53
Appendix Table 5: STEM Discipline Persistence Rates for CSU-LSAMP Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (1996-2014).....	54

Appendix Table 6: Estimated Percent of Benchmark Cohort Students Participating in CSU-LSAMP Program, (1996-2014).....	60
Appendix Table 7: STEM Discipline Graduation Rates for CSU-LSAMP Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (1996-2011).....	61
Appendix Table 8: Persistence Rates for CSU-LSAMP CCCT Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (2003-2014).....	64
Appendix Table 9: Graduation Rates for CSU-LSAMP CCCT Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (2003-2011).....	67
Appendix Table 10: Results of Attempt to Retrieve CSU-ERS and/or NSC Enrollment and Graduation Records for CSU-LSAMP Participants, 1994-2016	69
Appendix Table 11: Baccalaureate Degree Attainment, CSU-LSAMP Participants by Entry Phase, 1994-2016.....	69
Appendix Table 12: Participant Characteristics, Senior Level II CSU-LSAMP through 2015-2016.....	70
Appendix Table 13: Selected Participant Characteristics by First Year of Participation, Senior Level II CSU-LSAMP through 2015-2016.....	71
Appendix Table 14: Estimated URM-STEM Participation Rate by Gender, Senior Level II CSU-LSAMP through 2015-2016	72
Appendix Table 15: Estimated URM-STEM Participation Rate by Race/Ethnicity, Senior Level II CSU-LSAMP through 2015-2016.....	72
Appendix Table 16: Estimated URM-STEM Participation Rate by Discipline, Senior Level II CSU-LSAMP through 2015-2016.....	73
Appendix Table 17: Estimated URM-STEM Participation Rate by Campus, Senior Level II LSAMP through 2015-2016.....	74
Appendix Table 18: Activity Participation, Senior Level II CSU-LSAMP through 2015-2016	75
Appendix Table 19: Estimated Baccalaureate Degree Attainment for Senior Level I and Senior Level II CSU-LSAMP Participants by Year and URM-STEM Category	76

EXECUTIVE SUMMARY

This report presents the results of an external evaluation of the California State University Louis Stokes Alliance for Minority Participation (CSU-LSAMP). The Institute for Social Research at California State University, Sacramento conducted the evaluation. The report has two sections. The first section examines the overall effectiveness of the CSU-LSAMP project since its inception in 1994. The second section examines the first three years of the Senior Level II CSU-LSAMP project period (2013-2016).

A. Overall Effectiveness of the CSU-LSAMP Alliance

Established in 1994, the CSU-LSAMP Alliance included 18 of the 20 CSU campuses. Since that time, the CSU system has added three new campuses and five new campuses have joined the CSU-LSAMP Alliance. The CSU-LSAMP Alliance currently includes all 23 campuses. In Senior Level I, the only CSU campus that did not participate in CSU-LSAMP was the California Maritime Academy, which is a specialized campus of the CSU.

Since its inception, the CSU-LSAMP program has served 25,132 students, and 21,025 of these students were from underrepresented minority (URM) groups. Over the program's 23 years, the annual number of participants has increased more than four-fold, from 641 in 1994 to 3,225 in 2016.

Overall Effectiveness, 1994-2016

- Served 25,132 CSU-LSAMP participants, including 21,025 URM students
- CSU URM-STEM undergraduate enrollment increased 262%
- CSU URM-STEM baccalaureate degree production increased 394%
- Participants were 1.3-1.7 times more likely than non-participants to remain enrolled in STEM disciplines
- Participants were 1.8 times more likely than non-participants to graduate with STEM degrees within six years
- 64% of participants were awarded a bachelor's degree, and more than two-thirds of these degrees were in STEM disciplines
- 42% of Phase III, Senior Level I, and Senior Level II graduates persisted at the post-baccalaureate level
- 13% of these participants earned master's degrees, 3% earned doctorates, and 26% remain enrolled

During this same period, the number of URM students enrolled in science, technology, engineering and mathematics (STEM) disciplines at CSU campuses more than doubled. There was a 262 percent increase in URM-STEM enrollment, from 10,580 in 1994 to 35,343 in fall 2015. STEM enrollment for non-URM students increased by only 27 percent over the same period.

The major outcome objective for Phase I of the CSU-LSAMP project was to increase aggregate URM-STEM baccalaureate degree production. CSU-LSAMP achieved this objective, and the number of STEM baccalaureate degrees awarded to URM students at CSU campuses has nearly quadrupled. There was a 394 percent increase in CSU URM-STEM baccalaureate degree production—from 917 in 1994 to 4,532 in 2015-2016. Baccalaureate STEM degrees awarded by the CSU to non-URM students increased by 40 percent during the same period.

The major outcome objective for Phase II of the CSU-LSAMP project was to improve individual URM-STEM student success and progression to the baccalaureate degree. Participation in CSU-LSAMP was associated with improved persistence of Latino/Latina and African American students in STEM disciplines. The differences in first-through eighth-year persistence rates for Latino/Latina and African American participants and estimated rates for non-participants were substantial, ranging from 1.3 to 1.7 times higher for participants compared to non-participants.

Participation in CSU-LSAMP was associated with improved graduation rates for Latino/Latina and African American students in STEM disciplines. Six-year graduation rates for Latino/Latina

and African American participants were 1.8 times higher than estimated rates for non-participants.

Sixty-four percent of CSU-LSAMP participants earned their baccalaureate degree by the spring 2017 term and 72 percent of these degrees were in STEM disciplines. The STEM degree completion rate for URM participants was 44 percent. This translates to 9,455 STEM degrees awarded to CSU-LSAMP participants, including 7,572 awarded to URM students.

In Phase III, Senior Level I, and the current Senior Level II project, the CSU-LSAMP program began to increase emphasis on serving upper division students in research and other activities designed to motivate them to pursue graduate study and enhance their competitiveness. Of the 64 percent of Phase III, Senior Level I, and Senior Level II participants who graduated with a bachelor's degree (and for whom tracking information was available), 42 percent either earned a post-baccalaureate degree or are currently enrolled as of the spring 2017 term. This translates to an estimated 765 Phase III, Senior Level I, and Senior Level II participants who obtained a STEM Master's degree, and 108 who obtained a STEM doctoral degree.

B. The Senior Level II Project

Senior Level II CSU-LSAMP served a total of 5,452 unduplicated level-one participants during the project's three years, including 4,515 students from URM groups. Most of these participants were also pursuing STEM degrees (4,503).

Senior Level II Short-Term Milestones

	Year 1	Year 2	Year 3
1. Engaging at least 2,300 'level-one' students annually	✓	✓	✓
2. Supporting 500 students annually in textbook support programs	✓	✓	✓
3. Engaging at least 250 students annually in STEM summer bridge programs	✧	✓	✓
4. Engaging 800 students annually in academic excellence workshops	✓	✓	✓
5. Engaging 300 students annually in transition programs	✓	✓	✓
6. Engaging 500 students annually in research	✓	✓	✓
7 Engaging 40 students annually in international activities	✓	✓	✓
8. Engaging 500 students annually in professional development activities	✓	✓	✓

✓ = goal was met or exceeded ✧ = goal partially met

On average, eight percent of all URM students enrolled in STEM majors at the 23 Alliance campuses participated in Senior Level II CSU-LSAMP. Male and female students had the same participation rates (8%), but rates varied by race/ethnicity, STEM discipline and campus. Native American/Alaska Native and Native Hawaiian/Other Pacific Islander students had a higher participation rates than any other racial or ethnic group (14%),

closely followed by African American students (13%). Physical Sciences majors had higher participation rates than any other STEM major (16%). California Maritime Academy (22%), CSU San Jose (17%), and CSU Los Angeles (17%), had higher participation rates than other campuses.

The Senior Level II project established eight short-term milestones and seven long-term outcomes tied to improved individual student persistence, progression to graduate study and expanding opportunities for student engagement in research and international activities.

The Senior Level II project reached seven of the eight short-term milestones in the first year, and all eight in the second and third years.

The project exceeded the target of engaging at least 2,300 “level-one” students annually by 53 percent, with 3,520 participants in year one. The project exceeded the goal of supporting 500 students annually in textbook loan or reimbursement programs nearly twice over, with 1,405 students in year one. The project nearly met the goal of engaging 250 students annually in STEM summer bridge programs with 219 students in year one. The project exceeded the goal of engaging 800 students annually in academic excellence workshops by 28 percent, with 1,026 students in year one. The project exceeded the goal of engaging 300 students annually in transition activities by 16 percent, with 348 students in year one. The project exceeded the goal of engaging 500 students annually in research activities by 54 percent, with 772 students in year one. The project met the goal of engaging 40 students annually in international activities, with 40 students in year one. The project exceeded the goal of engaging 500 students annually in professional development activities by 78 percent, with 892 students in year one.

In year two, CSU-LSAMP exceeded the target of engaging at least 2,300 “level-one” students annually by 51 percent, with 3,473 participants. The project exceeded the goal of supporting 500 students annually in textbook loan or reimbursement programs by 91 percent, with 955 students in year two. The project exceeded the goal of engaging 250 students annually in STEM summer bridge programs by 15 percent with 287 students in year two. The project exceeded the goal of engaging 800 students annually in academic excellence workshops by 23 percent, with 982 students in year two. The project exceeded the goal of engaging 300 students annually in transition activities by 20 percent, with 360 students in year two. The project exceeded the goal of engaging 500 students annually in research activities by 51 percent, with 754 students in year two. The project exceeded the goal of engaging 40 students annually in international activities by 13 percent, with 45 students in year two. The project exceeded the goal of engaging 500 students annually in professional development activities by 110 percent, with 1,044 students in year two.

In year three, CSU-LSAMP exceeded the target of engaging at least 2,300 “level-one” students annually by 40 percent, with 3,225 participants. The project exceeded the goal of supporting 500 students annually in textbook loan or reimbursement programs by 73 percent, with 863 students in year three. The project exceeded the goal of engaging 250 students annually in STEM summer bridge programs by 37 percent with 343 students in year three. The project exceeded the goal of engaging 800 students annually in academic excellence workshops by seven percent, with 855 students in year three. The project exceeded the goal of engaging 300 students annually in transition activities by 38 percent, with 414 students in year three. The project exceeded the goal of engaging 500 students annually in research activities by 79 percent, with 897 students in year three. The project exceeded the goal of engaging 40 students annually in international activities by 58 percent, with 63 students in year three. The project exceeded the goal of engaging 500 students annually in professional development activities by 137 percent, with 1,186 students in year three.

Senior Level II Long-Term Outcomes

	Year 1	Year 2	Year 3
1. Increasing URM-STEM enrollment by 10%	✓	✓	✓
2. Increasing URM-STEM baccalaureate degree production by 10%	✓	✓	✓
3. Increasing the number of FTF CSU-LSAMP students who persist in STEM	✧	✧	✧
4. Increasing the number of FTF CSU-LSAMP students who graduate in STEM	✓	✧	✧
5. Increasing the number of CCCT CSU-LSAMP students who graduate in STEM	✧	✧	✧
6. Increasing the number of CSU-LSAMP students who graduate each year (500 annually)	✓	✓	✓
7. Increasing the number of participants enrolling in graduate programs (250 annually)	✓	✓	✓

✓ = goal met or exceeded ✧ = goal partially met

The Senior Level II project met (or partially met) all seven long-term outcomes in the first three years.

The project met the goal of increasing URM-STEM enrollment to 24,289 in year one, and the number of URM-STEM students enrolled exceeded the goal by 34 percent, with 32,602 students from URM groups enrolled in STEM disciplines. In year two, the project exceeded the goal of increasing URM-STEM enrollment to 24,289 by 59 percent, with

35,125 students from URM groups enrolled in STEM disciplines. In year three, the project exceeded the goal of increasing URM-STEM enrollment to 24,289 by 58 percent, with 38,343 students from URM groups enrolled in STEM disciplines.

The project met the goal of increasing annual URM-STEM baccalaureate degree production to 2,198 degrees in year one, and the number of URM-STEM baccalaureate degrees exceeded the goal by 57 percent with 3,455 degrees. In year two, the project exceeded the goal of increasing annual URM-STEM baccalaureate degree production to 2,198 degrees by 74 percent with 3,834 degrees. In year three, the project exceeded the goal of increasing annual URM-STEM baccalaureate degree production to 2,198 degrees by 106 percent with 4,532 degrees.

The first-year persistence rates for URM-STEM CSU-LSAMP participants were 1.3 times higher than for URM-STEM non-participants, and second-year persistence rates for URM CSU-LSAMP were 1.4 times higher than for URM-STEM non-participants: these rates fall short of the long-term goal of a rate that is two times higher than URM-STEM non-participants. First- and second-year persistence rates for URM CSU-LSAMP participants were 1.1 times higher than for non-URM-STEM non-participants, thus meeting the goal of approaching or exceeding the rate for non-URM-STEM non-participants for the first three years.

In year one, the six-year graduation rate for URM-STEM CSU-LSAMP participants who enter as first-time freshmen was two times higher than for URM-STEM non-participants, meeting the goal of a rate two times higher than URM-STEM non-participants. The project nearly met the goal in year two and year three, with six-year graduation rates for URM-STEM CSU-LSAMP participants who enter as first-time freshmen that were 1.9 times higher and 1.8 times higher than for URM-STEM non-participants. The six-year graduation rates for URM-STEM CSU-LSAMP participants who enter as first-time freshmen approaches or equals the rates for non-URM-STEM non-participants, meeting the goal of a rate that approaches or equals that of non-URM-STEM non-participants in the first three years.

In the first three years of the Senior Level II project, the four-year graduation rates for CCCT CSUS-LSAMP participants equal the rates for CCCT URM non-participants, falling short of the goal of a graduation rate that is twice that of CCCT URM non-participants. However, the project

met the goal of a graduation rate that approaches the rate for CCCT non-URM students in the first three years.

Even using the most conservative estimates of graduation, the project exceeded the goal of 500 CSU-LSAMP graduates in the first three years.

The project also met the goal of increasing the number of participants enrolling in graduate programs in the first three years; with 86 students above the goal of 250 students in year one, 97 students above the goal in year two, and 44 students above the goal in year three.

INTRODUCTION

This report presents the results of an external evaluation of the California State University Louis Stokes Alliance for Minority Participation (CSU-LSAMP). The Institute for Social Research at California State University, Sacramento conducted the evaluation. We divided the report into two sections. The first section examines the overall effectiveness of the CSU-LSAMP project since its inception in 1994. The second section examines the first three years of the Phase V Senior Level II CSU-LSAMP project period.

The CSU-LSAMP Alliance began in 1994, including 18 out of 20 CSU campuses. Since that time, the CSU system added three new campuses and five new campuses have joined the CSU-LSAMP Alliance. The CSU-LSAMP Alliance currently includes all 23 campuses. In Phase IV, the only CSU campus that did not participate in CSU-LSAMP was the California Maritime Academy, which is a specialized campus of the CSU.

The CSU-LSAMP project has included five project periods of five years each (25 years total). The program's objectives and emphasis have evolved over time. The main outcome objective for Phase I was to double the number of science, technology, engineering and mathematics (STEM) baccalaureate degrees awarded by the CSU to students from underrepresented minority (URM) groups. The main outcome objective for Phase II was to improve individual URM-STEM student success and progression to the baccalaureate degree. The main objective for Phase III was to improve aggregate student progression to STEM graduate programs. The main objective for Phase IV Senior Level I was to improve individual persistence and progression to graduate study, and engagement in international activities. The main objective for the current phase (Phase V, Senior Level II) is to continue to improve individual persistence and progression to graduate study, pursuing this common objective, while allowing the campuses greater flexibility to elect one of three programmatic emphases for the activities that they offer to participants.

C. Data Sources and Methodology

The analysis presented in this report utilizes three primary data sources. The first data source, called WebAMP, is the online LSAMP data gathering system established by the National Science Foundation (NSF). Each CSU-LSAMP campus program enters student, faculty, and activity data annually into the WebAMP system. Annual extracts from this system, beginning with the first year of Phase I (1993-1994) through the third year of the Senior Level II (2015-2016) were aggregated on a series of identifiers and characteristics (name, SSN, campus, gender, and discipline) to produce a longitudinal database describing all participants.

The second data source is the CSU Electronic Records System (ERS). ERS is the centralized reporting system for all CSU campuses maintained by the Analytic Studies Division (ASD) of the CSU Chancellor's Office. It includes detailed individual student-level information on matriculation, enrollment, and degrees awarded within the CSU system.

The third data source is the National Student Clearinghouse (NSC). The NSC is an electronic registry of student records. It includes individual student-level information on enrollment and degrees awarded nationally for all campuses who participate in the reporting system.

In addition to providing de-identified annual enrollment and degree files for all CSU students, the ASD performed annual matches to the ERS system using Social Security numbers of CSU-LSAMP participants from 1996-1997 through 2015-2016. We obtained ERS data for 82 percent of CSU-LSAMP participants. In order to obtain enrollment and degree information outside the CSU system, we submitted student name and date of birth for participants matched to the ERS

system to the NSC using the StudentTracker batch file exchange feature. We obtained NSC data for 66 percent of CSU-LSAMP participants.

D. Report Structure

Section I focuses on the overall effectiveness of the CSU-LSAMP alliance, using data from all five CSU-LSAMP project periods. First, the report describes demographic characteristics of the CSU-LSAMP participants. Secondly, the report describes CSU trends in URM-STEM undergraduate enrollment and URM-STEM baccalaureate degree production. Next, is an analysis of STEM discipline persistence and graduation rates for 1996-2014 first-time full-time cohorts (both CSU and CSU-LSAMP participants). Next, is analysis of persistence and graduation rates for 1996-2014 California Community College Transfer cohorts (both CSU and CSU-LSAMP participants). Finally, there is an analysis of baccalaureate attainment and advancement to graduate programs for CSU-LSAMP participants.

Section II examines measures for the first through third years of the Senior Level II CSU-LSAMP project period. The section describes Senior Level II participants and estimates participation of URM-STEM students in CSU-LSAMP. Next, this section of the report describes participation in activities by objective. Finally, this section evaluates progress toward the eight short-term milestones and four long-term outcomes established for the Senior Level II project.

SECTION I: OVERALL EFFECTIVENESS OF THE CSU-LSAMP ALLIANCE

This section examines measures of program effectiveness, looking back to 1994 when the CSU-LSAMP program was established and continuing on through the third year of the Senior Level II project period. The section begins with a profile of CSU-LSAMP participants, moves on to examine the extent to which CSU-LSAMP contributed to increasing URM-STEM enrollment and degrees within the CSU system, and closes with an evaluation of individual participant performance, including graduation rates, progression to STEM graduate programs and completion of STEM graduate degrees.

A. Profile of CSU-LSAMP Participants

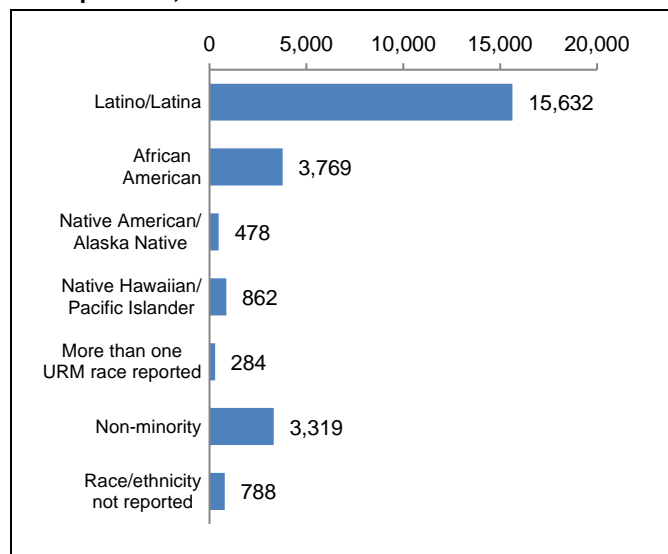
Since its inception in 1994, the CSU-LSAMP program has served a total of 25,132 students, 21,025 of who were URM students. Table 1 shows the number of new students entering the program during each phase.

Table 1: Number of New CSU-LSAMP Participants by Phase and URM Category, 1994-2016

	Phase I 1994-1998	Phase II 1999-2003	Phase III 2004-2008	Senior Level I 2009-2013	Senior Level II 2014-2016	Total
URM	4,290	5,329	5,566	3,475	2,366	21,025
Non-URM	285	1,620	207	640	567	3,319
Not reported	58	478	13	188	50	788
Total	4,633	7,427	5,786	4,303	2,983	25,132

Source: Longitudinal CSU-LSAMP participant database constructed from WebAMP records. Because we update the longitudinal database annually, the number of participants entering the program during each phase varies slightly from previous reports.

Figure 1: CSU-LSAMP Participant Racial/Ethnic Composition, 1994-2016

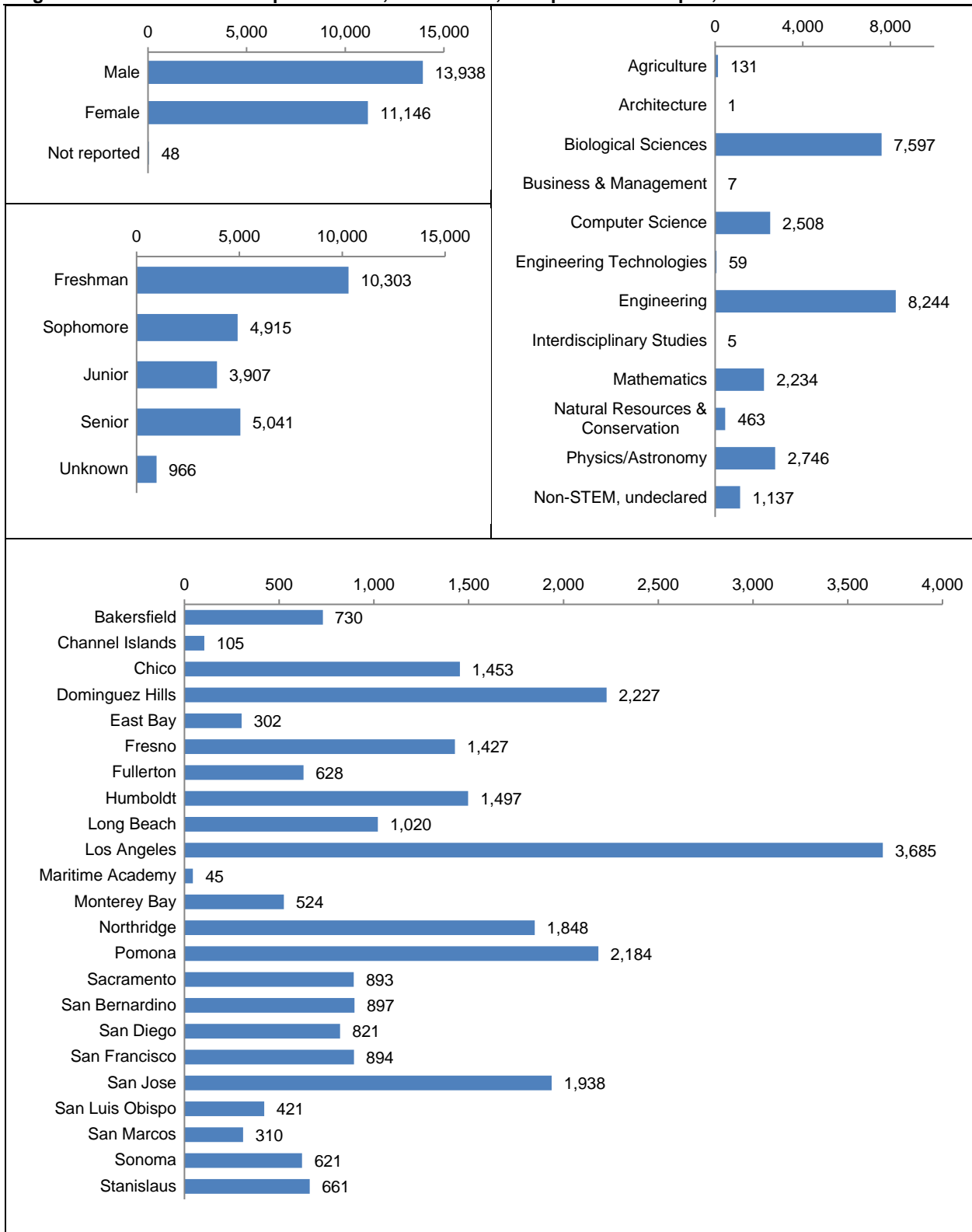


Source: Longitudinal CSU-LSAMP participant database constructed from WebAMP records.

Figure 1 describes the racial and ethnic composition of participants. Latino/Latina students were the largest group, followed by African American students and students who are not members of underrepresented minority groups.¹ There were slightly more male (55%) than female participants, and more students entered the program as lower division students (61%) (Figure 2). Participants were most likely to be majoring in engineering or biological sciences (33% and 30%, respectively). The number of participants from each campus varied widely, from a high of 3,686 for CSU Los Angeles, to a low of 45 for the newest alliance campus, California Maritime Academy. Appendix Table 1 provides additional detail and shows participant characteristics broken down by entry phase.

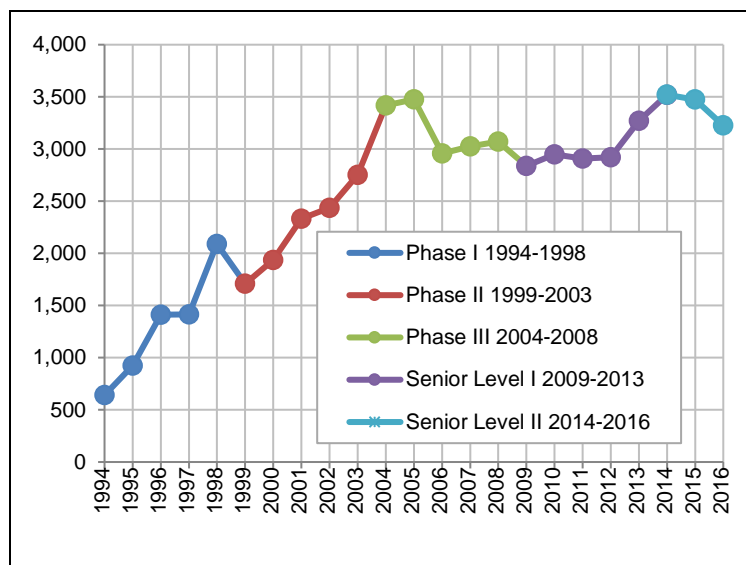
¹ CSU-LSAMP does not limit participation to URM students or provide URM students preference in admission. Students who face social, educational or economic barriers to careers in STEM are eligible for the program. To be eligible to participate in CSU-LSAMP, students must also be U.S. Citizens or Permanent Residents enrolled at a participating campus, either in an undergraduate major in a STEM discipline or who have expressed an interest in pursuing a STEM baccalaureate degree. Campuses may also specify additional academic qualifications, activity requirements, or entry level points for acceptance into the program.

Figure 2: CSU-LSAMP Participant Gender, Class Level, Discipline and Campus, 1994-2016



Source: Longitudinal CSU-LSAMP participant database constructed from WebAMP records.

Figure 3: Annual Number of CSU-LSAMP Participants, 1994-2016



Source: Longitudinal CSU-LSAMP participant database constructed from WebAMP records.

Figure 3 and Appendix Table 2 show the annual number of CSU-LSAMP participants. Over the CSU-LSAMP program's 23 years, the annual number of participants has more than quadrupled. The largest increases occurred during the first 11 years. In the first year of CSU-LSAMP, there were 641 participants and the number of participants peaked at 3,520 in the first year of Senior Level II.

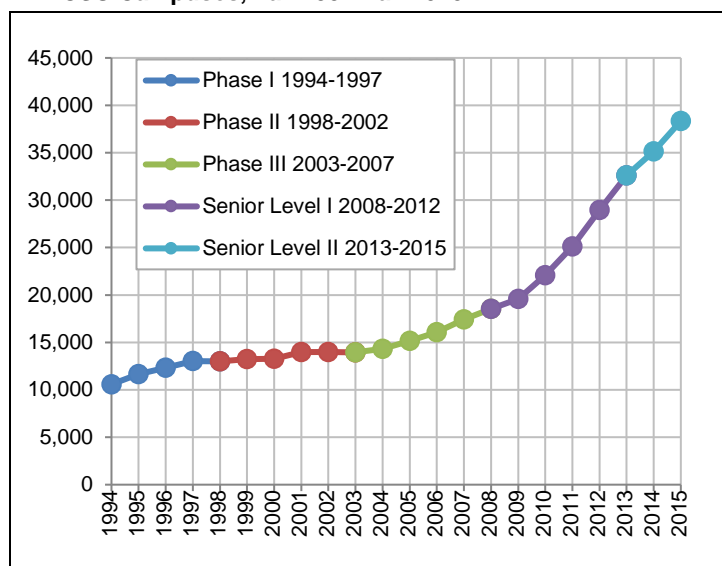
During the Phases I and II, the program included mostly group activities for lower division students. Beginning in Phase III, the program added an emphasis on engaging upper division students in mentored research and preparation for graduate study. This shift in

emphasis brought the average number of participants, per year, to approximately 3,158. During the most recent year, there were 3,225 participants.

The next section looks at CSU undergraduate enrollment of students from underrepresented minority groups in STEM disciplines.

B. CSU Enrollment of Students from Underrepresented Minority Groups in STEM Disciplines

Figure 4: Annual Undergraduate URM STEM Enrollment for All CSU Campuses, Fall 1994-Fall 2015



Sources: CSU Analytic Studies Division ERS enrollment files, WebAMP Reverse Site Reports, and WebAMP ExACT Reports. Enrollment data for fall 1993 (the first year of the Alliance) is not currently available. Excludes International Program and non-resident alien enrollment.

Figure 4 displays the annual undergraduate URM-STEM enrollment for all CSU Campuses. Appendix Table 3 provides additional detail. From the second year of Phase I, to the third year of the Senior Level II project, URM-STEM undergraduate enrollment increased by 262 percent, from 10,580 in 1994 to 38,343 in fall 2015.

During the same period, overall STEM enrollment increased by 75 percent. For students reporting non-URM race and ethnicity, STEM enrollment increased by 27 percent.

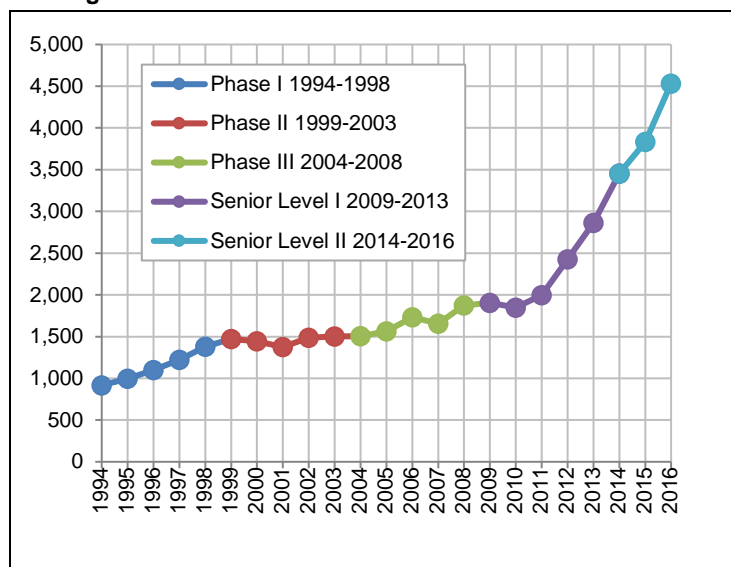
Some of the increase in URM-STEM enrollment may be due to an overall increase in URM enrollment. In the same period, URM non-STEM enrollment increased by 183 percent.²

The next section looks at STEM baccalaureate degrees awarded by the CSU to students from underrepresented minority groups.

² Some of the increase in URM-STEM enrollment for fall 2015 may be attributable to improvements in the accuracy with which the CSU Chancellor's Office describes student race and ethnicity. Beginning in fall 2010, the CSU Chancellor's Office measured race and ethnicity separately and students were not restricted to selecting one racial category. Conceivably, in the past, some students may have left this information blank rather than choosing just one category to describe their race and ethnicity.

C. STEM Baccalaureate Degrees Awarded by the CSU to Students from Underrepresented Minority Groups

Figure 5: Annual Number of Baccalaureate STEM Degrees Awarded by All CSU Campuses to URM Students, 1993-1994 through 2015-2016



Sources: CSU Analytic Studies Division ERS degree files, WebAMP Reverse Site Reports, and WebAMP ExACT Reports. Excludes degrees awarded to non-resident aliens.

Figure 5 displays the annual number baccalaureate STEM degrees awarded by all CSU Campuses to URM students. Appendix Table 4 provides additional detail. From the beginning of Phase I, to the third year of the Senior Level II project, annual URM-STEM baccalaureate degree production increased by 394 percent, from 917 in 1994 to 4,532 in 2015-2016.

From 1993-1994 through 2015-2016, the CSU awarded 44,083 STEM baccalaureate degrees to URM students.

During the same period, overall STEM baccalaureate degree production increased by 84 percent. Baccalaureate STEM degrees awarded by the CSU to non-URM students increased by 40 percent during the same period.

The next section focuses on STEM discipline persistence and graduation rates for 1996-2014 CSU-LSAMP first-time freshmen participant cohorts.

D. STEM Discipline Persistence and Graduation Rates for 1996-2014 CSU-LSAMP First Time Freshmen Participant Cohorts

Data sources and methodology

The information presented in this section describes a subset of CSU-LSAMP participants—going back to the third year of Phase I (1996-1997) through year three of the Senior Level II project (2015-2016)—CSU Analytic Studies matched these participants on social security number to CSU ERS records.³ In accordance with Consortium for Student Retention Data Exchange (CSRDE) criteria, the subset includes only participants entering the CSU system during a fall term as first time, full-time freshmen with declared majors in a STEM discipline. The analysis excludes CSU-LSAMP participants who do not meet these criteria; examples include participants who entered the CSU system as part-time students, those who did not matriculate during a fall term, those without a declared major in a STEM discipline, and students transferring from a California Community College. In addition, because matching to system records relied on social security numbers, participants whose WebAMP records did not include a social security number and those with a data entry error in their social security number could not be included. Participant cohorts exclude all students who began their participation in CSU-LSAMP after their first year in the CSU system.

To assess the impact of CSU-LSAMP participation on persistence and graduation rates, this analysis compares persistence and graduation rates for annual cohorts of CSU-LSAMP Latino/Latina and African American participants with benchmark cohorts. ISR obtained aggregate benchmark cohort information from the California State University Data for the Consortium for Student Retention Data Exchange.

CSRDE specifications for first-time, full-time freshmen cohorts, defined the subset of CSU-LSAMP participants that are included in the analysis. Both CSU-LSAMP participant and benchmark cohorts are comprised of students who entered the CSU system during a fall term as first-time, full-time freshmen with declared majors in a STEM discipline. The benchmark cohorts for 1996-2007 include all students in the specified category who matriculated at one of the 19 CSU campuses participating in Phase III of the CSU-LSAMP program. The benchmark cohorts for 2008-2012 include all students in the specified category who matriculated at one of the 22 CSU campuses participating in the Senior Level I CSU-LSAMP program. All 23 CSU campuses are participating in the Senior Level II CSU-LSAMP program; therefore, the benchmark cohorts for 2013-2014 include all students in the specified category who matriculated at any of the 23 CSU campuses.

The analysis includes persistence and graduation rates for cohorts of Latino/Latina and African-American LSAMP participants. Rates for Native Hawaiian or Other Pacific Islander CSU-LSAMP participants are not included because there was no corresponding benchmark available before 2010 (the closest CSRDE racial/ethnic group is “Asian,” which includes Pacific Islanders). Although CSDRE has added Native Hawaiian or Other Pacific Islander benchmark data (starting in 2010), these rates have not been included in the analysis because the small numbers would produce unstable rates, and to maintain comparability of the Asian and Pacific Islander benchmark used for all prior years. Likewise, there are comparable benchmark data for Native

³ The CSU Analytic Studies Division performed the match and provided data files describing matriculation, graduation and longitudinal enrollment for each matched CSU-LSAMP participant. During analysis of these matched records (through 2015-2016), we identified a systematic error producing missing degree information for a subset of records with graduation after 2011-2012. For the current report, we used data from the National Student Clearinghouse (NSC) to complete the missing degree information, when we were able to retrieve matched records from the NSC. We will revise these numbers when we are able to obtain corrected ERS data from CSU Analytic Studies.

American and Alaskan Native CSU-LSAMP participants, but these rates have not been included in the analysis because the small numbers—both for participant and benchmark cohorts—would produce unstable rates. In some instances, the analysis makes comparisons to “non-URM” students, which includes CSRDE data for White non-Hispanic and Asian or Pacific Islander cohorts.

The analysis describes average persistence and graduation rates across cohort years and CSU-LSAMP phases, making it easier to evaluate overall trends. The cohort years included in each average necessarily vary as indicated in the figure and table headings. For example, the first-year persistence average includes data from the 1996-2014 cohorts, while the sixth-year average only includes data from the 1996-2009 cohorts. Similarly, the fourth-year graduation average includes data from the 1996-2011 cohorts, while the sixth-year average only includes data from the 1996-2009 cohorts.

Seventh- and eighth-year persistence and graduation data is not available for 1996-1999 benchmark cohorts. To maintain comparability between benchmark and CSU-LSAMP participant averages, we excluded these cohort years from the computation of average rates for CSU-LSAMP participants. So while they are included in an effort to enhance the evaluation, the reader should interpret the seven- and eight-year rates cautiously. They lack the continuity and stability of fourth-through-sixth-year rates, due to the gap in cohort years and the inclusion of fewer cohorts.

Appendix Table 5 provides first-through-eighth-year STEM discipline persistence rates for each cohort and comparison group. Appendix Table 7 provides fourth-through-eighth-year STEM discipline graduation rates for each cohort and comparison group.

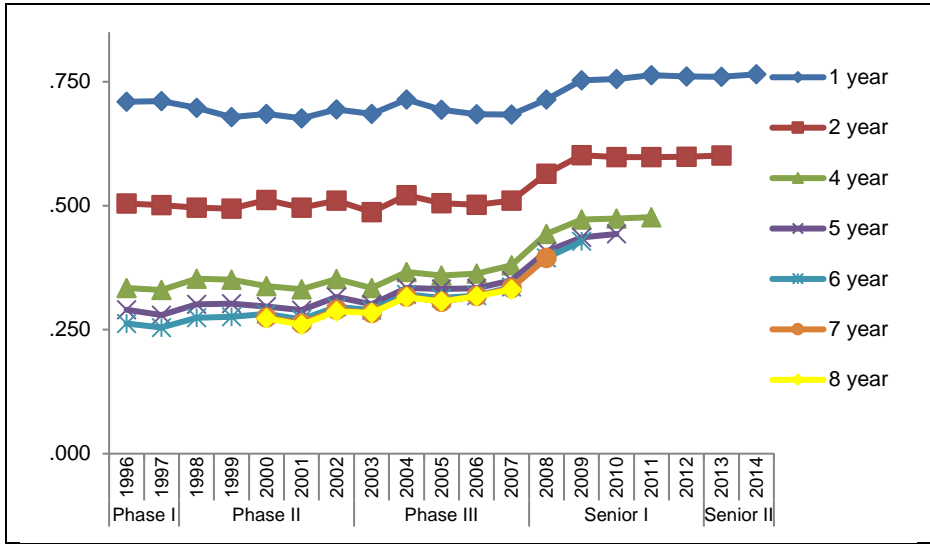
[STEM discipline persistence rates](#)

STEM discipline persistence rates reflect the percent of a cohort remaining or graduating in a STEM major. There are many factors that influence these rates, and it is helpful to begin with a look at STEM discipline persistence rates for CSU-LSAMP campuses and how these rates have changed over time.

Figure 6 and Table 2 display overall STEM discipline persistence rates for 1996-2014 cohorts. Seventy-one percent of first-time, full-time freshmen with declared STEM majors who entered one of the 19 CSU-LSAMP campuses in the fall of 1996 remained enrolled in a STEM discipline the following year. Aside from minor fluctuations, this rate remained fairly stable over time between 1996 and 2008. The rate increased starting in 2009, and has remained at 76 percent between 2010 and 2014. Appendix Table 2 provides additional detail.

Fifty percent of first-time, full-time freshmen with declared STEM majors who entered a CSU-LSAMP campus in the fall of 1996 remained enrolled in a STEM discipline two years later.

Figure 6: Overall STEM Discipline Persistence Rates, 1996-2014 Cohorts



Source: ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

This percentage has also remained stable, with the same indication of an upward trend beginning with students who entered during the fall 2008 term.

Thirty-three percent of the entering freshmen from the fall of 1996 remained enrolled in STEM or had graduated with a STEM degree four years later. Nearly all of the students who dropped out or

changed to non-STEM majors did so by year four.

Table 2: Overall STEM Discipline Persistence Rates, 1996-2014 Cohorts

		1-year	2-year	4-year	5-year	6-year	7-year	8-year
Phase I	1996	.710	.504	.334	.290	.263	--	--
	1997	.711	.501	.330	.280	.254	--	--
Phase II	1998	.698	.496	.353	.301	.274	--	--
	1999	.679	.494	.351	.302	.276	--	--
	2000	.685	.512	.338	.297	.282	.274	.273
	2001	.676	.496	.332	.289	.271	.263	.260
	2002	.694	.511	.352	.316	.296	.290	.287
Phase III	2003	.685	.487	.334	.301	.289	.284	.284
	2004	.714	.521	.367	.334	.321	.317	.315
	2005	.693	.505	.359	.332	.314	.306	.307
	2006	.684	.502	.363	.333	.318	.318	.317
	2007	.684	.510	.380	.350	.336	.334	.331
Senior I	2008	.714	.564	.443	.408	.395	.395	--
	2009	.753	.602	.472	.436	.428	--	--
	2010	.756	.598	.474	.443	--	--	--
	2011	.763	.598	.477	--	--	--	--
	2012	.761	.599	--	--	--	--	--
Senior II	2013	.760	.601	--	--	--	--	--
	2014	.765	--	--	--	--	--	--

Source: ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

Figure 7 and Table 3 display average STEM discipline rates for Latino/Latina, African American and non-URM cohorts by phase. There was a gap between persistence rates for URM and non-URM students at CSU-LSAMP campuses. This gap was wider for African American students than it was for Latino/Latina students. In general, STEM discipline persistence rates for non-

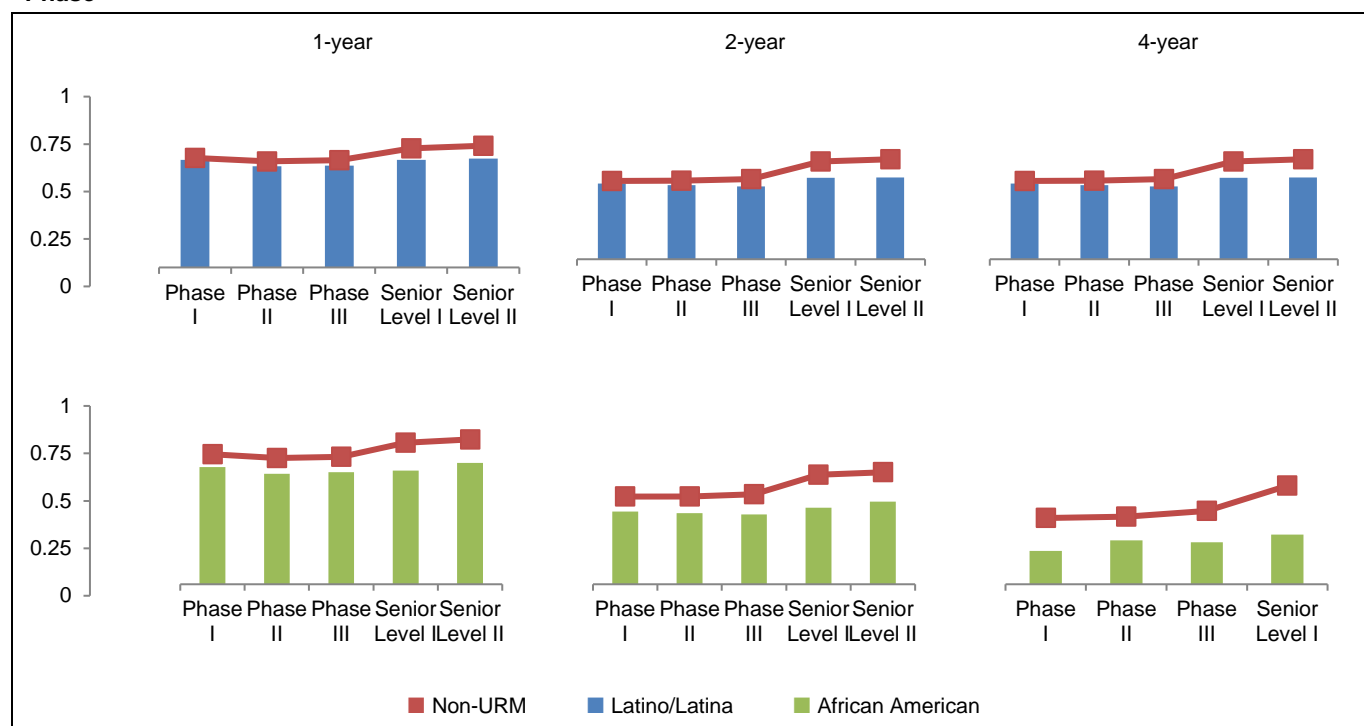
URM students have improved slightly over time, but rates for URM students have remained the same. This means that in most cases, the gap between URM and non-URM students, although not large to begin with, has grown a little wider.

Table 3: Average STEM Discipline Persistence Rates for Latino/Latina, African American and Non-URM Cohorts by Phase

		Phase I	Phase II	Phase III	Senior Level I	Senior Level II	
One-year	Latino	.709	.667	.671	.708	.718	
	African American	.650	.611	.620	.630	.672	
	Non-URM	.721	.699	.706	.784	.802	
Two-year	Latino	.495	.484	.476	.532	.535	
	African American	.425	.415	.408	.448	.483	
	Non-URM	.512	.513	.525	.639	.654	
Four-year	Latino	.312	.314	.312	.383	--	
	African American	.178	.235	.225	.265	--	
	Non-URM	.355	.361	.393	.527	--	
Non-URM differential	One-year	Latino/Latina and non-URM	1.0	1.0	1.1	1.1	1.1
		African American and. non-URM	1.1	1.1	1.1	1.2	1.2
	Two-year	Latino/Latina and. non-URM	1.0	1.1	1.1	1.2	--
		African American and. non-URM	1.2	1.2	1.3	1.4	--
	Four-year	Latino/Latina and. non-URM	1.1	1.1	1.3	1.4	--
		African American and non-URM	2.0	1.5	1.7	2.0	--

Source: ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University. The cohorts included in the phase averages vary based on the available data, see Figure 7 for more detail.

Figure 7: Average STEM Discipline Persistence Rates for Latino/Latina, African American and Non-URM Cohorts by Phase



Source: ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University. The cohorts included in the phase averages vary based on the available data. Phase I averages include 1996-1997 cohorts. Phase II averages include 1998-2002 cohorts. Phase III include 2003-2007 cohorts. Senior Level I one- and two-year averages include 2008-2012 cohorts, and 2008-2011 cohort for four-year rates. Senior Level II one-year rate includes 2013 and 2014, and two-year averages include 2013.

STEM discipline persistence rates for CSU-LSAMP participants

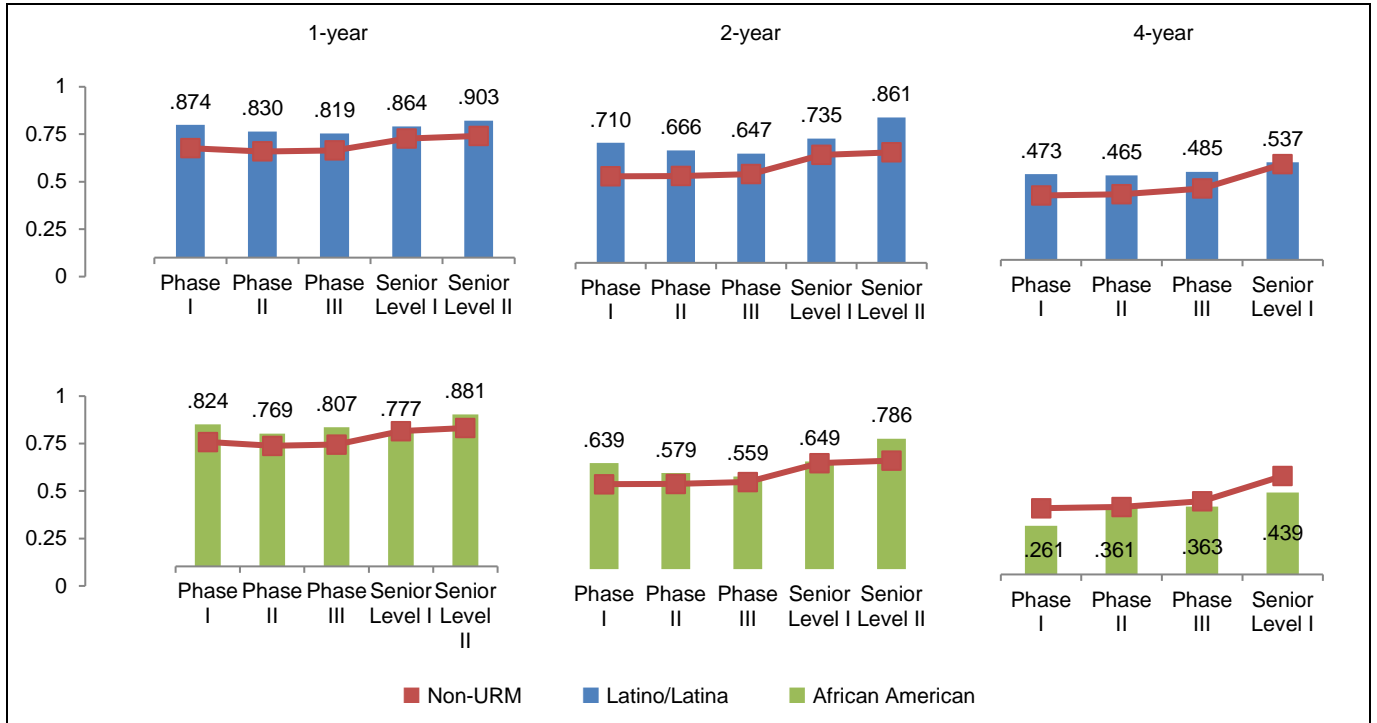
Figure 8 displays STEM discipline persistence rates for CSU-LSAMP participants. Appendix Table 5 provides more detail. Between the fall 1996 term and the fall 2014 term, there were 3,834 Latino/Latina students and 900 African American students who met the CSRDE criteria for STEM discipline cohorts and who participated in the CSU-LSAMP program during their first year at a CSU campus (Appendix Table 5). This translates to an average of 202 Latino/Latina participants and 47 African American participants in each annual cohort. Figure 8 shows first-, second-, and fourth-year persistence rates for Latino and African American participants entering the program during each phase.

Eighty-seven percent of Latino/Latina CSU-LSAMP participants who entered a CSU-LSAMP campus during the last two years of Phase I of the project remained enrolled as STEM majors one year later. For those entering during Phases II and III, the percentage declined slightly to between 82 and 83 percent, but returned to 86 percent for those entering during the five years of the Senior Level I project. The percentage increased substantially in the first two years of the Senior Level II. Ninety percent of Latino/Latina CSU-LSAMP participants who entered a CSU-LSAMP campus during the first two years of Senior Level II remained enrolled as STEM majors one year later.

Seventy-one percent of Latino/Latina CSU-LSAMP participants who entered a CSU-LSAMP campus during the last two years of Phase I of the project remained enrolled as STEM majors one year later. For those entering during Phases II and III, the percentage declined slightly to between 65 and 67 percent, but returned to 74 percent for those entering during the five years of the Senior Level I project. The percentage increased in the first year of the Senior Level II. Eighty-six percent of Latino/Latina CSU-LSAMP participants who entered a CSU-LSAMP campus during the first year of Senior Level II remained enrolled as STEM majors two years later.

Fourth-year persistence rates remained stable during Phase I, Phase II, and Phase III (between 47 and 49 percent), but increased during the Senior Level I project to 54 percent. Persistence rates for Latino/Latina CSU-LSAMP participants were consistently higher than rates for non-URM students at CSU-LSAMP campuses for all project phases (Phase I, Phase II, Phase III, Senior Level I and Senior Level II).

Figure 8: Average One-, Two-, and Four-Year STEM Discipline Persistence Rates by Phase for Latino/Latina and African American CSU-LSAMP Participants, 1996-2014 Cohorts



Sources: Longitudinal participant database constructed from WebAMP records matched to CSU ERS records. Non-URM student data is from the ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University. The cohorts included in the phase averages vary based on the available data, see Figure 7 for more detail.

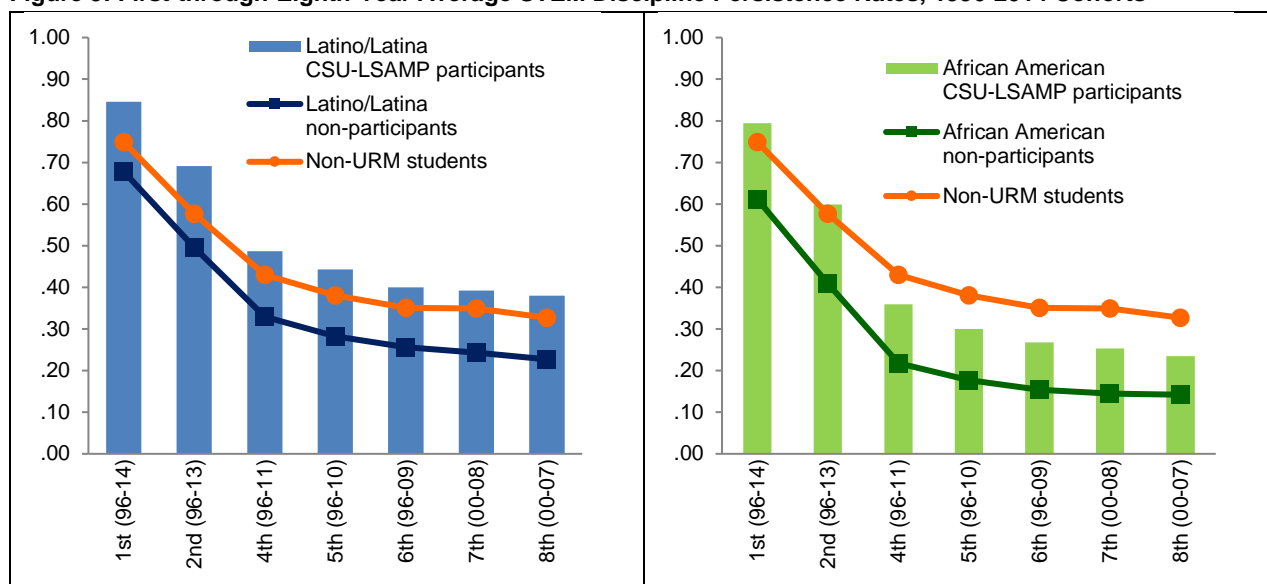
Eighty-two percent of African American CSU-LSAMP participants who entered a CSU-LSAMP campus during the last two years of Phase I of the project remained enrolled as STEM majors one year later. This percentage fluctuated between 77 and 81 between Phase II, Phase III, and Senior Level I. The percentage increased substantially in the first two years of the Senior Level II. Eighty-eight percent of African American CSU-LSAMP participants who entered a CSU-LSAMP campus during the first two years of Senior Level II remained enrolled as STEM majors one year later.

Sixty-four percent of African American CSU-LSAMP participants who entered a CSU-LSAMP campus during the last two years of Phase I of the project remained enrolled as STEM majors one year later. For those entering during Phases II and III, the percentage declined slightly to between 56 and 58 percent, but returned to 65 percent for those entering during the five years of the Senior Level I project. The percentage increased substantially in the first year of the Senior Level II. Seventy-nine percent of African American CSU-LSAMP participants who entered a CSU-LSAMP campus during the first year of Senior Level II remained enrolled as STEM majors one year later.

Fourth-year persistence rates for African American CSU-LSAMP participants increased during Phase II, Phase III, and Senior Level I. During Phase II and Phase III, persistence rates for African American CSU-LSAMP participants were similar to rates for non-URM students. However, during the five years of Senior Level I, the increase in rates for non-URM students far exceeded the increase in rates for African American CSU-LSAMP participants, thus resulting in a gap between African American CSU-LSAMP participants and non-URM students at CSU-LSAMP campuses.

Setting aside the issue of the phase when participants entered the CSU-LSAMP program, Figure 9 and Table 4 show average first-through-eighth-year STEM discipline rates for CSU-LSAMP participants in comparison to non-participants and non-URM students. Participation in CSU-LSAMP was associated with improved persistence of Latino/Latina and African American students in STEM disciplines, and the URM/non-URM gap is significantly narrowed—and in many instances—eliminated for URM CSU-LSAMP participants. Latino/Latina CSU-LSAMP participants had STEM discipline persistence rates that are higher than, or equivalent to, rates for non-URM students. African American CSU-LSAMP participants had first- and second-year STEM discipline persistence rates that were equivalent to rates for non-URM students, but beginning in the fourth-year, the gap returns.

Figure 9: First-through-Eighth-Year Average STEM Discipline Persistence Rates, 1996-2014 Cohorts



Sources: Longitudinal participant database constructed from WebAMP records matched to CSU ERS records. Non-participant and non-URM student data is from the ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

The differences in first- through seventh-year persistence rates for Latino/Latina and African American participants and estimated rates for non-participants are substantial, ranging from 1.3 times higher for first-year persistence rates to 1.7 times higher for eighth-year persistence rates.

The differences in first- through eighth-year persistence rates for Latino/Latina participants and estimated rates for non-participants are substantial, ranging from 1.2 times higher for first-year persistence rates to 1.7 times higher for eighth-year persistence rates. There are also significant differences for African American participants and estimated rates for non-participants, ranging from 1.3 times higher for first-year persistence rates to 1.7 times higher for fifth-, sixth-, seventh-, and eighth-year persistence rates.

Table 4: Average STEM Discipline Persistence Rates, 1996-2014 Cohorts

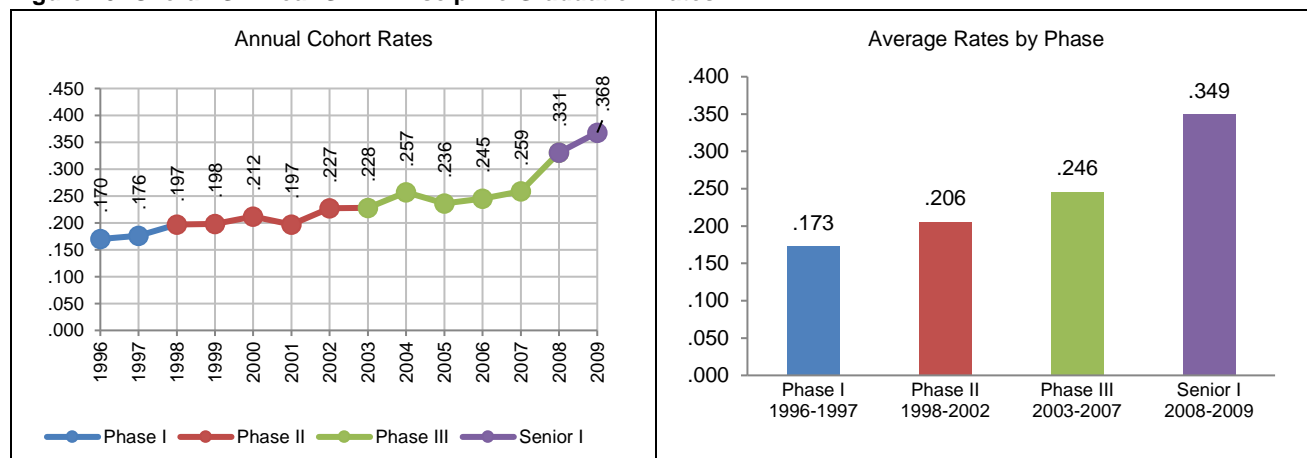
		Average STEM Discipline Persistence Rates						
		1 st year (1996- 2014)	2 nd year (1996- 2013)	4 th year (1996- 2011)	5 th year (1996- 2010)	6 th year (1996- 2009)	7 th year (2000- 2008)	8 th year (2000- 2007)
Latino/ Latina	LSAMP	.846	.691	.487	.443	.400	.392	.380
	Non-LSAMP (estimated)	.678	.496	.329	.282	.256	.243	.227
	All (LSAMP & non-LSAMP)	.699	.512	.345	.300	.274	.260	.247
African American	LSAMP	.794	.599	.359	.300	.268	.253	.235
	Non-LSAMP (estimated)	.612	.409	.218	.177	.154	.145	.142
	All (LSAMP & non-LSAMP)	.630	.429	.234	.192	.169	.157	.154
Asian or Pacific Islander		.754	.759	.589	.425	.369	.336	.333
White		.734	.741	.567	.433	.391	.364	.363
All STEM first-time freshmen		.721	.727	.549	.395	.348	.321	.316
Differential between LSAMP & non-LSAMP	Latino/Latina	1.2	1.4	1.5	1.6	1.6	1.6	1.7
	African American	1.3	1.5	1.6	1.7	1.7	1.7	1.7

Sources: Longitudinal participant database constructed from WebAMP records matched to CSU ERS records. Non-participant and non-URM student data is from the ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

STEM discipline graduation rates

The following discussion examines STEM discipline graduation rates, which reflect the percent of a cohort graduating in a STEM major. There are many factors that influence graduation rates, and as with persistence rates, it is helpful to begin with a look at STEM discipline graduation rates for CSU-LSAMP campuses and how these rates have changed over time. This analysis describes nine cohorts from fall 1996 through fall 2009. Figure 10 displays six-year STEM discipline graduation rates. Appendix Table 6 provides detail on STEM graduation rates. STEM discipline graduates rates for the last cohort were about 2.0 times higher than they were for the first cohort (Figure 10). Seventeen percent of first-time, full-time freshmen with declared STEM majors who entered the CSU system in fall 1996 graduated with a STEM degree within six years. By the second year of Senior Level I, 37 percent of entering students meeting the same criteria graduated with a STEM degree within six years.

Figure 10: Overall Six-Year STEM Discipline Graduation Rates



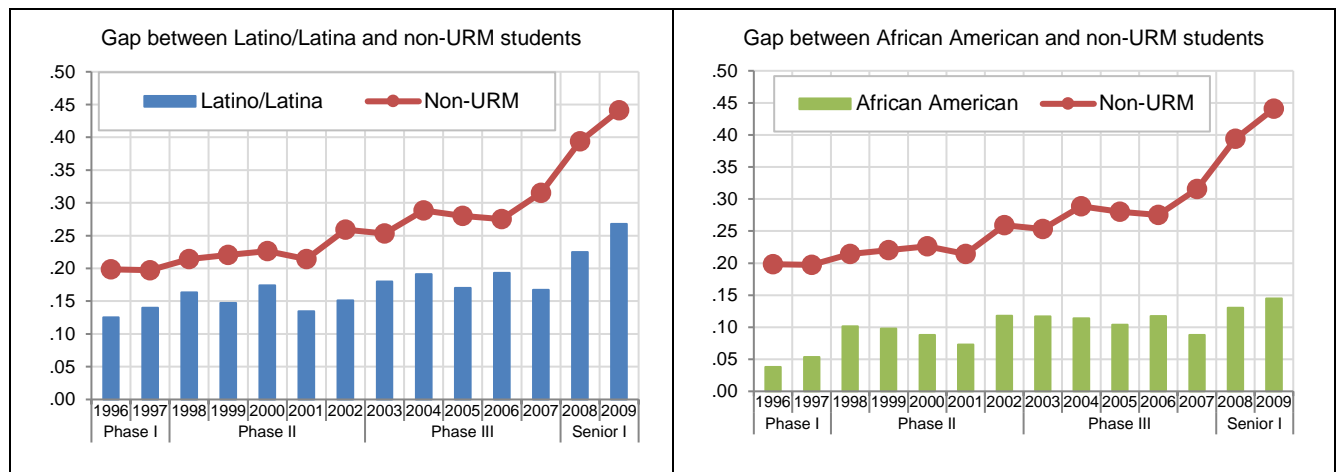
Source: ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

Figure 11 displays six-year STEM discipline graduation rates for Latino-Latina, African American, and non-URM students. There was a considerable gap between graduation rates for

URM and non-URM students (Figure 11). STEM discipline graduation rates for non-URM students were about 1.5 times higher than for Latino/Latina students. During the 14-year period, graduation rates for both groups increased, but the gap increased as well. For the 1996 cohort, 20 percent of non-URM students graduated with a STEM degree within six years, compared to 13 percent of Latino/Latina students. For the 2009 cohort, 44 percent of non-URM students graduated in six years, compared to 27 percent of Latino/Latina students.

The gap for African American students was even wider, and it narrowed considerably during Phase II, and the first four years of Phase III, before widening again in the last year of Phase III and into Senior Level I. For the 1996 cohort, just four percent of African American students graduated with a STEM degree within six years, compared to 20 percent of non-URM students. After 14 years, for the 2009 cohort, the STEM discipline graduation rate for African American students had risen to 15 percent, compared to 44 percent of non-URM students.

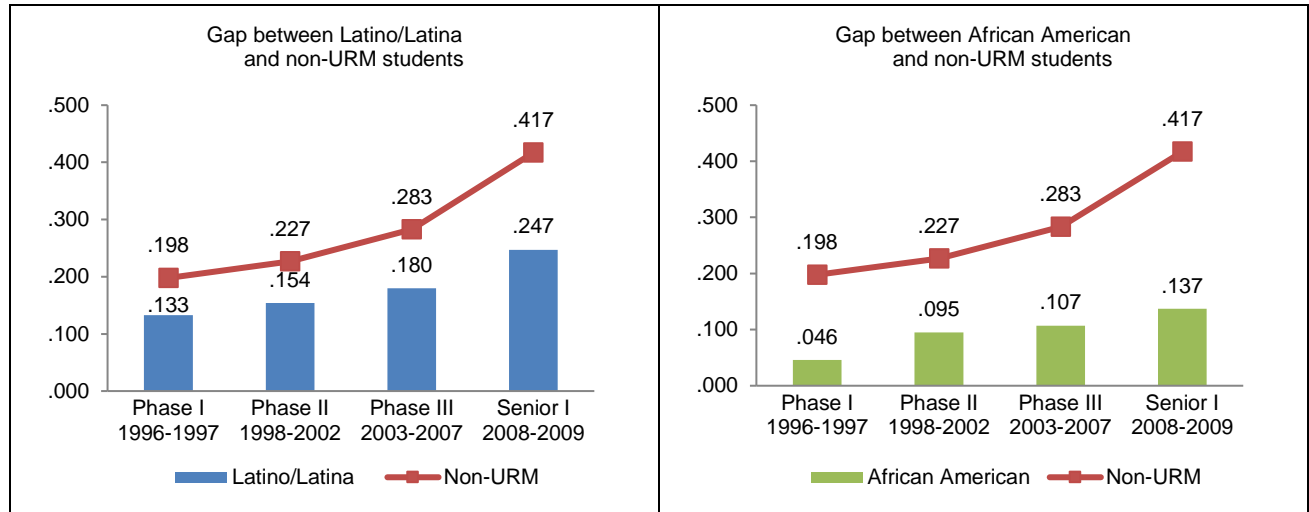
Figure 11: Six-Year STEM Discipline Graduation Rates for Latino/Latina, African American and Non-URM Cohorts



Source: ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

Annual graduation rates are somewhat volatile and looking at average graduation rates by phase makes it easier to see trends. Figure 12 and Table 5 display average six-year graduation rates by phase. For cohorts matriculating during Phase I, six-year STEM discipline graduation rates were about 4.3 times higher for non-URM students than rates for African American students. However, for cohorts matriculating during Phases II and III, the gap narrowed considerably, and rates were about 2.4 to 2.6 times higher for non-URM students than rates for African American students. For the cohorts available for Senior Level I (2008-2009), the six-year STEM discipline graduation rates for non-URM students were three times higher than rates for African American students.

Figure 12: Average Six-Year STEM Discipline Graduation Rates by Phase for Latino/Latina, African American and Non-URM Cohorts



Source: ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

This approach also makes it easier to see that the gap between Latino/Latina students and non-URM students has remained relatively stable, with a slight increase in Phase III and Senior Level I. For cohorts matriculating during Phase I, six-year STEM discipline graduation rates were 1.5 times higher for non-URM students than rates for Latino/Latina students. This differential remained stable, for cohorts matriculating during Phase II. For cohorts matriculating during Phase III, STEM discipline graduation rates for non-URM students were 1.6 times higher than rates for Latino/Latina students, a slight increase. For the cohorts available for Senior Level I (2008-2009), the six-year STEM discipline graduation rates for non-URM students were 1.7 times higher than rates for Latino/Latina students.

Table 5: Average Six-Year STEM Discipline Graduate Rates by Phase for Latino/Latina, African American and Non-URM Cohorts, 1996-2009

	Six-year STEM discipline graduation rates			URM to non-URM differential	
	Latino/Latina	African American	Non-URM	Latino/Latina	African American
Overall 1996-2009	.186	.101	.285	1.54	2.74
Phase I 1996-1997	.133	.046	.198	1.49	4.31
Phase II 1998-2002	.154	.095	.227	1.47	2.39
Phase III 2003-2007	.180	.107	.283	1.57	2.64
Senior Level I 2008-2009	.247	.137	.417	1.69	3.04
Phase I to Senior I differential	1.86	2.99	2.11	--	--

Source: ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

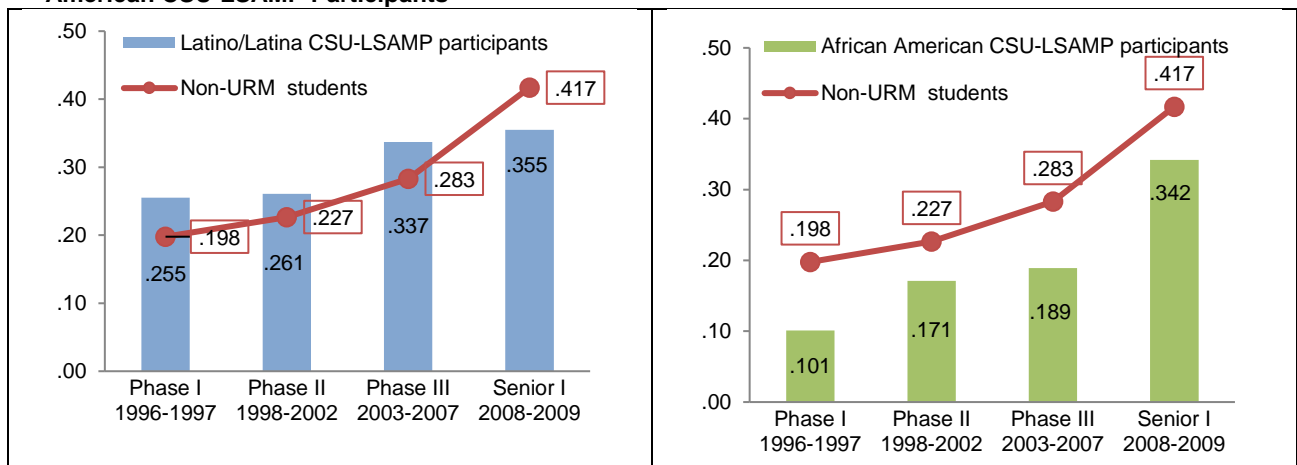
STEM discipline graduation rates for CSU-LSAMP participants

Figure 13 displays STEM discipline graduation rates for CSU-LSAMP participants. Latino/Latina and African American CSU-LSAMP participants who entered a CSU-LSAMP campus during Phase III and Senior Level I had higher STEM discipline graduation rates than participants who entered during Phase I (Figure 13). The percentage of CSU-LSAMP participants graduating increased from 26 to 36 percent for Latino/Latina participants and from 10 to 34 percent for African American participants.

During the first three phases of the project, graduation rates for Latino/Latina CSU-LSAMP participants were higher than rates for non-URM students at CSU-LSAMP campuses. However, a gap returns for the first two cohorts available for Senior Level I (2008-2009): the six-year STEM discipline graduation rate for non-URM students was 1.2 times higher than the rate for Latino/Latina CSU-LSAMP participants.

The rate of increase in graduation rates for Latino/Latina CSU-LSAMP participants stayed close to the increases for non-URM students through the first three phases of the project. For Latino/Latina participants Phase III rates were 1.3 times higher than Phase I rates. For non-URM students Phase III rates were 1.4 times higher than Phase I rates. In contrast, the Latino/Latina participants Senior Level I rates were 1.4 times higher than Phase I rates, while the non-URM students Senior Level I rates were 2.1 times higher than Phase I rates.

Figure 13: Average Six-Year STEM Discipline Graduation Rates by Phase for Latino/Latina and African American CSU-LSAMP Participants



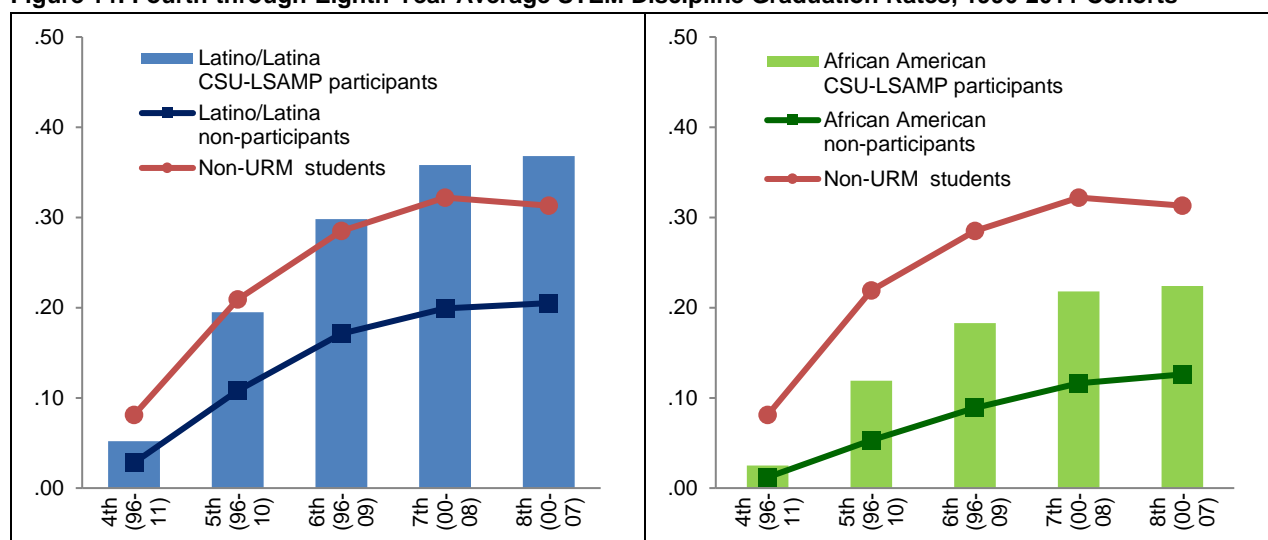
Source: ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

Throughout all phases of the project, graduation rates for African American CSU-LSAMP participants were lower than rates for non-URM students at CSU-LSAMP campuses. However, the rate of increase in graduation rates for African American CSU-LSAMP participants surpassed increases for non-URM students. For African American participants, Senior Level I rates were 3.4 times higher than Phase I rates, compared to 2.1 times higher for non-URM students.

Setting aside the issue of the project phase during which participants entered, Figure 14 and Table 6 compare average fourth- through eighth-year STEM discipline graduation rates for CSU-LSAMP participants with rates for non-participants and non-URM students. Participation in CSU-LSAMP was associated with improved graduation rates of Latino/Latina and African American students in STEM disciplines.

For URM CSU-LSAMP participants, the URM/non-URM gap was significantly narrowed, and for Latino/Latina CSU-LSAMP participants, the gap was eliminated; average graduation rates for Latino/Latina CSU-LSAMP participants were higher than or comparable to rates for non-URM students. Average graduation rates for African American participants were lower than non-URM comparison groups, although the gap narrows significantly between fourth- and eighth-year graduation rates. Six-year graduation rates for African American participants were 1.6 times lower than rates for non-URM students.

Figure 14: Fourth-through-Eighth-Year Average STEM Discipline Graduation Rates, 1996-2011 Cohorts



Source: Longitudinal participant database constructed from WebAMP records matched to CSU ERS records. Non-participant and non-URM student data is from the ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

Six-year STEM discipline graduation rates for Latino/Latina and African American participants are 1.8 times higher than estimated rates for non-participants.

Average STEM discipline graduation rates for Latino-Latina CSU-LSAMP participants are consistently higher than that of Latino/Latina non-participants. The average four-year STEM discipline graduation rate of Latino/Latina CSU-LSAMP participants is 1.9 times higher than that of Latino/Latina non-participants. The difference between Latino/Latina participant and non-participant rates narrows slightly in subsequent years, with eighth-year graduation rates of Latino/Latina participants 1.8 times higher than those of Latino/Latina non-participants.

Average STEM discipline graduation rates for African American CSU-LSAMP participants were consistently higher than rates for African American non-participants. The average four-year graduation rate of African American CSU-LSAMP participants is 2.1 times higher than that of African American non-participants. The difference between African American participant and non-participant rates narrows in subsequent years, with eight-year graduation rates of African American participants 1.8 times higher than those of African American non-participants.

Table 6: Fourth-through-Eighth-Year Average STEM Discipline Graduation Rates, 1996-2011 Cohorts

		Average STEM Discipline Graduation Rates				
		4 th year (1996-2011)	5 th year (1996-2010)	6 th year (1996-2009)	7 th year (2000-2008)	8 th year (2000-2007)
Latino/ Latina	LSAMP	.052	.195	.298	.358	.368
	Non-LSAMP (estimated)	.028	.108	.171	.199	.205
	All (LSAMP & non-LSAMP)	.031	.118	.186	.218	.226
African American	LSAMP	.025	.119	.183	.218	.224
	Non-LSAMP (estimated)	.012	.053	.089	.116	.126
	All (LSAMP & non-LSAMP)	.013	.061	.101	.128	.138
Asian or Pacific Islander		.054	.170	.252	.298	.300
White		.103	.259	.313	.342	.325
All STEM first-time freshmen		.064	.184	.249	.285	.283
Differential between LSAMP & non-LSAMP	Latino/Latina	1.9	1.8	1.7	1.8	1.8
	African American	2.1	2.2	2.1	1.9	1.8

Source: Longitudinal participant database constructed from WebAMP records matched to CSU ERS records. Non-participant and non-URM student data is from the ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

The next section focuses on persistence and graduation rates for 2003-2014 CSU-LSAMP California Community College transfer participant cohorts.

E. Persistence and Graduation Rates for 2003-2014 CSU-LSAMP California Community College Transfer Participant Cohorts

Data sources and methodology

The information presented in this section describes a subset of CSU-LSAMP participants—going back to the beginning of Phase III (2003-2004) through year three of the Senior Level II project (2015-2016)—CSU Analytic Studies matched these participants on social security number to CSU ERS records.⁴ In accordance with Consortium for Student Retention Data Exchange (CSRDE) criteria, the subset includes only participants entering the CSU system during a fall term as California Community College transfers who were sophomores or above. The analysis includes part-time students, and all majors, since the benchmark data is not available by STEM discipline. Also, because matching to system records relied on social security numbers, participants whose WebAMP records did not include a social security number and those with a data entry error in their social security number could not be included.

To assess the impact of CSU-LSAMP participation on persistence and graduation rates, this analysis compares persistence and graduation rates for annual cohorts of CSU-LSAMP Latino/Latina and African American participants with benchmark cohorts. ISR obtained aggregate benchmark cohort information from the California State University Data for the Consortium for Student Retention Data Exchange.

The benchmark cohorts for 2003-2014 include all students in the specified category who matriculated at one of the 23 CSU campuses. The analysis includes persistence and graduation rates for cohorts of Latino/Latina and African-American LSAMP participants. Rates for Native Hawaiian or Other Pacific Islander CSU-LSAMP participants are not included because there was no corresponding benchmark available before 2010 (the closest CSRDE racial/ethnic group is “Asian,” which includes Pacific Islanders). Although CSDRE has added Native Hawaiian or Other Pacific Islander benchmark data (starting in 2010), these rates have not been included in the analysis because the small numbers would produce unstable rates, and to maintain comparability of the Asian and Pacific Islander benchmark used for all prior years. Likewise, there are comparable benchmark data for Native American and Alaskan Native CSU-LSAMP participants, but these rates have not been included in the analysis because the small numbers—both for participant and benchmark cohorts—would produce unstable rates. In some instances, the analysis makes comparisons to “non-URM” students, which includes CSRDE data for White non-Hispanic and Asian or Pacific Islander cohorts.

The analysis describes average persistence and graduation rates across cohort years and CSU-LSAMP phases, making it easier to evaluate overall trends. The cohort years included in each average necessarily vary as indicated in the figure and table headings. For example, the first-year persistence average includes data from the 2003-2014 cohorts, while the sixth-year average only includes data from the 2003-2009 cohorts. Similarly, the fourth-year graduation average includes data from the 2003-2011 cohorts, while the sixth-year average only includes data from the 2003-2009 cohorts.

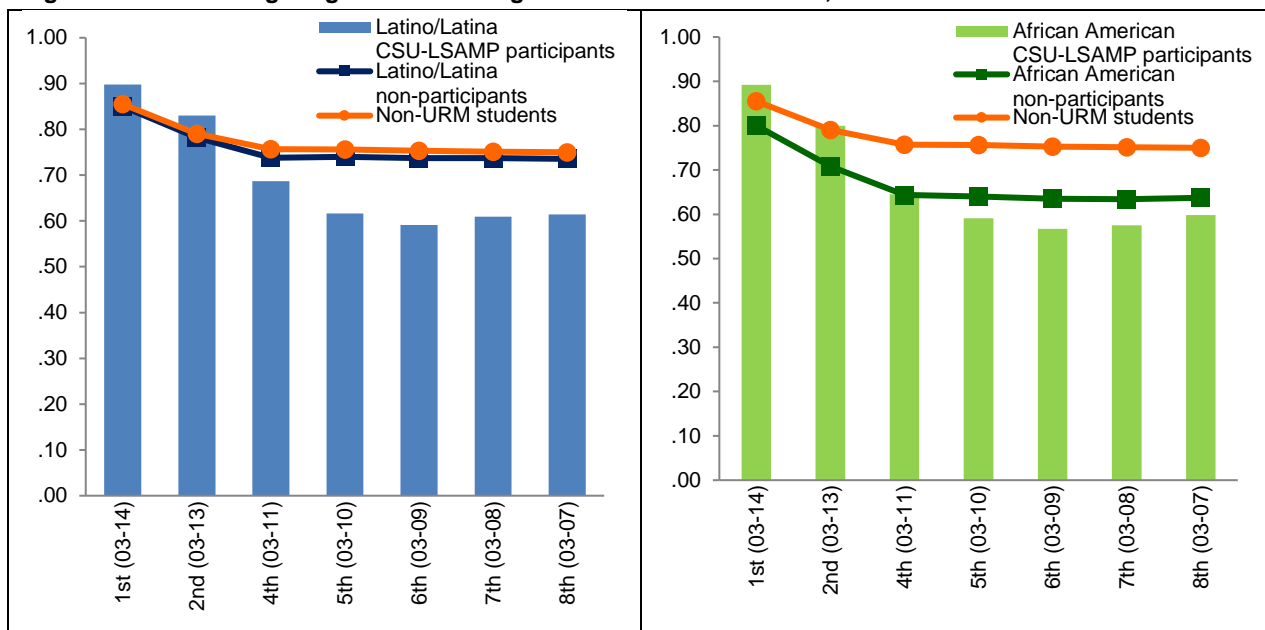
⁴ The CSU Analytic Studies Division performed the match and provided data files describing matriculation, graduation and longitudinal enrollment for each matched CSU-LSAMP participant. During analysis of these matched records (through 2015-2016), we identified a systematic error producing missing degree information for a subset of records with graduation after 2011-2012. For the current report, we used data from the National Student Clearinghouse (NSC) to complete the missing degree information, when we were able to retrieve matched records from the NSC. We will revise these numbers when we are able to obtain corrected ERS data from CSU Analytic Studies.

Appendix Table 5 provides first-through-eighth-year persistence rates for each cohort and comparison group. Appendix Table 7 provides fourth-through-eighth-year graduation rates for each cohort and comparison group.

Persistence rates for CCCT CSU-LSAMP participants

Figure 15 and Table 7 show average first-through-eighth-year rates for CSU-LSAMP CCCT participants in comparison to non-participants and non-URM students. First- and second-year persistence of URM CSU-LSAMP exceeds persistence for both URM non-participants and Non-URM students. However, the gap between Latino/Latina participants and non-participants returns in the fourth-year. African American participants had persistence rates very close to African American non-participants. However, the gap between African American participants and Non-URM students returned in the fourth-year.

Figure 15: First-through-Eighth-Year Average CCCT Persistence Rates, 2003-2014 Cohorts



Sources: Longitudinal participant database constructed from WebAMP records matched to CSU ERS records. Non-participant and non-URM student data is from the ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

The first-through-eighth-year persistence rates for Latino/Latina and African American participants are slightly below or comparable to estimated rates for non-participants.

Table 7: Average CCCT Persistence Rates, 2003-2011 Cohorts

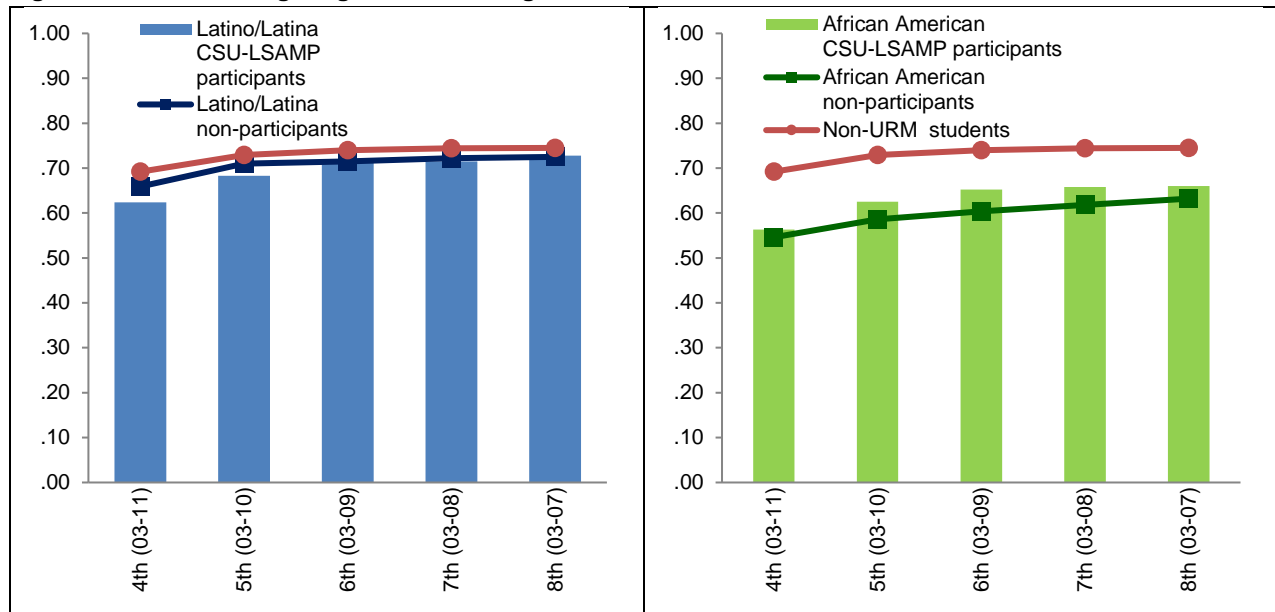
		Average CCCT Persistence Rates						
		1 st year (2003- 2014)	2 nd year (2003- 2013)	4 th year (2003- 2011)	5 th year (2003- 2010)	6 th year (2003- 2009)	7 th year (2003- 2008)	8 th year (2003- 2007)
Latino/ Latina	LSAMP	.898	.830	.687	.616	.591	.609	.614
	Non-LSAMP (estimated)	.850	.782	.738	.740	.737	.737	.736
	All (LSAMP & non-LSAMP)	.851	.783	.737	.738	.734	.734	.734
African American	LSAMP	.892	.800	.645	.591	.567	.575	.598
	Non-LSAMP (estimated)	.800	.708	.644	.640	.635	.634	.637
	All (LSAMP & non-LSAMP)	.802	.710	.644	.639	.633	.632	.636
Asian or Pacific Islander		.760	.848	.779	.736	.732	.730	.728
White		.727	.858	.795	.766	.766	.762	.761
All California Community College Transfers		.723	.849	.782	.745	.744	.741	.741
Differential between LSAMP & non-LSAMP	Latino/Latina	1.1	1.1	0.9	0.8	0.8	0.8	0.8
	African American	1.1	1.1	1.0	0.9	0.9	0.9	0.9

Sources: Longitudinal participant database constructed from WebAMP records matched to CSU ERS records. Non-participant and non-URM student data is from the ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

Graduation rates for CCCT CSU-LSAMP participants

Figure 16 and Table 8 compare average fourth-through-eighth-year graduation rates for CCCT CSU-LSAMP participants with rates for non-participants and non-URM students. Average graduation rates for Latino/Latina CSU-LSAMP participants approach or equal the rates for Latino/Latina non-participants and the rates for non-URM students. Average graduation rates for African American participants are comparable to African American non-participants, but there is a gap between African American students and non-URM students.

Figure 16: Fourth-through-Eighth-Year Average CCCT Graduation Rates, 2003-2011 Cohorts



Source: Longitudinal participant database constructed from WebAMP records matched to CSU ERS records. Non-participant and non-URM student data is from the ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

Fourth-year graduation rates for Latino/Latina and African American participants are slightly below or comparable to estimated rates for non-participants and non-URM students.

Table 8: Fourth-through-Eighth-Year Average CCCT Graduation Rates, 2003-2011 Cohorts

		Average CCCT Graduation Rates				
		4 th year (2003-2011)	5 th year (2003-2010)	6 th year (2003-2009)	7 th year (2003-2008)	8 th year (2003-2007)
Latino/ Latina	LSAMP	.624	.683	.715	.715	.728
	Non-LSAMP (estimated)	.659	.710	.715	.722	.725
	All (LSAMP & non-LSAMP)	.659	.710	.715	.722	.726
African American	LSAMP	.563	.625	.652	.658	.660
	Non-LSAMP (estimated)	.546	.586	.604	.618	.632
	All (LSAMP & non-LSAMP)	.555	.598	.610	.620	.627
Asian or Pacific Islander		.647	.656	.700	.713	.720
White		.703	.708	.742	.751	.755
All California Community College Transfers		.668	.675	.714	.726	.732
Differential between LSAMP & non-LSAMP	Latino/Latina	0.9	1.0	1.0	1.0	1.0
	African American	1.0	1.1	1.1	1.1	1.0

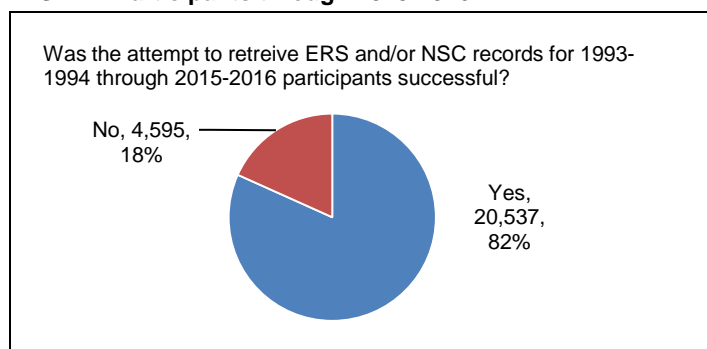
Source: Longitudinal participant database constructed from WebAMP records matched to CSU ERS records. Non-participant and non-URM student data is from the ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.

The next section examines baccalaureate degree attainment for CSU-LSAMP participants.

F. Baccalaureate Degree Attainment for CSU-LSAMP Participants

The preceding description of STEM discipline persistence and graduation rates focused on a subset of 4,734 CSU-LSAMP participants who met specific criteria necessary for comparison with CSRDE benchmarks.⁵ In contrast, the current section examines baccalaureate degree attainment for a larger group of 20,537 CSU-LSAMP participants and includes degrees earned outside the CSU system.

Figure 17: Results of Tracking Data Retrieval for CSU-LSAMP Participants through 2015-2016

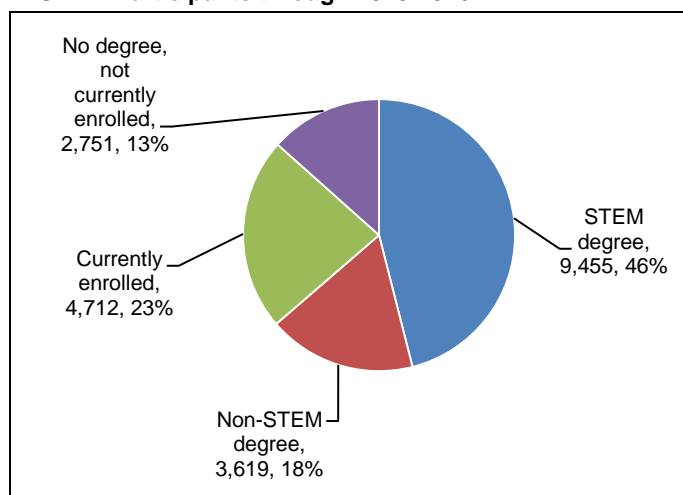


See Appendix Table 10 for more detail

Figure 17 shows the percentage of CSU-LSAMP participants that we were able to successfully match in either the ERS or NSC. Appendix Table 10 provides more detail. Information for these 20,537 participants is the result of an attempt to retrieve ERS and NSC records for the 25,132 students who participated in CSU-LSAMP at any time from 1993-1994 through 2015-2016.

These 20,537 participants include the 4,734 students who met the CSRDE criteria as well as those who did not. This includes students who entered the CSU system as part-time students, those who did not matriculate during a fall term, those without a declared major in a STEM discipline, students transferring from a California Community College, students who began their participation in CSU-LSAMP after their first year in the CSU system, and students from all racial and ethnic groups.

Figure 18: Baccalaureate Degree Attainment for CSU-LSAMP Participants through 2015-2016



Source: Longitudinal participant database constructed from WebAMP records matched to ERS and NSC records. See Appendix Table 11 for more detail.

Figure 18 displays the baccalaureate degree attainment for CSU-LSAMP participants. Appendix Table 11 provides more detail. ERS and NSC degree records show that of these 20,537 participants, 13,074 (64%) earned bachelor's degrees by spring 2017 and that 9,455 of these degrees were in STEM disciplines, for a STEM degree completion rate of 46 percent. Of the STEM degrees, 7,572 (80%) were awarded to students from URM groups, and the STEM degree completion rate for URM students was 37 percent (7,572 URM STEM degrees out of the 20,537 participants for whom ERS and/or NSC records were retrieved) (Figure 18 and Appendix Table 11).

⁵ Latino/Latina and African American participants entering the CSU system during a fall term as first time, full-time freshmen with declared majors in a STEM discipline.

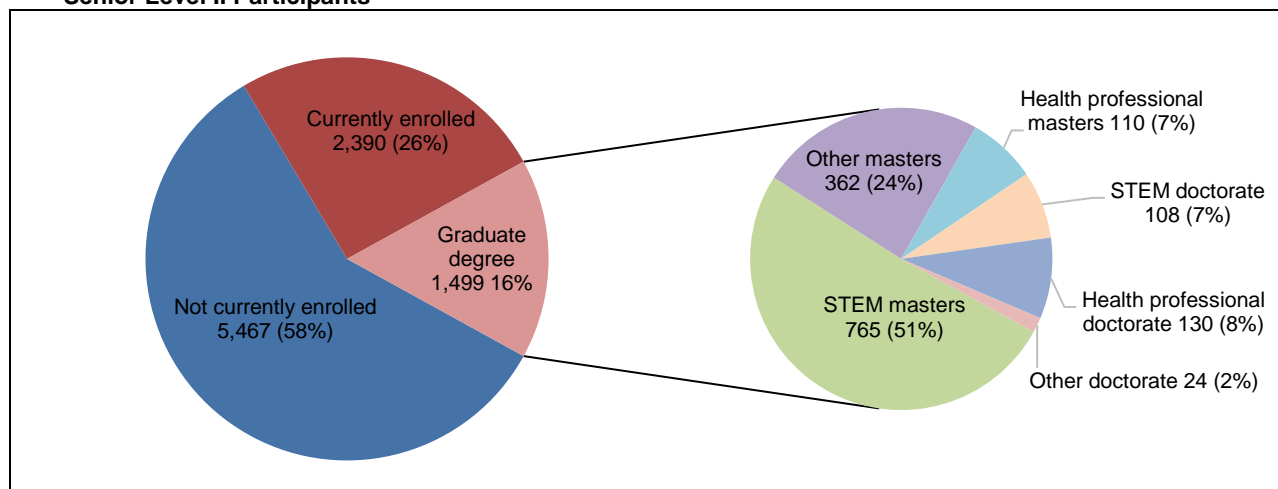
Assuming that the same degree completion rates also apply to the 18 percent of participants for whom ERS and NSC records could not be retrieved translates to an estimate that overall, 11,561 participants earned STEM bachelor's degrees by Spring 2017 and that 9,048 of these STEM degrees were awarded to URM participants.

The next section examines advancement to graduate programs for CSU-LSAMP Phase III, Senior Level I, and Senior Level II participants.

G. Advancement to Graduate Programs for CSU-LSAMP Phase III and Senior Level Participants

In Phase III, Senior Level I, and continuing in Senior Level II, the CSU-LSAMP program began to increase emphasis on serving upper division students in research and other activities designed to motivate them to pursue graduate study and enhance their competitiveness. Figure 19 and Table 9 display estimated post-baccalaureate enrollment and degree attainment for CSU-LSAMP participants. Based on analysis of NSC and ERS records for Phase III, Senior Level I, and Senior Level II CSU-LSAMP participants, we estimate that 9,356 students (63%) graduated with a bachelor's degree.⁶ We also found that 42 percent of the graduates (3,279 out of 7,889) with tracking information available either earned a post-baccalaureate degree or are currently enrolled (Figure 19 and Table 9).⁷ This translates to an estimated 765 Phase III, Senior Level I, and Senior Level II participants who obtained a STEM Master's degree and 108 who obtained a STEM doctorate degree.

Figure 19: Estimated Post-Baccalaureate Enrollment and Degree Attainment for Phase III, Senior Level I, and Senior Level II Participants



Source: Longitudinal participant database constructed from WebAMP records matched to CSU ERS records.

⁶ Of the 14,851 Phase III, Senior Level I, and Senior Level II participants, we successfully obtained tracking information for 12,587 students, and the records showed that 7,889 of them (or 63%) graduated with a bachelor's degree. Applying this graduation rate to the 14,851 Phase III, Senior Level I, and Senior Level II participants produces an estimated 9,356 Phase III, Senior Level I, and Senior Level II participants graduating with bachelor's degrees.

⁷ Many of these participants have not had enough time to complete their doctorate, so it is likely that the number of doctorate degrees will increase in the coming years. For S&E 2009 doctorate recipients, the median number of years from entry to graduate school to receipt of doctorate was 7.0 (Science and Engineering Indicators 2012S, National Science Foundation, National Center for Science and Engineering Statistics, Survey of Earned Doctorates, special tabulations [2010]).

Table 9: Post-Baccalaureate Enrollment and Degree Attainment for Phase III, Senior Level I, and Senior Level II Participants

	Phase III, Senior Level I, and Senior Level II participants who obtained a bachelor's degree and for whom tracking information is available		Estimated number of Phase III, Senior Level I, and Senior Level II participants
	Number	Percent	
STEM masters	645	8.2%	765
Health professional masters	93	1.2%	110
Other masters	305	3.9%	362
STEM doctorate	91	1.2%	108
Health professional doctorate	110	1.4%	130
Other doctorate	20	0.3%	24
Currently enrolled	2,015	25.5%	2,390
Not currently enrolled	4,610	58.4%	5,467
Total	7,889	100.0%	9,356

Source: Longitudinal participant database constructed from WebAMP records matched to CSU ERS records.

Section I focused on the overall effectiveness of the CSU-LSAMP alliance, looking at data from all phases of the CSU-LSAMP project. Section II focuses on the first three years of the current Senior Level II project, and shows progress towards short-term milestones and long-term outcomes.

SECTION II: THE SENIOR LEVEL II PROJECT

This section of the report examines measures for the first through third years of the Senior Level II CSU-LSAMP project period. The section describes Senior Level II participants and activities and evaluates progress toward the eight short-term milestones and four long-term outcomes established for the Senior Level II project.

A. Senior Level II CSU-LSAMP Participants

Senior Level II CSU-LSAMP has served a total of 5,452 unduplicated level-one participants during the project's three years, including 4,515 students from URM groups (STEM and Non-STEM combined). Most of these participants were also pursuing STEM degrees (4,503) as displayed in Table 10.

During year one, campuses reported that they served 3,520 unduplicated level-one students, including 3,021 from URM groups. In the first year of the project, 1,105 new participants entered the program. During year two, campus reported that they served 3,473 unduplicated level-one students, including 2,908 from URM groups. In the second year of the project, 991 new participants entered the program. During year three, campus reported that they served 3,225 unduplicated level-one students, including 2,676 from URM groups. In the third year of the project, 887 new participants entered the program.

Table 10: Number of Senior Level II CSU-LSAMP Participants through 2015-2016 by URM-STEM Category⁸

	URM		Non-URM		Not reported		Total
	STEM	Non-STEM	STEM	Non-STEM	STEM	Non-STEM	
Year 1 (2013-2014) participants	3,013	8	469	2	28	0	3,520
Year 2 (2014-2015) participants	2,901	7	525	0	38	2	3,473
Year 3 (2015-2016) participants	2,675	1	510	0	39	0	3,225
New Senior Level II year 1 participants	909	6	180	0	10	0	1,105
New Senior Level II year 2 participants	762	4	205	0	19	1	991
New Senior Level II year 3 participants	684	1	182	0	20	0	887
New participants entering during Senior Level II	2,355	11	567	0	49	1	2,983
Participants continuing from an earlier phase	2,148	1	296	2	22	0	2,469
Unduplicated participants for years 1-3	4,503	12	863	2	71	1	5,452

Source: Longitudinal participant database constructed from WebAMP records

Since the first section of this report includes an overall profile of CSU-LSAMP participants, this discussion will focus on changes in the characteristics of new participants entering the program during the three years of the Senior Level II project.

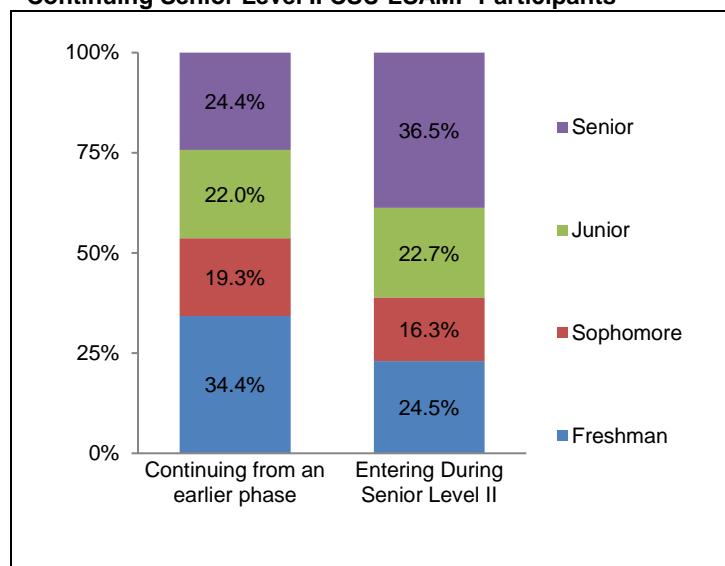
Appendix Table 12 provides demographic details on Senior Level II CSU-LSAMP participants. The percentage of female participants increased slightly during Senior Level II, from 42 percent for continuing participants to 47 percent for new participants.

Latino/Latina students still comprise the largest racial/ethnic group, with a slight decrease from 70 percent for continuing participants to 66 percent for new participants, while the percentage of

⁸ It should be noted that since a student may be a STEM major one year and a non-STEM major the next (or vice versa), in order to describe URM-STEM status across years, if a student was a STEM major at some point during their CSU-LSAMP participation, they are counted as a STEM major in Table 10.

participants who are not members of an underrepresented minority group increased from 12 percent for continuing participants to 19 percent for new participants.

Figure 20: Class Level at Program Entry for New and Continuing Senior Level II CSU-LSAMP Participants



Source: Longitudinal participant database constructed from WebAMP records.

Figure 20 shows the breakdown of participants by class level. Purposeful changes in the program are evident in the increased proportion of overall students beginning the program as upper classmen compared to those continuing from an earlier phase. More than half (61%) of the Senior Level II new participants entered the program as upper division students. In contrast, 46 percent of participants continuing from an earlier phase entered as upper division students.

Consistent with continuing students, there were more biological sciences and engineering majors than any other discipline category among new entries, followed distantly by physical sciences, mathematics and computer science.

Participants majoring in engineering decreased from 38 percent of continuing students to 32 percent of new students entering in the three years of Senior Level II CSU-LSAMP. In contrast, students majoring in biological sciences increased from 31 to 33 percent, students majoring in physical sciences increased from 14 to 16 percent, and students majoring in computer science increased from six to seven percent.

Next, the report focuses on estimating the level of participation for URM-STEM students.

B. Estimating the Level of Participation for URM-STEM Students

During year one of Senior Level II, nine percent of all URM-STEM students enrolled at the 23 Alliance campuses participated, as shown in Table 11. During year two of Senior Level II, eight percent of all URM-STEM students enrolled at the 23 Alliance campuses participated. In year three of Senior Level II, seven percent of all URM-STEM students enrolled at the 23 Alliance campuses participated, continuing the slight decrease seen between year one and two.

Table 11: Estimated URM-STEM Participation Rate, Senior Level II CSU-LSAMP through 2015-2016

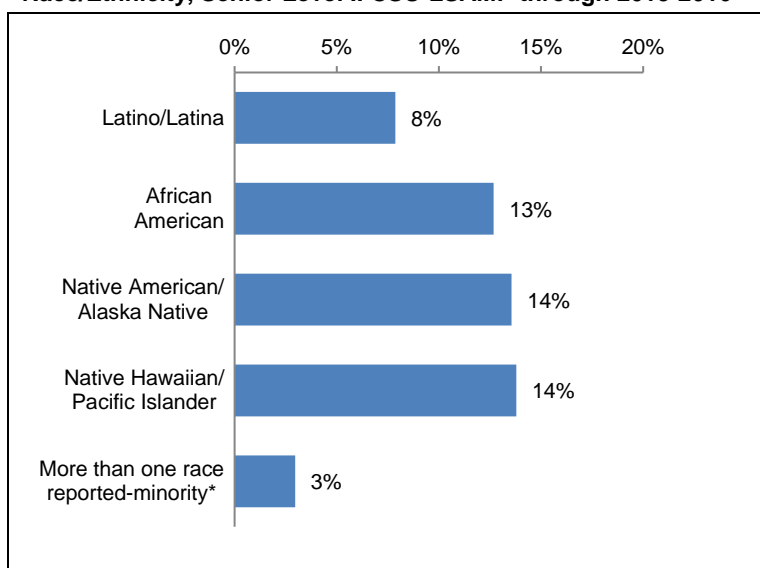
	Year 1 2013-2014	Year 2 2014-2015	Year 3 2015-2016
URM STEM enrollment*	32,602	35,125	38,343
URM STEM CSU-LSAMP participants†	2,999	2,889	2,675
Estimated participation rate	9%	8%	7%

While this measure provides a useful indicator of the percent of CSU URM-STEM students who participate in CSU-LSAMP, it is important to keep in mind several issues that affect the precision of this measure. This includes the fact that URM-STEM enrollment can only identify those students

who reported their race and/or ethnicity. In addition, the data is coming from two different sources and the ERS file may report student race and/or ethnicity differently than the WebAMP system.

Appendix Tables 14-17 provide detail on estimated CSU-LSAMP participation rates. Over the three years of Senior Level II, the average participation rate for male and female students was eight percent.

Figure 21: Average Estimated URM-STEM Participation Rate by Race/Ethnicity, Senior Level II CSU-LSAMP through 2015-2016



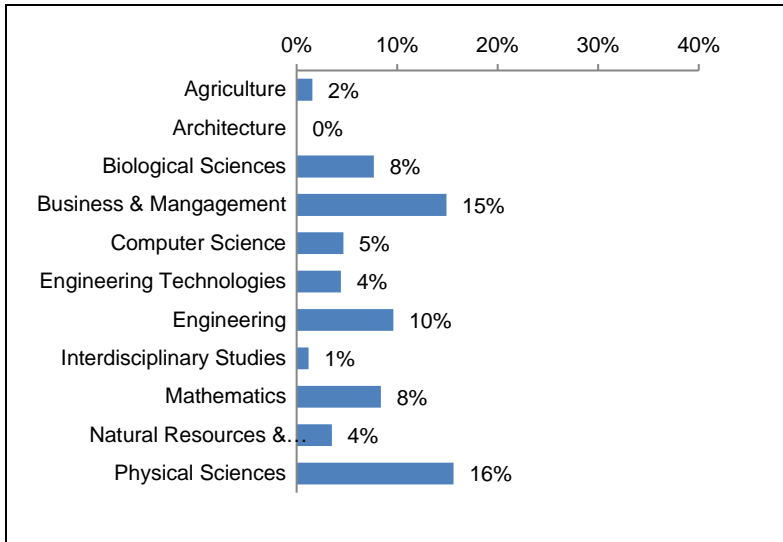
Sources: ERS enrollment and Longitudinal CSU-LSAMP participant database.

* This is a new category not present in the ERS enrollment data prior to Fall 2010.

Figure 21 and Appendix Table 15 show the average estimated URM-STEM participation rate by race/ethnicity. African American, Native American/Alaska Native, and Native Hawaiian/Pacific Islander STEM majors had the highest participation rates across the three years of Senior Level II (Figure 21 and Appendix Table 15). In year three, the participation rate for African American STEM majors enrolled was ten percent, down from last year; this brings the three year average down to 13 percent. In contrast, the participation rate for Native American/Alaska Native STEM majors enrolled was 16 percent, up from last year; this brings the three year average up to 14 percent. The percentage of Native

Hawaiian/Pacific Islander STEM majors enrolled who participated in CSU-LSAMP remained stable at 14 percent across all three years. Aside from students who identified themselves as members of more than one underrepresented minority group, Latino/Latina STEM majors had the lowest participation rate. On average, there were 29,850 Latino/Latina STEM majors enrolled and 2,350 participated in CSU-LSAMP, for an eight percent participation rate.

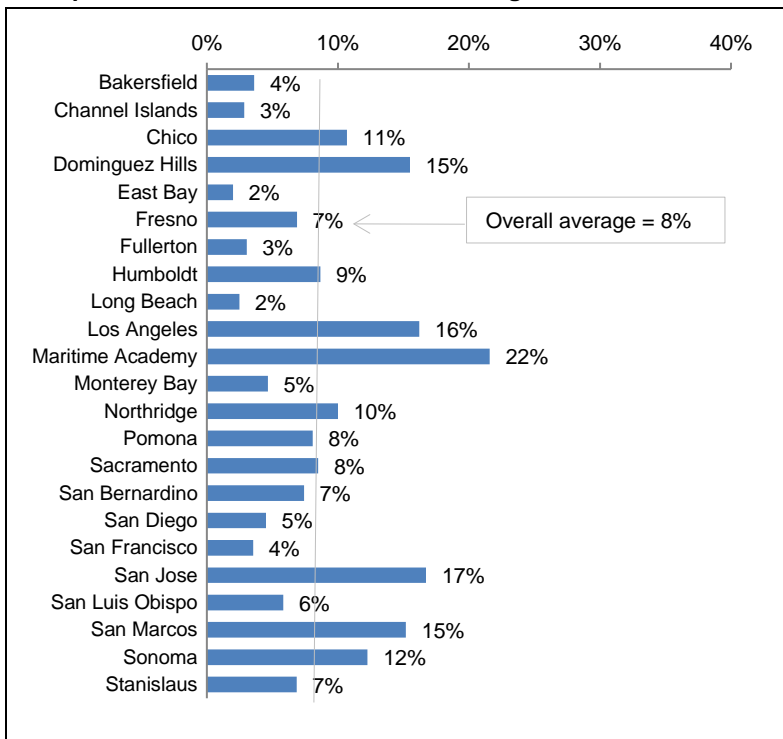
Figure 22: Average Estimated URM-STEM Participation Rate by Discipline, Senior Level II CSU-LSAMP through 2015-2016



Sources: ERS enrollment and Longitudinal CSU-LSAMP participant database.

science majors (32%), had an average participation rate of eight percent. Architecture majors had the lowest average participation of zero percent.

Figure 23: Average Estimated URM-STEM Participation Rate by Campus, Senior Level II CSU-LSAMP through 2015-2016



Sources: ERS enrollment and Longitudinal CSU-LSAMP participant database.

Figure 22 and Appendix Table 16 show the average estimated URM-STEM participation rate by discipline. Estimated average URM-STEM participation rates varied markedly depending on discipline. Participation rates were highest for the physical sciences (16%). The next highest participation rate was for business and management majors (15%), who comprise less than one percent of STEM majors.

The average participation rate for engineering majors, who comprise 35 percent of all participants, was ten percent. The second most prevalent group of participants—biological

Figure 23 and Appendix Table 17 show the average estimated URM-STEM participation rate by campus. Estimated average URM-STEM participation rates for Senior Level II CSU-LSAMP varied widely from one campus to the next.

California Maritime Academy had the highest average participation rate (22%), although their students make up less than one percent of all CSU-LSAMP participants. CSU San Jose and CSU Los Angeles had the next highest rates, with 17 and 16 percent, respectively, of URM-STEM students participating in CSU-LSAMP.

Long Beach had the lowest rate of participation, with two percent of URM-STEM students participating in CSU-LSAMP.

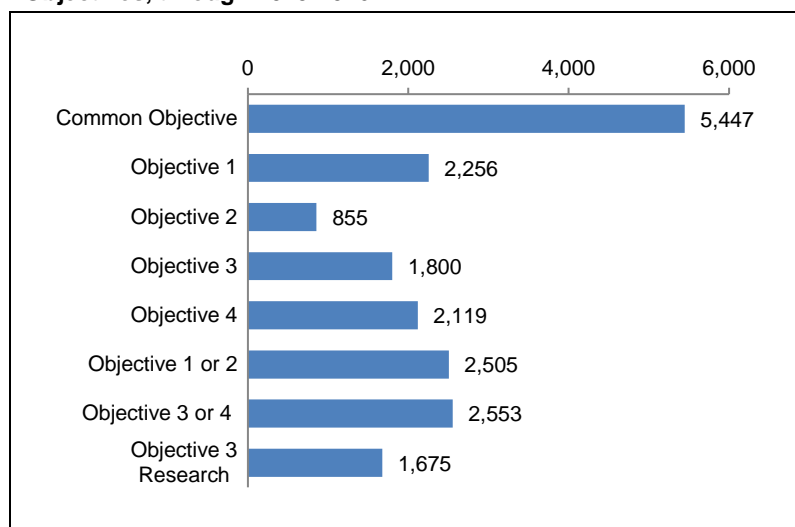
Next, the report focuses on activity participation by objective.

C. Activity Participation

The Senior Level II project includes 24 different activities, with each activity supporting one of the five project objectives:

- Common Objective: provide on-going CSU-LSAMP student support and exposure to career and research opportunities in STEM to increase persistence in STEM and enhance interest in pursuing graduate study and professional careers in STEM.
- *Objective 1: support students in “gatekeeper” courses in STEM to improve student performance and persistence in STEM.*
- *Objective 2: support students as they transition into STEM disciplines (e.g. as first-time freshmen, transfer students, or newly declared majors) to improve persistence in STEM.*
- *Objective 3: provide opportunities for students to engage in research projects, internships, and international activities to encourage continuation to graduate school and professional careers in STEM.*
- *Objective 4: provide additional professional development and graduate school preparation activities to increase the number of students entering graduate programs and professional careers in STEM.*

Figure 24: Number of Level-One Students Participating in Activities Supporting the Five Senior Level II CSU-LSAMP Objectives, through 2015-2016



Source: Longitudinal participant database constructed from WebAMP records. See Appendix Table 18 for more detail.

Figures 24 and 25 display activity participation by objective. Appendix Table 18 provides detailed information for annual and cumulative Senior Level II activity participation.

Campuses offered seven activities supporting the Common Objective, including: clubs; communications; attending conferences; LSAMP advising and counseling; meetings and seminars; student cohesion activities; and peer mentoring:

- In the first year of Senior Level II, 3,497 students (99%) participated in Common Objective activities. The top five activities for the Common Objective were: Communication (3,029 participants); LSAMP Advising/Counseling (2,865 participants); Conferences-attending only (551 participants); Meetings/Seminars (517 participants); and Clubs (285 participants).

- In the second year of Senior Level II, 3,454 students (99%) participated in Common Objective activities. The top five activities for the Common Objective were: Communication (2,980 participants); LSAMP Advising/Counseling (2,961 participants); Meetings/Seminars (618 participants); Conferences-attending only (540 participants); and Clubs (375 participants).
- In the third year of Senior Level II, 3,225 students (100%) participated in Common Objective activities. The top five activities for the Common Objective were: 1) Communication (2,769 participants); LSAMP Advising/Counseling (2,769 participants); Meetings/Seminars (624 participants); Conferences-attending only (546 participants); and Clubs (464 participants).

Campuses offered three activities supporting Objective 1, including: Academic Excellence Workshops; Other Academic Support Activities and STEM Summer Bridge Programs:

- In the first year of Senior Level II, 1,262 students (36%) participated in one or more Objective 1 activities. Over 1,000 (1,026) LSAMP students participated in Academic Excellence Workshops, while there were 219 STEM Summer Bridge Program participants, and 203 participants in Other Academic Support Activities.
- In the second year of Senior Level II, 1,195 students (34%) participated in one or more Objective 1 activities. Nearly 1,000 (982) LSAMP students participated in Academic Excellence Workshops, while there were 287 STEM Summer Bridge Program participants, and 194 participants in Other Academic Support Activities.
- In the third year of Senior Level II, 1,086 students (34%) participated in one or more Objective 1 activities. There were 855 LSAMP students who participated in Academic Excellence Workshops, while there were 343 STEM Summer Bridge Program participants, and 206 participants in Other Academic Support Activities.

Campuses offered five activities supporting Objective 2, all focused on transitioning students, including: CC Transfer Student First Year Activities, Freshman First Year Program, Orientation Programs, Other Transition Activities, and non-STEM Summer Bridge Program:

- In the first year of Senior Level II, 350 students (10%) participated in Objective 2 activities, primarily in Orientation Programs (292 participants) and the Freshman First Year Program (47 participants).
- In the second year of Senior Level II, 360 students (10%) participated in Objective 2 activities, primarily in Orientation Programs (319 participants) and the Freshman First Year Program (34 participants).
- In the third year of Senior Level II, 422 students (13%) participated in Objective 2 activities, primarily in Orientation Programs (359 participants) and the CC Transfer Student First Year Activities (34 participants).

Campuses offered four activities supporting Objective 3, all focused on research activities, including: Internships, International Activities, LSAMP Funded Research, and Other Funded Research:

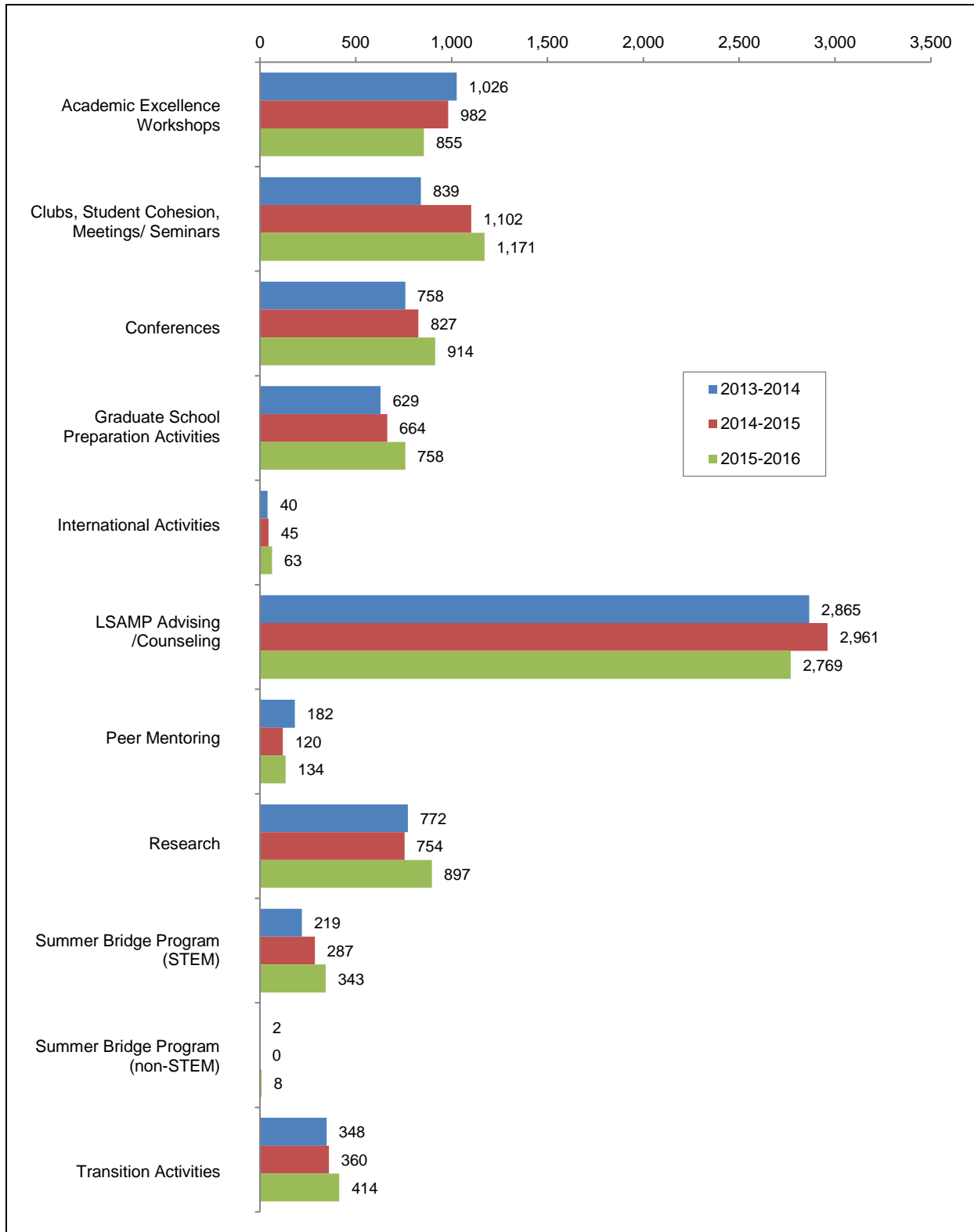
- In the first year of Senior Level II, 836 students (24%) participated in Objective 3 activities, primarily in research funded directly by the program (343) and in research funded through other sources (521). Additional year one activities included internships for 89 students and international research experiences for 40 students.

- In the second year of Senior Level II, 812 students (23%) participated in Objective 3 activities, primarily in research funded directly by the program (373) and in research funded through other sources (504). Additional year two activities included internships for 69 students and international research experiences for 45 students.
- In the third year of Senior Level II, 990 students (31%) participated in Objective 3 activities, primarily in research funded directly by the program (424) and in research funded through other sources (652). Additional year three activities included internships for 148 students and international research experiences for 63 students.

Senior Level II CSU-LSAMP offered five activities in support of Objective 4. These activities included; graduate school preparation activities, opportunities to serve as facilitators, mentors, or trainers, presentation and publication of research and other professional development activities:

- In year one, there were 892 students (25%) who participated in one or more of these activities, primarily in graduate school activities (629 participants), and presentation/publication of research (376 participants).
- In year two, there were 1,044 students (30%) who participated in one or more of these activities, primarily in graduate school activities (664 participants), and presentation/publication of research (501 participants).
- In year three, there were 1,186 students (37%) who participated in one or more of these activities, primarily in graduate school activities (758 participants), and presentation/publication of research (592 participants).

Figure 25: Number of CSU-LSAMP Participants for Selected Activities by Year, through 2015-2016

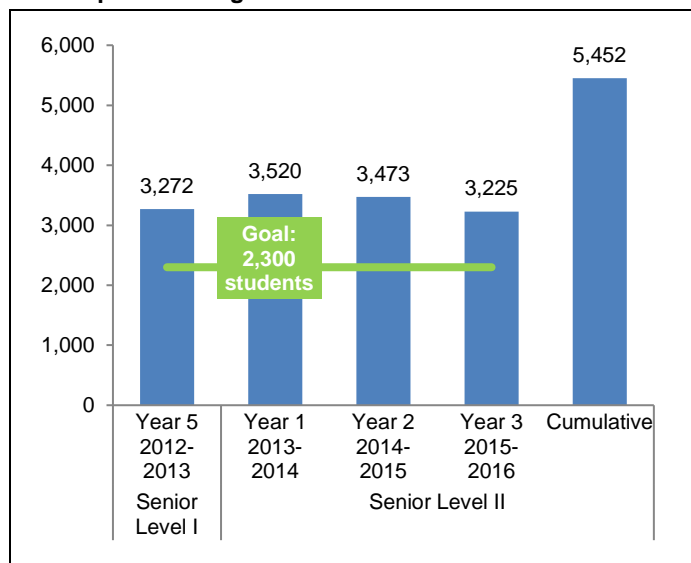


The next section focuses on progress toward short-term milestones.

D. Findings Regarding Short-Term Milestones

Progress toward the goal of engaging at least 2,300 “level-one” students annually

Figure 26: Number of Senior Level II CSU-LSAMP Participants through 2015-2016

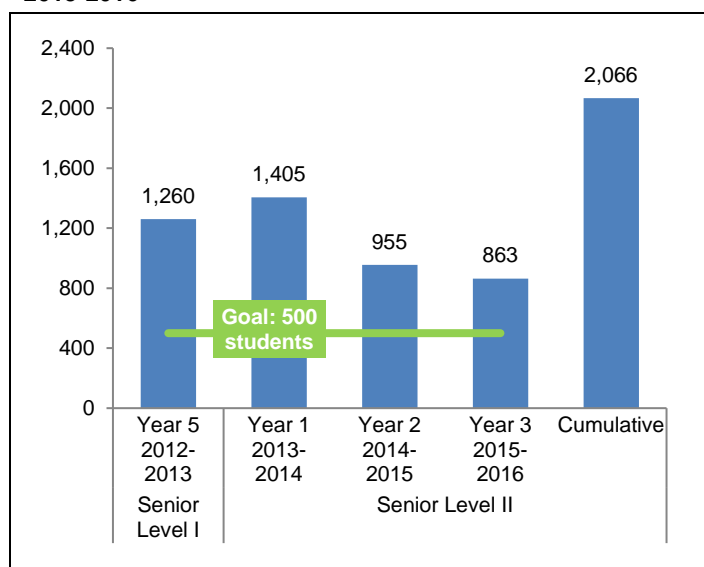


Source: WebAMP

Figure 26 displays the number of unduplicated level-one participants. CSU-LSAMP surpassed this goal before the end of Senior Level I, and continued to surpass this goal through the first three years of Senior Level II. In year one of Senior Level II campuses reported that they served 3,520 unduplicated level-one students, 53 percent over the goal of 2,300 “level-one” students. In year two campuses reported that they served 3,473 unduplicated level-one students, 51 percent over the goal, and in year three, campuses reported that they served 3,225 unduplicated level-one students, 40 percent over the goal.

Progress toward the goal of supporting 500 students in textbook reimbursement programs annually

Figure 27: Number of CSU-LSAMP Students in Material Support Activities, Senior Level II CSU-LSAMP through 2015-2016

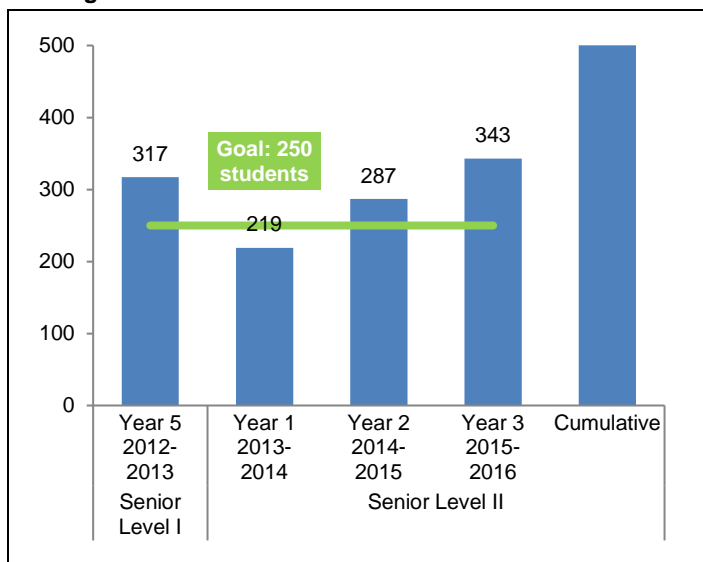


Source: WebAMP

Figure 27 shows the number of participants provided with material support. CSU-LSAMP surpassed this goal before the end of Senior Level I, and continued to surpass this goal through the first three years of Senior Level II. During year one of Senior Level II, campuses reported that they provided material support to 1,405 unduplicated level-one students. In year two, campuses reported that they provided material support to 955 unduplicated level-one students, and in year three, campuses reported that they provided material support to 863 unduplicated level-one students.

Progress toward the goal of engaging at least 250 participants in STEM summer bridge programs annually

Figure 28: Number of Students Participating in STEM Summer Bridge Programs, Senior Level II CSU-LSAMP through 2015-2016

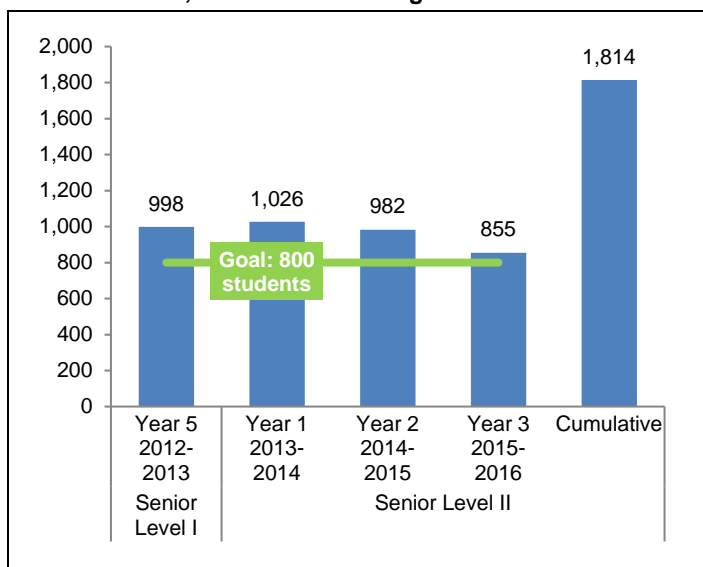


Source: WebAMP.

Figure 28 shows the number of students participating in STEM Summer Bridge Programs. CSU-LSAMP surpassed this goal before the end of Senior Level I. During year one of Senior Level II, campuses reported that there were 219 unduplicated level-one students participating in STEM Summer Bridge Programs, which was slightly below the goal. However, the goal was exceeding in years two and three of Senior Level II. In year two, campuses reported that there were 287 unduplicated level-one students participating in STEM Summer Bridge Programs, and in year three, campuses reported that there were 343 unduplicated level-one students participating in STEM Summer Bridge Programs.

Progress toward the goal of engaging 800 students in academic excellence workshops annually

Figure 29: Academic Excellence Workshop Participants, Senior Level II, CSU-LSAMP through 2015-2016

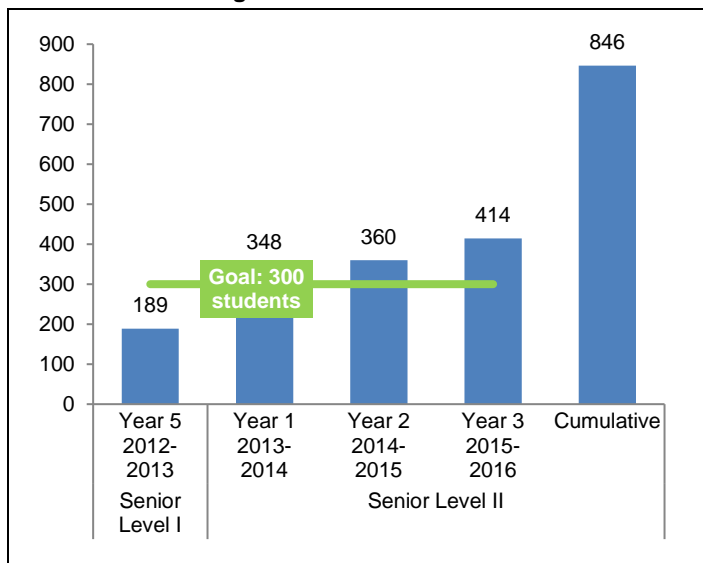


Source: WebAMP

Figure 29 displays the number of Academic Excellence Workshop participants. CSU-LSAMP surpassed this goal before the end of Senior Level I, and continued to surpass this goal through the first three years of Senior Level II. During year one of Senior Level II, campuses reported that there were 1,026 unduplicated level-one students participating in Academic Excellence Workshops. In year two, campuses reported that there were 982 unduplicated level-one students participating in Academic Excellence Workshops, and in year three campuses reported that there were 855 unduplicated level-one students participating in Academic Excellence Workshops.

Progress toward the goal of engaging 300 students in transition programs annually

Figure 30: Transition Program Participants, Senior Level II CSU-LSAMP through 2015-2016

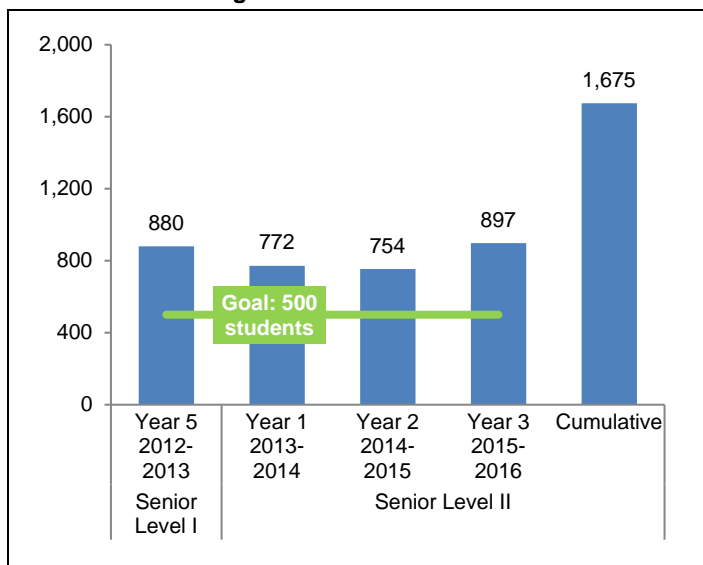


Source: WebAMP

Figure 30 shows the number of transition program participants. CSU-LSAMP approached this goal before the end of Senior Level I. CSU-LSAMP surpassed this goal in years one through three of Senior Level II. In year one of Senior Level II, campuses reported that there were 348 unduplicated level-one students participating in transition programs. During year two, campuses reported that there were 360 unduplicated level-one students participating in transition programs, and in year three campuses reported that there were 414 unduplicated level-one students participating in transition programs

Progress toward engaging 500 students in research activities annually

Figure 31: Research Activity Participants, Senior Level II CSU-LSAMP through 2015-2016

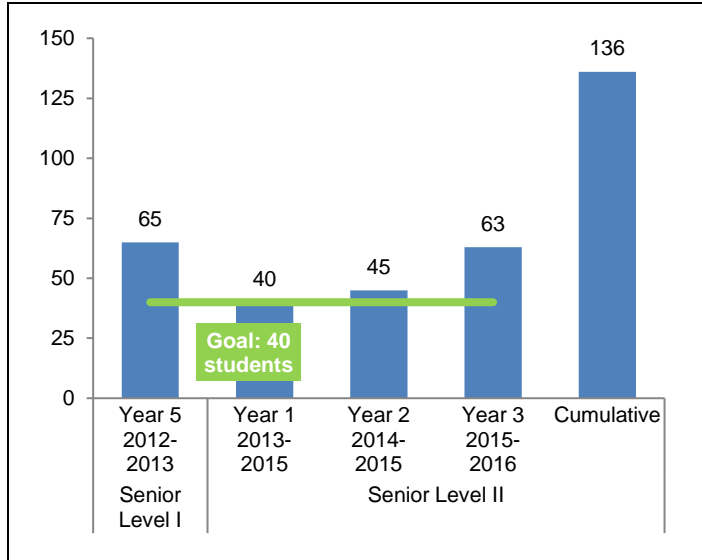


Source: WebAMP

Figure 31 displays the number of research activity participants. CSU-LSAMP surpassed this goal before the end of Senior Level I, and continued to surpass this goal through the first three years of Senior Level II. During year one of Senior Level II, campuses reported that there were 772 unduplicated level-one students participating in research activities. In year two, campuses reported that there were 754 unduplicated level-one students participating in research activities, and in year three, campuses reported that there were 897 unduplicated level-one students participating in research activities.

Progress toward engaging 40 students in international activities annually

Figure 32: International Activity Participants, Senior Level II CSU-LSAMP through 2015-2016

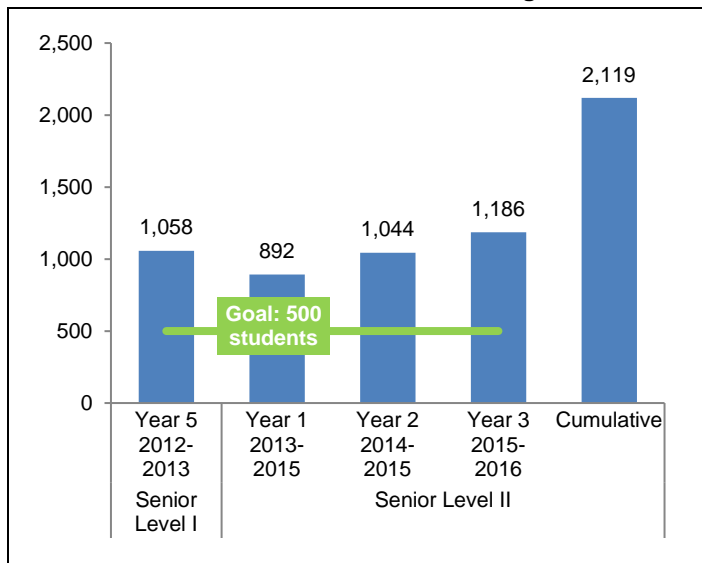


Source: WebAMP

Figure 32 displays the number of international activity participants. CSU-LSAMP surpassed this goal before the end of Senior Level I, and met or exceeded the goal during the first three years of Senior Level II. During year one of Senior Level II, campuses reported that there were 40 unduplicated level-one students participating in international activities. In year two, campuses reported that there were 45 unduplicated level-one students participating in international activities, and in year three, campuses reported that there were 63 unduplicated level-one students participating in international activities.

Progress toward engaging 500 students annually in professional development activities

Figure 33: Participants in Professional Development Activities, Senior Level II CSU-LSAMP through 2015-2016



Source: WebAMP

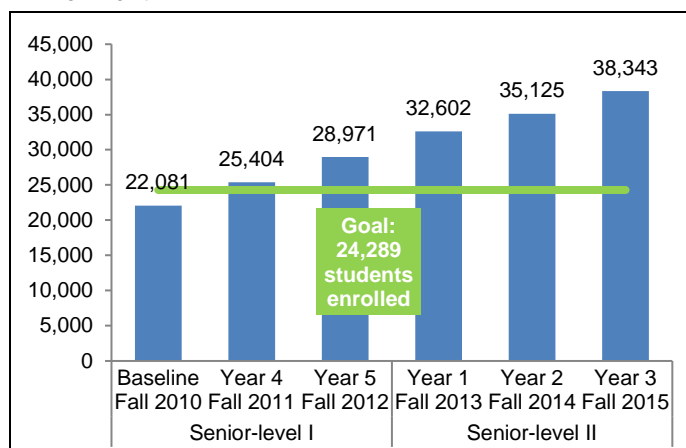
Figure 33 shows the number of participants in professional development activities. CSU-LSAMP surpassed this goal before the end of Senior Level I, and continued to surpass this goal through the first three years of Senior Level II. During year one of Senior Level II, campuses reported that there were 892 unduplicated level-one students participating in professional development activities. In year two, campuses reported that there were 1,044 unduplicated level-one students participating in professional development activities, and in year three, campuses reported that there were 1,186 unduplicated level-one students participating in professional development activities.

The next section focuses on progress toward long-term outcomes.

E. Findings Regarding Long-Term Outcomes

Progress toward increasing URM-STEM enrollment

Figure 34: System-Wide Undergraduate URM-STEM Enrollment



Source: CSU ERS records

Figure 34 and Table 12 display CSU system-wide undergraduate URM-STEM enrollment. CSU-LSAMP proposed that URM-STEM enrollment would increase from a fall 2010 baseline of 22,081 for all campuses to 24,289 for all campuses in Senior Level II CSU-LSAMP. The project met this goal in year five of Senior Level I and URM-STEM undergraduate enrollment has continued to increase in subsequent years. Undergraduate URM-STEM enrollment exceeded the proposed goal by 8,313 students in year one, and 10,836 in year two, and by 14,054 in year three.

- During year one of Senior Level II CSU-LSAMP, undergraduate URM-STEM enrollment for all campuses increased from 22,081 in fall 2010 to 32,602 in fall 2013 (a 47.6% increase).
- During year two of Senior Level II CSU-LSAMP, undergraduate URM-STEM enrollment for all campuses increased from 22,081 in fall 2010 to 35,125 in fall 2014 (a 59.1% increase).
- During year three of Senior Level II CSU-LSAMP, undergraduate URM-STEM enrollment for all campuses increased from 22,081 in fall 2010 to 38,343 in fall 2015 (a 73.6% increase).

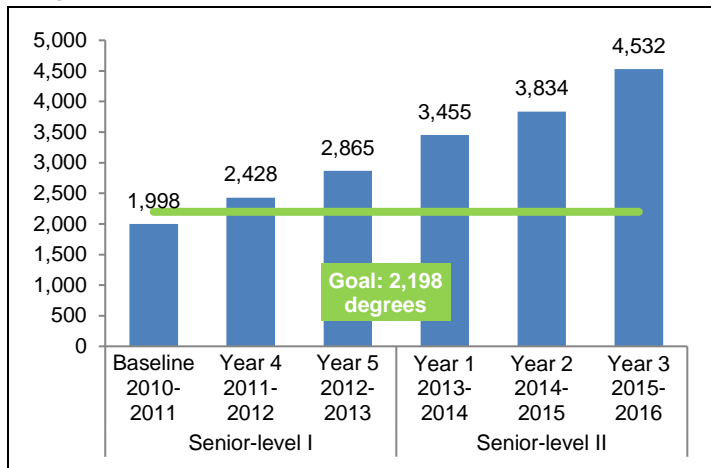
Table 12: CSU System-Wide Undergraduate URM-STEM Enrollment, Fall 2010-2015

	Senior Level I			Senior Level II		
	Baseline (Fall 2010)	Year 4 (Fall 2011)	Year 5 (Fall 2012)	Year 1 (Fall 2013)	Year 2 (Fall 2014)	Year 3 (Fall 2015)
URM-STEM enrollment	22,081	25,404	28,971	32,602	35,125	38,343
Percent increase from baseline	n/a	15.0%	31.2%	47.6%	59.1%	73.6%

Source: CSU ERS records.

Progress toward increasing URM-STEM baccalaureate degree production

Figure 35: CSU System-Wide URM-STEM Baccalaureate Degree Production



Source: CSU ERS records

Figure 35 and Table 13 show CSU system-wide URM-STEM baccalaureate degree production. CSU-LSAMP proposed that URM-STEM baccalaureate degree production (for the 23 campuses in the CSU) would increase from the baseline of 1,998 per year in 2010-2011 to 2,198 per year. CSU-LSAMP surpassed this goal in year five of Senior Level I, and continued to surpass this goal through the first three years of Senior Level II, as URM-STEM baccalaureate degree production has continued to increase in subsequent years.

- During year one of Senior Level II CSU-LSAMP, URM-STEM baccalaureate degree production increased from 1,998 in 2010-2011 to 3,455 in 2013-2014 (a 72.9% increase).
- During year two of Senior Level II CSU-LSAMP, URM-STEM baccalaureate degree production increased from 1,998 in 2010-2011 to 3,834 in 2014-2015 (a 91.9% increase).
- During year three of Senior Level II CSU-LSAMP, URM-STEM baccalaureate degree production increased from 1,998 in 2010-2011 to 4,532 in 2015-2016 (a 126.8% increase).

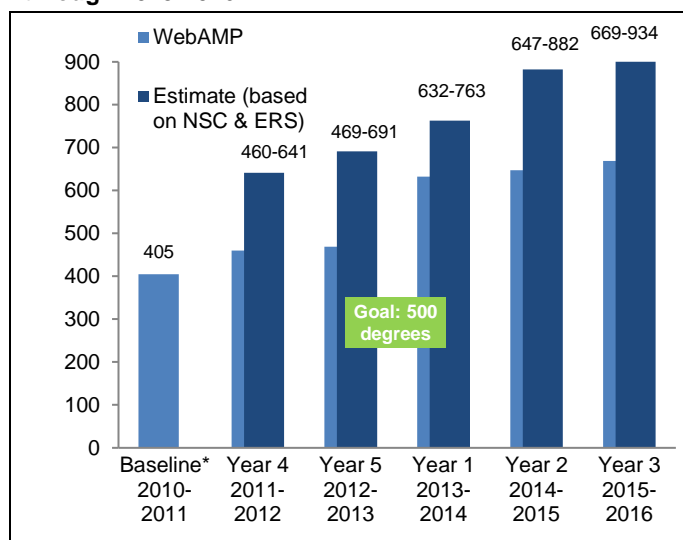
Table 13: CSU System-Wide URM-STEM Baccalaureate Degrees, 2010-2011 through 2015-2016

	Senior Level I			Senior Level II		
	Baseline (2010-2011)	Year 4 (2011-2012)	Year 5 (2012-2013)	Year 1 (2013-2014)	Year 2 (2014-2015)	Year 3 (2015-2016)
URM-STEM degrees	1,998	2,428	2,865	3,455	3,834	4,532
Percent increase from baseline	n/a	21.5%	43.4%	72.9%	91.9%	126.8%

Source: CSU ERS records

Progress toward increasing the number of CSU-LSAMP students who graduate each year

Figure 36: Estimated Number of CSU-LSAMP Participants who Graduated, Senior Level II CSU-LSAMP through 2015-2016



* The baseline count is limited to the 22 Senior Level I campuses because there were no 2010-2011 participants at the new Senior-Level II campus.
Table 14 shows the computation of the estimates.

Figure 36 and Table 14 show the estimated number of CSU-LSAMP participants who graduated. CSU-LSAMP proposed to increase the number of participants who graduate each year from 400 to 500. Even using the most conservative measure of the number of graduates—the number reported by campuses through WebAMP—the project achieved this goal in the first year of Senior Level II CSU-LSAMP, and has continued to exceed the goal each year.

During year one, campuses reported through WebAMP that 632 CSU-LSAMP participants graduated. This was a gain of 227 graduates over the 405 reported during the 2010-2011 baseline year. In year two, campuses reported that 647 CSU-LSAMP participants graduated, which is a gain 242 over the baseline. In year three, campuses reported that 669

CSU-LSAMP participants graduated, a gain of 264 over the baseline.

One of the reasons the number of graduates reported in WebAMP each year provides a conservative measure of progress toward this goal is that it may undercount the actual number of participants graduating. The availability of graduation data in time for WebAMP reporting deadlines varies by campus, and it is cumbersome and time consuming for campus program coordinators to verify and enter each student’s graduation status, particularly for programs with large numbers of students.

In addition, the graduates reported in WebAMP only reflect the number of *current* participants graduating. For example, a student who participated only during year one and who graduated during year three would not be recorded as a graduate in WebAMP. In order to supplement the graduation data entered into WebAMP, we made an attempt to retrieve NSC and ERS records for the 9,591 students who participated in Senior Level I and Senior Level II CSU-LSAMP. Data was found in one or both systems for 8,633 (90%) of these students, and their records showed that 8.0 percent graduated during year one of Senior Level II, and 9.2 percent graduated during year two of Senior Level II, and 9.7% graduated during year three of Senior Level II. Based on these results, we estimate that 763 CSU-LSAMP Senior Level II participants graduated during year one, 882 graduated during year two, and 934 graduated during year three.⁹

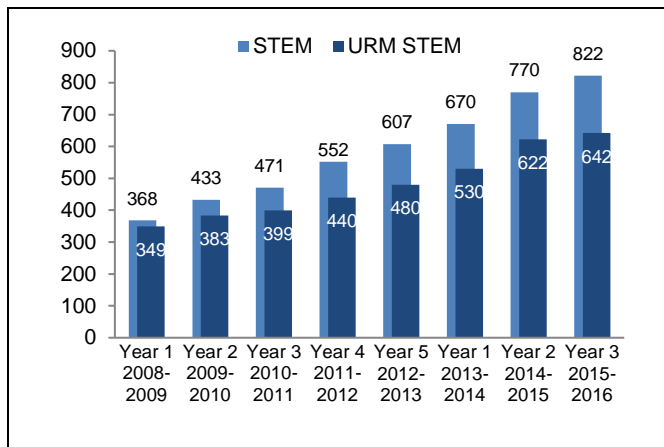
⁹ NSC records also include degrees obtained outside the CSU system, which is another factor contributing to the difference between these estimates of the number of graduates and those reported in WebAMP.

Table 14: Estimated Baccalaureate Degree Attainment for Senior Level I and Senior Level II CSU-LSAMP Participants

			Senior Level I and Senior Level II CSU-LSAMP participants for whom tracking information was available:		Estimated number of Senior Level I and Senior Level II CSU-SAMP participants ¹⁰
			Number	Percent	
Graduates ¹¹	Senior I	Yr 1 2008-2009	355	4.1%	394
		Yr 2 2009-2010	425	4.9%	
		Yr 3 2010-2011	478	5.5%	
		Yr 4 2011-2012	577	6.7%	
		Yr 5 2012-2013	622	7.2%	
	Senior II	Yr 1 2013-2014	687	8.0%	763
		Yr 2 2014-2015	794	9.2%	
		Yr 3 2015-2016	841	9.7%	
		Yr 4 2016-2017	293	3.4%	
Currently enrolled			3,479	40.3%	3,865
No degree, not enrolled			82	0.9%	91
Total			8,633	100.0%	9,591

Source: WebAMP participant data matched to CSU ERS and NSC records.

Figure 37: Estimated Number STEM and URM STEM Graduates, Senior Level I and Senior Level II CSU-LSAMP Participants through 2015-2016 (23 Senior Level Campuses)



Source: WebAMP participant data matched to CSU ERS and NSC records. Appendix Table 19 shows the computation of these estimates, as well as estimates for other subgroups.

Since these estimates include *all* Senior Level I and Senior Level II participants, not just those participating during a specific year, they are notably higher than the number of graduates reported in WebAMP for all years. Some students who “drop out” of the CSU-LSAMP program move into non-STEM disciplines.

Figure 37 shows the estimated number of STEM degrees earned by Senior Level I and Senior Level II participants. Appendix Table 19 shows the computation of the estimates. An estimated 670 participants graduated with STEM degrees during year one of Senior Level II, 770 graduated in year two, and 822 graduated in year three. Figure 37 also shows the estimated number of STEM bachelor’s degrees earned by URM students.

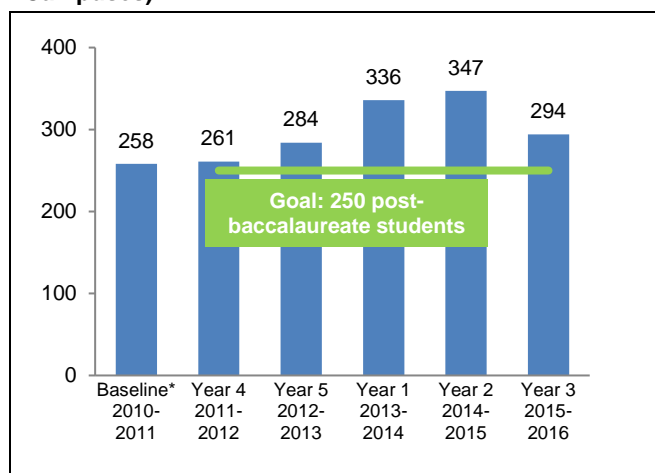
¹⁰ The estimated number of participants in each category was obtained by applying the percentages for participants for whom follow-up tracking information is available (e.g., those whose CSU-ERS and/or NSC records were successfully retrieved) to the total number of participants. Totals for these estimates may not sum due to rounding.

¹¹ We collapsed tracking information to describe the number of degrees awarded annually. The CSU ERS system records the award year and term for degrees and the NSC system records the date. The categories shown here reflect the number of degrees awarded between the summer and spring terms (CSU-ERS data) or the number of degrees awarded between July 1 and June 30 (NSC data). The currently available CSU ERS data and the NSC system data includes degrees earned through spring 2017.

Progress toward increasing the number of participants enrolling in graduate programs

CSU-LSAMP proposed to increase the number of graduates progressing to graduate school from the current baseline to 250 per year. Figure 38 and Table 15 show the estimated post-baccalaureate enrollment for CSU-LSAMP participants.

Figure 38: Estimated Post-Baccalaureate Enrollment, Senior Level I and Senior Level II CSU-LSAMP Participants through 2015-2016 (23 Senior Level Campuses)



Source: WebAMP participant data matched to CSU ERS and NSC records. See Table 15 for computation details.

Based on analysis of NSC and ERS records for Senior Level I and Senior Level II CSU-LSAMP participants who graduated, we estimated that 336 of the Senior Level II year one graduates enrolled in graduate programs following receipt of their degree, 347 of the year two graduates enrolled in graduate programs, and 294 of the year three graduates enrolled in graduate programs.

Unfortunately, we cannot be certain that all these students enrolled in graduate programs. NSC enrollment data—the source of information regarding enrollment outside the CSU system—does not indicate a student’s level of enrollment or discipline (that information is only reflected in NSC records when a degree is awarded).

We derived the estimated number of participants continuing in higher education from NSC and ERS records for the 5,072 Senior Level I and Senior Level II participants who graduated during the program. These records show that 1,985 of these Senior Level I and Senior Level II participants (39.1%) enrolled subsequent to the receipt of their bachelor’s degree.

Table 15: Post-Baccalaureate Enrollment for Senior Level I and Senior Level II CSU-LSAMP Participants

Year bachelor's degree was awarded	Senior Level I and Senior Level II CSU-LSAMP participants for whom tracking information is available			Estimated number of Senior Level I and Senior Level II CSU-LSAMP participants	
	Number graduating	Number enrolled after graduating	Percent enrolled after graduating	Graduating	Enrolled after graduating*
Senior I					
Year 1 2008-2009	355	147	41.4%	394	163
Year 2 2009-2010	425	206	48.5%	472	229
Year 3 2010-2011	478	210	43.9%	531	233
Year 4 2011-2012	577	235	40.7%	641	261
Year 5 2012-2013	622	256	41.2%	691	284
Senior II					
Year 1 2013-2014	687	302	44.0%	763	336
Year 2 2014-2015	794	312	39.3%	882	347
Year 3 2015-2016	841	265	31.5%	934	294
Year 4 2016-2017	293	52	17.7%	326	58
Total	5,072	1,985	39.1%	5,635	2,205

Source: WebAMP participant data matched to CSU ERS and NSC records.

* Obtained by applying the percentages for participants for whom follow-up tracking information is available to the estimated number of graduates from Table 14.

APPENDIX A: ADDITIONAL TABLES

Appendix Table 1: Participant Characteristics by Entry Phase, 1994-2016

		Phase I 1994-1998		Phase II 1999-2003		Phase III 2004-2008		Senior Level I 2009-2013		Senior Level II 2014-2016		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Gender	Male	2,745	59%	4,050	55%	3,245	56%	2,304	54%	1,594	53%	13,938	55%
	Female	1,882	41%	3,343	45%	2,536	44%	1,999	46%	1,386	46%	11,146	44%
	Not reported	6	0%	34	0%	5	0%	0	0%	3	0%	48	0%
	Total	4,633	100%	7,427	100%	5,786	100%	4,303	100%	2,983	100%	25,131	100%
Race/ Ethnicity	Latino/Latina	3,001	65%	3,781	51%	4,178	72%	2,766	64%	1,981	66%	15,632	62%
	African American	832	18%	1,133	15%	1,015	18%	522	12%	267	9%	3,769	15%
	Native American/Alaska Native	101	2%	126	2%	141	2%	77	2%	33	1%	478	2%
	Native Hawaiian/Pacific Islander	350	8%	258	3%	137	2%	82	2%	35	1%	862	3%
	More than one URM group	6	0%	30	0%	95	2%	103	2%	50	2%	284	1%
	Non-minority	285	6%	1,620	22%	207	4%	640	15%	567	19%	3,319	13%
	Race/ethnicity not reported	58	1%	479	6%	13	0%	188	4%	50	2%	788	3%
	Total	4,633	100%	7,427	100%	5,786	100%	4,303	100%	2,983	100%	25,132	100%
Class level at program entry	Freshman	2,254	49%	3,843	52%	2,447	42%	1,073	25%	686	23%	10,303	41%
	Sophomore	881	19%	1,579	21%	1,259	22%	722	17%	474	16%	4,915	20%
	Junior	327	7%	979	13%	867	15%	1,067	25%	667	22%	3,907	16%
	Senior	500	11%	804	11%	1,140	20%	1,441	33%	1,156	39%	5,041	20%
	Unknown	671	14%	222	3%	73	1%	0	0%	0	0%	966	4%
	Total	4,633	100%	7,427	100%	5,786	100%	4,303	100%	2,983	100%	25,132	100%
Division at program entry	Lower	3,135	68%	5,422	73%	3,706	64%	1,795	42%	1,160	39%	15,218	61%
	Upper	827	18%	1,783	24%	2,007	35%	2,508	58%	1,823	61%	8,948	36%
	Unknown	671	14%	222	3%	73	1%	0	0%	0	0%	966	4%
	Total	4,633	100%	7,427	100%	5,786	100%	4,303	100%	2,983	100%	25,132	100%
Discipline during most recent year of partic- ipation	Agriculture	4	0%	22	0%	25	0%	46	1%	34	1%	131	1%
	Architecture	0	0%	0	0%	0	0%	0	0%	1	0%	1	0%
	Biological Sciences	1,207	26%	2,334	31%	1,618	28%	1,455	34%	983	33%	7,597	30%
	Business and Management	0	0%	0	0%	1	0%	4	0%	2	0%	7	0%
	Computer Science	597	13%	996	13%	458	8%	244	6%	213	7%	2,508	10%
	Engineering Technologies	0	0%	0	0%	2	0%	9	0%	48	2%	59	0%
	Engineering	1,707	37%	2,229	30%	1,996	34%	1,349	31%	963	32%	8,244	33%
	Interdisciplinary Studies	0	0%	1	0%	0	0%	0	0%	4	0%	5	0%
	Mathematics	391	8%	506	7%	768	13%	370	9%	199	7%	2,234	9%
	Natural Resources and Conserv.	9	0%	99	1%	182	3%	124	3%	49	2%	463	2%
	Physical Sciences	352	8%	573	8%	686	12%	667	16%	468	16%	2,746	11%
	Non-STEM, undeclared	366	8%	667	9%	50	1%	35	1%	19	1%	1,137	5%
	Total	4,633	100%	7,427	100%	5,786	100%	4,303	100%	2,983	100%	25,132	100%
Campus during most recent year of partic- ipation	Bakersfield	248	5%	178	2%	144	2%	83	2%	77	3%	730	3%
	Channel Islands	0	0%	0	0%	0	0%	60	1%	45	2%	105	0%
	Chico	97	2%	918	12%	177	3%	131	3%	130	4%	143	1%
	Dominguez Hills	243	5%	1,120	15%	497	9%	237	6%	130	4%	2,227	9%
	East Bay	111	2%	48	1%	59	1%	49	1%	35	1%	302	1%
	Fresno	283	6%	439	6%	295	5%	241	6%	169	6%	1,427	6%
	Fullerton	149	3%	102	1%	126	2%	156	4%	95	3%	628	2%
	Humboldt	146	3%	584	8%	321	6%	307	7%	139	5%	1,497	6%
	Long Beach	375	8%	301	4%	178	3%	100	2%	66	2%	1,020	4%
	Los Angeles	688	15%	1,230	17%	850	15%	644	15%	274	9%	3,686	15%
	Maritime Academy	0	0%	0	0%	0	0%	1	0%	44	1%	45	0%
	Monterey Bay	0	0%	2	0%	373	6%	76	2%	73	2%	524	2%
	Northridge	374	8%	411	6%	496	9%	314	7%	253	8%	1,848	7%
	Pomona	472	10%	569	8%	586	10%	347	8%	210	7%	2,184	9%
	Sacramento	159	3%	139	2%	240	4%	220	5%	135	5%	893	4%
	San Bernardino	164	4%	118	2%	286	5%	203	5%	126	4%	897	4%
	San Diego	212	5%	205	3%	129	2%	164	4%	111	4%	821	3%
	San Francisco	215	5%	202	3%	206	4%	173	4%	98	3%	894	4%
	San Jose	452	10%	606	8%	373	6%	279	6%	228	8%	1,938	8%
	San Luis Obispo	0	0%	0	0%	1	0%	207	5%	213	7%	421	2%
San Marcos	0	0%	0	0%	0	0%	139	3%	171	6%	310	1%	
Sonoma	104	2%	103	1%	236	4%	104	2%	74	2%	621	2%	
Stanislaus	141	3%	152	2%	213	4%	68	2%	87	3%	661	3%	
Total	4,633	100%	7,427	100%	5,786	100%	4,303	100%	2,983	100%	25,132	100%	

Source: Longitudinal participant database constructed from WebAMP records.

Appendix Table 2: Annual Number of CSU-LSAMP Participants, 1994-2016

		Number
Phase I	1993-1994	641
	1994-1995	924
	1995-1996	1411
	1996-1997	1415
	1997-1998	2,091
Phase II	1998-1999	1,708
	1999-2000	1,937
	2000-2001	2,333
	2001-2002	2,436
	2002-2003	2,751
Phase III	2003-2004	3,418
	2004-2005	3,476
	2005-2006	2,959
	2006-2007	3,025
	2007-2008	3,070
Senior Level I	2008-2009	2,838
	2009-2010	2,947
	2010-2011	2,908
	2011-2012	2,290
	2012-2013	3,272
Senior Level II	2013-2014	3,520
	2014-2015	3,474
	2015-2016	3,227

Data source: WebAMP ExACT Reports.

Appendix Table 3: CSU Undergraduate Enrollment for All CSU Campuses by URM and STEM Categories, Fall 1994-Fall 2015

		STEM					Non-STEM					Total						
		Non-URM and not reported			Subtotal	Total	Non-URM and not reported			Subtotal	Total	Non-URM and not reported			Subtotal	Total		
URM		Non-URM	Not reported	Non-URM			Not reported	Non-URM	Not reported			Non-URM	Not reported	URM			Non-URM	Not reported
Phase I	Fall 1994	10,580	39,783	3,370	43,153	53,733	54,293	131,689	14,178	145,867	200,160	64,873	171,472	17,548	189,020	253,893		
	Fall 1995	11,637	37,269	3,622	40,891	52,528	59,392	129,989	15,047	145,036	204,428	71,029	167,258	18,669	185,927	256,956		
	Fall 1996	12,337	36,222	5,720	41,942	54,279	63,306	124,423	22,776	147,199	210,505	75,643	160,645	28,496	189,141	264,784		
	Fall 1997	13,028	39,805	4,448	44,253	57,281	64,856	127,819	17,918	145,737	210,593	77,884	167,624	22,366	189,990	267,874		
Phase II	Fall 1998	13,000	41,100	4,772	45,872	58,872	65,328	126,688	19,362	146,050	211,378	78,328	167,788	24,134	191,922	270,250		
	Fall 1999	13,232	39,527	7,612	47,139	60,371	66,467	121,144	27,571	148,715	215,182	79,699	160,671	35,183	195,854	275,553		
	Fall 2000	13,264	39,623	7,765	47,388	60,652	67,876	123,416	29,268	152,684	220,560	81,140	163,039	37,033	200,072	281,212		
	Fall 2001	13,968	40,716	8,231	48,947	62,915	72,268	129,057	32,052	161,109	233,377	86,236	169,773	40,283	210,056	296,292		
	Fall 2002	13,989	40,112	8,466	48,578	62,567	74,775	133,075	35,161	168,236	243,011	88,764	173,187	43,627	216,814	305,578		
Phase III	Fall 2003	13,962	38,149	8,260	46,409	60,371	76,958	134,764	36,404	171,168	248,126	90,920	172,913	44,664	217,577	308,497		
	Fall 2004	14,328	37,490	7,782	45,272	59,600	79,312	136,663	33,827	170,490	249,802	93,640	174,153	41,609	215,762	309,402		
	Fall 2005	15,168	37,395	7,358	44,753	59,921	84,820	142,247	32,931	175,178	259,998	99,988	179,642	40,289	219,931	319,919		
	Fall 2006	16,084	38,254	7,224	45,478	61,562	90,984	147,721	31,991	179,712	270,696	107,068	185,975	39,215	225,190	332,258		
	Fall 2007	17,428	39,651	7,367	47,018	64,446	96,168	152,109	33,014	185,123	281,291	113,596	191,760	40,381	232,141	345,737		
Senior I	Fall 2008	18,542	40,488	7,160	47,648	66,190	99,417	151,179	32,471	183,650	283,067	117,959	191,667	39,631	231,298	349,257		
	Fall 2009	19,578	41,003	7,794	48,797	68,375	101,461	144,963	32,375	177,338	278,799	121,039	185,966	40,169	226,135	347,174		
	Fall 2010	22,081	41,408	5,889	47,297	69,378	105,528	136,052	23,794	159,846	265,374	127,609	177,460	29,683	207,143	334,752		
	Fall 2011	25,404	44,831	5,484	50,315	75,719	116,858	138,739	21,527	160,266	277,124	142,262	183,570	27,011	210,581	352,843		
	Fall 2012	28,971	46,883	5,063	51,946	80,917	125,741	138,980	18,797	157,777	283,518	154,712	185,863	23,860	209,723	364,435		
Senior II	Fall 2013	32,602	49,050	4,886	53,936	86,538	134,564	135,848	16,929	152,777	287,341	167,166	184,898	21,815	206,713	373,879		
	Fall 2014	35,125	48,778	4,905	53,683	88,808	143,204	134,828	16,743	151,571	294,775	178,329	183,606	21,648	205,254	383,583		
	Fall 2015	38,343	50,707	4,580	55,287	93,630	153,911	132,782	15,334	148,116	302,027	192,254	183,489	19,914	203,403	395,657		
Percent change	Phase I	23%	0%	32%	3%	7%	19%	-3%	26%	0%	5%	20%	-2%	27%	1%	6%		
	Phase II	8%	-2%	77%	6%	6%	14%	5%	82%	15%	15%	13%	3%	81%	13%	13%		
	Phase III	25%	4%	-11%	1%	7%	25%	13%	-9%	8%	13%	25%	11%	-10%	7%	12%		
	Senior Level	89%	16%	-29%	9%	22%	26%	-8%	-42%	-14%	0%	31%	-3%	-40%	-9%	4%		
Percent change from the first year of Phase I to the second year of the Senior Level II		262%	27%	36%	28%	74%	183%	1%	8%	2%	51%	196%	7%	13%	8%	56%		

Data sources: CSU Analytic Studies Division ERS enrollment files, WebAMP Reverse Site Reports, and WebAMP ExACT Reports. Enrollment data for fall 1993 (the first year of the Alliance) is not currently available.

Note: Excludes International Program and non-resident alien enrollment. The percent change for each phase reflects changes from the first to last year of each phase.

Appendix Table 4: Annual Number of Baccalaureate Degrees Awarded by URM and STEM Categories, All CSU Campuses 1993-1994 through 2015-2016

		STEM				Non-STEM				Total						
		Non-URM and not reported			Total	Non-URM and not reported			Total	Non-URM and not reported			Total			
URM		Non-URM	Not reported	Subtotal		URM	Non-URM	Not reported		Subtotal	URM	Non-URM		Not reported	Subtotal	
Phase I	1993-1994	917	6,359	528	6,887	7,804	8,190	34,494	2,983	37,477	45,667	9,107	40,853	3,511	44,364	53,471
	1994-1995	996	6,279	550	6,829	7,825	8,771	32,091	2,976	35,067	43,838	9,767	38,370	3,526	41,896	51,663
	1995-1996	1,100	5,921	844	6,765	7,865	9,427	29,389	4,361	33,750	43,177	10,527	35,310	5,205	40,515	51,042
	1996-1997	1,224	5,719	853	6,572	7,796	10,111	28,025	4,496	32,521	42,632	11,335	33,744	5,349	39,093	50,428
	1997-1998	1,379	5,993	959	6,952	8,331	10,720	27,815	4,673	32,488	43,208	12,099	33,808	5,632	39,440	51,539
Phase II	1998-1999	1,473	5,852	969	6,821	8,294	11,505	27,877	5,219	33,096	44,601	12,978	33,729	6,188	39,917	52,895
	1999-2000	1,443	5,721	1,018	6,739	8,182	12,350	27,755	5,312	33,067	45,417	13,793	33,476	6,330	39,806	53,599
	2000-2001	1,375	5,478	988	6,466	7,841	12,510	28,512	5,929	34,441	46,951	13,885	33,990	6,917	40,907	54,792
	2001-2002	1,485	5,826	1,164	6,990	8,475	14,080	29,882	6,631	36,513	50,593	15,565	35,708	7,795	43,503	59,068
	2002-2003	1,501	5,793	1,245	7,038	8,539	14,137	29,041	7,295	36,336	50,473	15,638	34,834	8,540	43,374	59,012
Phase III	2003-2004	1,505	5,717	1,417	7,134	8,639	14,769	31,427	8,179	39,606	54,375	16,274	37,144	9,596	46,740	63,014
	2004-2005	1,562	5,845	1,399	7,244	8,806	15,488	31,530	8,243	39,773	55,261	17,050	37,375	9,642	47,017	64,067
	2005-2006	1,732	6,211	1,345	7,556	9,288	16,366	32,714	8,137	40,851	57,217	18,098	38,925	9,482	48,407	66,505
	2006-2007	1,654	6,068	1,372	7,440	9,094	17,189	33,626	8,032	41,658	58,847	18,843	39,694	9,404	49,098	67,941
	2007-2008	1,874	6,504	1,271	7,775	9,649	18,510	35,410	7,625	43,035	61,545	20,384	41,914	8,896	50,810	71,194
Senior Level I	2008-2009	1,904	6,300	1,374	7,674	9,578	18,402	35,983	8,159	44,142	62,544	20,306	42,283	9,533	51,816	72,122
	2009-2010	1,849	5,948	2,039	7,987	9,836	17,759	34,102	11,219	45,321	63,080	19,608	40,050	13,258	53,308	72,916
	2010-2011	1,998	5,398	2,477	7,875	9,873	20,732	35,174	9,121	44,295	65,027	22,730	40,572	11,598	52,170	74,900
	2011-2012	2,426	6,837	1,379	8,216	10,642	21,723	34,121	7,079	41,200	62,923	24,149	40,958	8,458	49,416	73,565
	2012-2013	2,865	7,549	1,282	8,831	11,696	24,786	36,008	6,294	42,302	67,088	27,651	43,557	7,576	51,133	78,784
Senior Level II	2013-2014	3,455	8,157	1,204	9,361	12,816	27,340	36,066	5,665	41,731	69,071	30,795	44,223	6,869	51,092	81,887
	2014-2015	3,834	8,429	1,089	9,518	13,352	28,914	36,022	5,325	41,347	70,261	32,748	44,451	6,414	50,865	83,613
	2015-2016	4,532	8,881	969	9,850	14,382	32,647	36,538	4,692	41,230	73,877	37,179	45,419	5,661	51,080	88,259
Total	44,083	146,785	27,735	164,670	218,603	386,426	743,602	147,645	850,017	1,277,673	430,509	890,387	175,380	1,014,687	1,496,276	
Percent change	Phase I	50%	-6%	82%	1%	7%	31%	-19%	57%	-13%	-5%	33%	-17%	60%	-11%	-4%
	Phase II	2%	-1%	28%	3%	3%	23%	4%	40%	10%	13%	20%	3%	38%	9%	12%
	Phase III	25%	14%	-10%	9%	12%	25%	13%	-7%	9%	13%	25%	13%	-7%	9%	13%
	Senior Level	50%	20%	-7%	15%	22%	35%	0%	-23%	-4%	7%	36%	3%	-21%	-1%	9%
Percent change from the second year of Phase I to the first year of the Senior Level II	394%	40%	84%	43%	84%	299%	6%	57%	10%	62%	308%	11%	61%	15%	65%	

Data sources: CSU Analytic Studies Division ERS degree files, WebAMP Reverse Site Reports, and WebAMP ExACT Reports.

Note: Excludes degrees awarded to non-resident aliens. The percent change for each phase reflects changes from the first to last year of each phase.

Appendix Table 5: STEM Discipline Persistence Rates for CSU-LSAMP Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (1996-2014)

Cohort	Number matriculating	Number continuing or graduating in STEM major after:								STEM discipline persistence rate after:							
		1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs		
Latino CSU-LSAMP participants	1996	244	212	172	110	100	87	80	65	.869	.705	.451	.410	.357	.328	.266	
	1997	242	213	173	120	108	98	89	78	.880	.715	.496	.446	.405	.368	.322	
	1998	216	188	134	100	88	75	67	66	.870	.620	.463	.407	.347	.310	.306	
	1999	258	211	178	126	114	103	91	88	.818	.690	.488	.442	.399	.353	.341	
	2000	202	164	135	89	80	74	69	66	.812	.668	.441	.396	.366	.342	.327	
	2001	219	179	145	99	88	78	72	70	.817	.662	.452	.402	.356	.329	.320	
	2002	208	173	143	99	88	80	75	71	.832	.688	.476	.423	.385	.361	.341	
	2003	288	234	169	122	116	106	102	102	.813	.587	.424	.403	.368	.354	.354	
	2004	213	184	157	114	105	99	96	96	.864	.737	.535	.493	.465	.451	.451	
	2005	216	170	134	97	91	87	86	84	.787	.620	.449	.421	.403	.398	.389	
	2006	212	177	140	111	100	94	91	91	.835	.660	.524	.472	.443	.429	.429	
	2007	178	142	116	93	88	80	80	80	.798	.652	.522	.494	.449	.449	.449	
	2008	157	134	109	88	72	72	72	--	.854	.694	.561	.459	.459	.459	--	
	2009	167	145	125	75	75	75	--	--	.868	.749	.449	.449	.449	--	--	
	2010	176	151	136	108	104	--	--	--	.858	.773	.614	.591	--	--	--	
	2011	129	111	90	67	--	--	--	--	.860	.698	.519	--	--	--	--	
	2012	170	149	127	--	--	--	--	--	.876	.747	--	--	--	--	--	
	2013	187	179	161	--	--	--	--	--	.957	.861	--	--	--	--	--	
	2014	152	127	--	--	--	--	--	--	.836	--	--	--	--	--	--	
	Non-CSU-LSAMP participants (estimated) †	1996	825	533	350	220	185	171	--	--	.646	.424	.267	.224	.207	--	--
1997		873	591	386	232	185	168	--	--	.677	.442	.266	.212	.192	--	--	
1998		930	593	419	314	253	230	--	--	.638	.451	.338	.272	.247	--	--	
1999		1,046	649	448	284	253	234	--	--	.620	.428	.272	.242	.224	--	--	
2000		1,077	703	509	328	292	274	261	254	.653	.473	.305	.271	.254	.242	.236	
2001		1,155	714	496	291	231	220	215	211	.618	.429	.252	.200	.190	.186	.183	
2002		1,095	699	492	284	241	216	215	209	.638	.449	.259	.220	.197	.196	.191	
2003		1,219	791	554	331	286	270	265	271	.649	.454	.272	.235	.221	.217	.222	
2004		1,389	938	650	391	336	317	314	319	.675	.468	.281	.242	.228	.226	.230	
2005		1,684	1,080	756	477	441	411	391	391	.641	.449	.283	.262	.244	.232	.232	
2006		1,896	1,235	863	585	529	491	488	485	.651	.455	.309	.279	.259	.257	.256	
2007		2,225	1,436	991	650	582	552	544	526	.645	.445	.292	.262	.248	.244	.236	
2008		2,913	1,906	1,466	1,035	925	877	871	--	.654	.503	.355	.318	.301	.299	--	
2009		3,232	2,298	1,730	1,268	1,131	1,092	--	--	.711	.535	.392	.350	.338	--	--	
2010		3,576	2,533	1,900	1,362	1,222	--	--	--	.708	.531	.381	.342	--	--	--	
2011		4,475	3,186	2,324	1,693	--	--	--	--	.712	.519	.378	--	--	--	--	
2012	5,204	3,698	2,748	--	--	--	--	--	.711	.528	--	--	--	--	--		
2013	6,032	4,302	3,164	--	--	--	--	--	.713	.525	--	--	--	--	--		
2014	6,385	4,147	--	--	--	--	--	--	.649	--	--	--	--	--	--		

Appendix Table 5 (continued): STEM Discipline Persistence Rates for CSU-LSAMP Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (1996-2014)

	Cohort	Number matriculating	Number continuing or graduating in STEM major after:								STEM discipline persistence rate after:							
			1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs		
Latino	Benchmark	1996	1,069	745	522	330	285	258	--	--	.697	.488	.309	.267	.241	--	--	
		1997	1,115	804	559	352	293	266	--	--	.721	.501	.316	.263	.239	--	--	
		1998	1,146	781	553	414	341	305	--	--	.682	.483	.361	.298	.266	--	--	
		1999	1,304	860	626	410	367	337	--	--	.660	.480	.314	.281	.258	--	--	
		2000	1,279	867	644	417	372	348	330	320	.678	.504	.326	.291	.272	.258	.250	
		2001	1,374	893	641	390	319	298	287	281	.650	.467	.284	.232	.217	.209	.205	
		2002	1,303	872	635	383	329	296	290	280	.669	.487	.294	.252	.227	.223	.215	
		2003	1,507	1,025	723	453	402	376	367	373	.680	.480	.301	.267	.250	.244	.248	
		2004	1,602	1,122	807	505	441	416	410	415	.700	.504	.315	.275	.260	.256	.259	
		2005	1,900	1,122	807	505	441	416	410	415	.700	.504	.315	.275	.260	.256	.259	
		2006	2,108	1,250	890	574	532	498	477	475	.658	.468	.302	.280	.262	.251	.250	
		2007	2,403	1,412	1,003	696	629	585	579	576	.670	.476	.330	.298	.278	.275	.273	
		2008	3,070	1,578	1,107	743	670	632	624	606	.657	.461	.309	.279	.263	.260	.252	
		2009	3,399	2,040	1,575	1,123	997	949	943	--	.664	.513	.366	.325	.309	.307	--	
		2010	3,752	2,443	1,855	1,343	1,206	1,167	--	--	.719	.546	.395	.355	.343	--	--	
		2011	4,604	2,684	2,036	1,470	1,326	--	--	--	.715	.543	.392	.353	--	--	--	
		2012	5,374	3,297	2,414	1,760	--	--	--	--	.716	.524	.382	--	--	--	--	
		2013	6,219	3,847	2,875	--	--	--	--	--	.716	.535	--	--	--	--	--	
		2014	6,537	4,481	3,325	--	--	--	--	--	.721	.535	--	--	--	--	--	

* Note: STEM discipline persistence rates reflect the percent of a cohort remaining or graduating in a STEM major.

† We estimated the number of non-LSAMP participants by subtracting the number of students in the LSAMP participant cohort from the number of students in the corresponding benchmark cohort.

‡ We obtained benchmark cohort information from the California State University Data for the Consortium for Student Retention Data Exchange (CSRDE). Benchmark cohorts for 1996-2007 include all students in the specified category at the 19 CSU campuses participating in Phase III of the CSU-LSAMP program. The 2008-2012 benchmark cohorts include students at the 22 CSU campuses participating in Senior Level I CSU-LSAMP. Seventh and eighth year persistence data is not available for 1996-1999 benchmark cohorts.

Appendix Table 5 (continued): STEM Discipline Persistence Rates for CSU-LSAMP Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (1996-2014)

Cohort	Number matriculating	Number continuing or graduating in STEM major after:								STEM discipline persistence rate after:							
		1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs		
African American CSU-LSAMP participants	1996	53	44	31	13	9	8	7	4	.830	.585	.245	.170	.151	.132	.075	
	1997	66	54	45	18	14	14	13	11	.818	.682	.273	.212	.212	.197	.167	
	1998	62	45	33	16	13	13	13	12	.726	.532	.258	.210	.210	.210	.194	
	1999	82	68	54	36	30	28	26	24	.829	.659	.439	.366	.341	.317	.293	
	2000	47	38	27	16	15	13	13	12	.809	.574	.340	.319	.277	.277	.255	
	2001	68	50	35	24	20	18	14	14	.735	.515	.353	.294	.265	.206	.206	
	2002	62	46	37	24	19	15	15	14	.742	.597	.387	.306	.242	.242	.226	
	2003	64	50	32	17	13	10	10	10	.781	.500	.266	.203	.156	.156	.156	
	2004	55	46	31	20	18	16	15	15	.836	.564	.364	.327	.291	.273	.273	
	2005	63	54	33	26	20	19	18	16	.857	.524	.413	.317	.302	.286	.254	
	2006	55	43	33	21	21	18	14	14	.782	.600	.382	.382	.327	.255	.255	
	2007	33	25	22	14	13	10	10	10	.758	.667	.424	.394	.303	.303	.303	
	2008	35	26	21	16	13	13	13	--	.743	.600	.457	.371	.371	.371	--	
	2009	38	29	26	15	15	15	--	--	.763	.684	.395	.395	.395	--	--	
	2010	26	20	15	12	10	--	--	--	.769	.577	.462	.385	--	--	--	
2011	24	16	13	11	--	--	--	--	.667	.542	.458	--	--	--	--		
2012	25	24	21	--	--	--	--	--	.960	.840	--	--	--	--	--		
2013	28	25	22	--	--	--	--	--	.893	.786	--	--	--	--	--		
2014	14	12	--	--	--	--	--	--	.857	--	--	--	--	--	--		
Non-CSU-LSAMP participants (estimated) †	1996	339	220	126	59	53	48	--	--	.649	.372	.174	.156	.142	--	--	
	1997	327	192	132	50	35	28	--	--	.587	.404	.153	.107	.086	--	--	
	1998	313	188	126	70	61	55	--	--	.601	.403	.224	.195	.176	--	--	
	1999	307	185	124	71	58	46	--	--	.603	.404	.231	.189	.150	--	--	
	2000	339	205	130	64	47	41	43	45	.605	.383	.189	.139	.121	.127	.133	
	2001	342	175	118	62	48	45	39	41	.512	.345	.181	.140	.132	.114	.120	
	2002	328	192	126	75	63	56	55	55	.585	.384	.229	.192	.171	.168	.168	
	2003	330	185	117	64	53	53	48	47	.561	.355	.194	.161	.161	.145	.142	
	2004	357	223	158	83	68	63	52	50	.625	.443	.232	.190	.176	.146	.140	
	2005	466	289	186	96	88	73	63	68	.620	.399	.206	.189	.157	.135	.146	
	2006	473	279	183	108	86	78	77	77	.590	.387	.228	.182	.165	.163	.163	
	2007	513	300	188	94	72	68	68	65	.585	.366	.183	.140	.133	.133	.127	
	2008	570	330	233	130	106	100	94	--	.579	.409	.228	.186	.175	.165	--	
	2009	458	303	206	119	100	89	--	--	.662	.450	.260	.218	.194	--	--	
	2010	441	280	202	127	109	--	--	--	.635	.458	.288	.247	--	--	--	
2011	436	281	185	108	--	--	--	--	.644	.424	.248	--	--	--	--		
2012	553	333	246	--	--	--	--	--	.602	.445	--	--	--	--	--		
2013	591	391	277	--	--	--	--	--	.662	.469	--	--	--	--	--		
2014	520	347	--	--	--	--	--	--	.667	--	--	--	--	--	--		

Appendix Table 5 (continued): STEM Discipline Persistence Rates for CSU-LSAMP Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (1996-2014)

	Cohort	Number matriculating	Number continuing or graduating in STEM major after:								STEM discipline persistence rate after:							
			1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs		
African American	Benchmark	1996	392	264	157	72	62	56	--	--	.673	.401	.184	.158	.143	--	--	
		1997	393	246	177	68	49	42	--	--	.626	.450	.173	.125	.107	--	--	
		1998	375	233	159	86	74	68	--	--	.621	.424	.229	.197	.181	--	--	
		1999	389	253	178	107	88	74	--	--	.650	.458	.275	.226	.190	--	--	
		2000	386	243	157	80	62	54	56	57	.630	.407	.207	.161	.140	.145	.148	
		2001	410	225	153	86	68	63	53	55	.549	.373	.210	.166	.154	.129	.134	
		2002	390	238	163	99	82	71	70	69	.610	.418	.254	.210	.182	.179	.177	
		2003	394	235	149	81	66	63	58	57	.596	.378	.206	.168	.160	.147	.145	
		2004	412	269	189	103	86	79	67	65	.653	.459	.250	.209	.192	.163	.158	
		2005	529	343	219	122	108	92	81	84	.648	.414	.231	.204	.174	.153	.159	
		2006	528	322	216	129	107	96	91	91	.610	.409	.244	.203	.182	.172	.172	
		2007	546	325	210	108	85	78	78	75	.595	.385	.198	.156	.143	.143	.137	
		2008	605	356	254	146	119	113	107	--	.588	.420	.241	.197	.187	.177	--	
		2009	496	332	232	134	115	104	--	--	.669	.468	.270	.232	.210	--	--	
		2010	467	300	217	139	119	--	--	--	.642	.465	.298	.255	--	--	--	
		2011	460	297	198	119	--	--	--	--	.646	.430	.259	--	--	--	--	
	2012	578	357	267	--	--	--	--	--	.618	.462	--	--	--	--	--		
	2013	619	416	299	--	--	--	--	--	.672	.483	--	--	--	--	--		
	2014	534	359	--	--	--	--	--	--	.672	--	--	--	--	--	--		

Appendix Table 5 (continued): STEM Discipline Persistence Rates for CSU-LSAMP Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (1996-2014)

	Cohort	Number matriculating	Number continuing or graduating in STEM major after:								STEM discipline persistence rate after:							
			1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs		
n-URM benchmark‡	Asian or Pacific Islander	1996	1,340	1,010	769	528	451	401	--	--	.754	.574	.394	.337	.299	--	--	
		1997	1,669	1,271	925	623	507	453	--	--	.762	.554	.373	.304	.271	--	--	
		1998	1,832	1,380	1,018	728	596	526	--	--	.753	.556	.397	.325	.287	--	--	
		1999	2,059	1,482	1,123	833	680	603	--	--	.720	.545	.405	.330	.293	--	--	
		2000	2,146	1,514	1,181	760	670	620	606	597	.705	.550	.354	.312	.289	.282	.278	
		2001	2,165	1,527	1,143	750	636	589	574	565	.705	.528	.346	.294	.272	.265	.261	
		2002	1,805	1,319	976	679	613	570	552	550	.731	.541	.376	.340	.316	.306	.305	
		2003	1,679	1,175	864	587	530	500	488	484	.700	.515	.350	.316	.298	.291	.288	
		2004	1,704	1,259	937	674	614	588	586	575	.739	.550	.396	.360	.345	.344	.337	
		2005	1,894	1,382	1,054	772	702	664	652	652	.730	.556	.408	.371	.351	.344	.344	
		2006	1,913	1,365	1,050	770	689	661	657	654	.714	.549	.403	.360	.346	.343	.342	
		2007	2,006	1,466	1,152	898	823	783	779	777	.731	.574	.448	.410	.390	.388	.387	
		2008	2,434	1,790	1,461	1,171	1,082	1,024	1,023	--	--	.735	.600	.481	.445	.421	.420	--
		2009	2,257	1,787	1,492	1,172	1,073	1,048	--	--	--	.792	.661	.519	.475	.464	--	--
2010	2,382	1,890	1,525	1,211	1,133	--	--	--	--	.793	.640	.508	.476	--	--	--		
2011	3,019	2,445	1,940	1,583	--	--	--	--	--	.810	.643	.524	--	--	--	--		
2012	3,033	2,431	1,991	--	--	--	--	--	--	.802	.656	--	--	--	--	--		
2013	3,426	2,747	2,226	--	--	--	--	--	--	.802	.650	--	--	--	--	--		
2014	3,499	2,837	--	--	--	--	--	--	--	.811	--	--	--	--	--	--		
	White	1996	1,452	1,008	675	470	415	384	--	--	.694	.465	.324	.286	.264	--	--	
		1997	1,595	1,075	733	526	477	443	--	--	.674	.460	.330	.299	.278	--	--	
		1998	1,722	1,150	790	560	517	479	--	--	.668	.459	.325	.300	.278	--	--	
		1999	1,934	1,261	870	646	582	547	--	--	.652	.450	.334	.301	.283	--	--	
		2000	1,855	1,244	894	626	556	545	532	538	.671	.482	.337	.300	.294	.287	.290	
		2001	1,976	1,353	973	695	645	602	586	590	.685	.492	.352	.326	.305	.297	.299	
		2002	1,920	1,346	993	727	672	638	635	631	.701	.517	.379	.350	.332	.331	.329	
		2003	2,197	1,514	1,058	794	733	724	716	715	.689	.482	.361	.334	.330	.326	.325	
		2004	2,120	1,501	1,090	829	775	755	747	746	.708	.514	.391	.366	.356	.352	.352	
		2005	2,187	1,524	1,116	840	802	779	770	767	.697	.510	.384	.367	.356	.352	.351	
		2006	2,370	1,608	1,172	891	843	823	827	829	.678	.495	.376	.356	.347	.349	.350	
		2007	2,566	1,775	1,350	1,063	999	973	974	967	.692	.526	.414	.389	.379	.380	.377	
		2008	4,157	3,112	2,491	2,080	1,966	1,942	1,956	--	--	.749	.599	.500	.473	.467	.471	--
		2009	3,992	3,107	2,552	2,141	2,036	2,020	--	--	--	.778	.639	.536	.510	.506	--	--
2010	3,798	2,985	2,426	2,100	2,009	--	--	--	--	.786	.639	.553	.529	--	--	--		
2011	4,204	3,339	2,750	2,366	--	--	--	--	--	.794	.654	.563	--	--	--	--		
2012	4,014	3,229	2,635	--	--	--	--	--	--	.804	.656	--	--	--	--	--		
2013	4,649	3,675	3,053	--	--	--	--	--	--	.790	.657	--	--	--	--	--		
2014	4,520	3,644	--	--	--	--	--	--	--	.806	--	--	--	--	--	--		

Appendix Table 5 (continued): STEM Discipline Persistence Rates for CSU-LSAMP Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (1996-2014)

Cohort	Number matriculating	Number continuing or graduating in STEM major after:							STEM discipline persistence rate after:							
		1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	
Overall	1996	4,865	3,454	2,453	1,624	1,413	1,278	--	--	.710	.504	.334	.290	.263	--	--
	1997	5,484	3,899	2,748	1,810	1,533	1,395	--	--	.711	.501	.330	.280	.254	--	--
	1998	5,940	4,144	2,948	2,097	1,790	1,628	--	--	.698	.496	.353	.301	.274	--	--
	1999	6,606	4,484	3,266	2,317	1,998	1,822	--	--	.679	.494	.351	.302	.276	--	--
	2000	6,576	4,507	3,365	2,221	1,951	1,852	1,805	1,794	.685	.512	.338	.297	.282	.274	.273
	2001	6,896	4,664	3,419	2,287	1,996	1,868	1,811	1,793	.676	.496	.332	.289	.271	.263	.260
	2002	6,330	4,395	3,232	2,230	2,000	1,873	1,837	1,816	.694	.511	.352	.316	.296	.290	.287
	2003	6,585	4,513	3,208	2,202	1,983	1,905	1,867	1,868	.685	.487	.334	.301	.289	.284	.284
	2004	6,628	4,732	3,456	2,430	2,213	2,128	2,099	2,091	.714	.521	.367	.334	.321	.317	.315
	2005	7,351	5,096	3,714	2,641	2,442	2,310	2,252	2,254	.693	.505	.359	.332	.314	.306	.307
	2006	7,866	5,383	3,946	2,858	2,621	2,505	2,503	2,497	.684	.502	.363	.333	.318	.318	.317
	2007	8,659	5,924	4,418	3,287	3,028	2,907	2,891	2,867	.684	.510	.380	.350	.336	.334	.331
	2008	11,551	8,250	6,518	5,116	4,710	4,563	4,558	--	.714	.564	.443	.408	.395	.395	--
	2009	11,626	8,754	6,998	5,492	5,071	4,975	--	--	.753	.602	.472	.436	.428	--	--
	2010	11,797	8,920	7,049	5,588	5,226	--	--	--	.756	.598	.474	.443	--	--	--
	2011	13,877	10,594	8,292	6,620	--	--	--	--	.763	.598	.477	--	--	--	--
	2012	14,736	11,213	8,824	--	--	--	--	--	.761	.599	--	--	--	--	--
	2013	17,192	13,064	10,339	--	--	--	--	--	.760	.601	--	--	--	--	--
	2014	17,626	13,483	--	--	--	--	--	--	.765	--	--	--	--	--	--

Appendix Table 6: Estimated Percent of Benchmark Cohort Students Participating in CSU-LSAMP Program, (1996-2014)

	Cohort	Number of Students			Percent Distribution		
		CSU-LSAMP Participants	Non-CSU-LSAMP Participants*	Total	CSU-LSAMP Participants	Non-CSU-LSAMP Participants*	Total
Latino first-time freshmen with declared STEM majors on entry	1996	244	825	1,069	23%	77%	100%
	1997	242	873	1,115	22%	78%	100%
	1998	216	930	1,146	19%	81%	100%
	1999	258	1,046	1,304	20%	80%	100%
	2000	202	1,077	1,279	16%	84%	100%
	2001	219	1,155	1,374	16%	84%	100%
	2002	208	1,095	1,303	16%	84%	100%
	2003	288	1,219	1,507	19%	81%	100%
	2004	213	1,389	1,602	13%	87%	100%
	2005	216	1,684	1,900	11%	89%	100%
	2006	212	1,896	2,108	10%	90%	100%
	2007	178	2,225	2,403	7%	93%	100%
	2008	157	2,913	3,070	5%	95%	100%
	2009	167	3,232	3,399	5%	95%	100%
	2010	176	3,576	3,752	5%	95%	100%
2011	129	4,475	4,604	3%	97%	100%	
2012	170	5,204	5,374	3%	97%	100%	
2013	187	6,032	6,219	3%	97%	100%	
2014	152	6,385	6,537	2%	98%	100%	
African American first-time freshmen with declared STEM majors on entry	1996	53	339	392	14%	86%	100%
	1997	66	327	393	17%	83%	100%
	1998	62	313	375	17%	83%	100%
	1999	82	307	389	21%	79%	100%
	2000	47	339	386	12%	88%	100%
	2001	68	342	410	17%	83%	100%
	2002	62	328	390	16%	84%	100%
	2003	64	330	394	16%	84%	100%
	2004	55	357	412	13%	87%	100%
	2005	63	466	529	12%	88%	100%
	2006	55	473	528	10%	90%	100%
	2007	33	513	546	6%	94%	100%
	2008	35	570	605	6%	94%	100%
	2009	38	458	496	8%	92%	100%
	2010	26	441	467	6%	94%	100%
2011	24	436	460	5%	95%	100%	
2012	25	553	578	4%	96%	100%	
2013	28	591	619	5%	95%	100%	
2014	14	520	534	3%	97%	100%	

* We estimated the number of non-LSAMP students in a cohort by subtracting the number of students in the LSAMP participant cohort from the number of students in the corresponding benchmark cohort. We created the LSAMP participant cohorts by matching student SSN as entered into the WebAMP system to CSU system records. LSAMP participants with missing or incorrectly entered SSNs could not be included in a cohort. This difference would understate the estimated percent of a cohort participating in the LSAMP program.

Appendix Table 7: STEM Discipline Graduation Rates for CSU-LSAMP Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (1996-2011)

	Cohort	Number matriculating	Number graduating in a STEM major after:					STEM discipline graduation rate after:*						
			4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs		
Latino	CSU-LSAMP participants	1996	244	5	33	59	65	65	.020	.135	.242	.266	.266	
		1997	242	4	36	65	75	78	.017	.149	.269	.310	.322	
		1998	216	12	38	57	61	64	.056	.176	.264	.282	.296	
		1999	258	3	31	66	79	86	.012	.120	.256	.306	.333	
		2000	202	9	40	58	63	64	.045	.198	.287	.312	.317	
		2001	219	5	33	54	62	64	.023	.151	.247	.283	.292	
		2002	208	8	32	53	68	69	.038	.154	.255	.327	.332	
		2003	288	21	64	82	90	93	.073	.222	.285	.313	.323	
		2004	214	18	61	88	91	93	.084	.285	.411	.425	.435	
		2005	216	13	42	62	73	79	.060	.194	.287	.338	.366	
		2006	212	17	53	77	86	92	.080	.250	.363	.406	.434	
		2007	178	9	35	64	78	85	.051	.197	.360	.438	.478	
		2008	157	7	37	52	67	--	.045	.236	.331	.427	--	
		2009	167	5	31	63	--	--	.030	.186	.377	--	--	
		2010	176	21	59	--	--	--	.119	.335	--	--	--	
		2011	129	8	--	--	--	--	.062	--	--	--	--	
		Non-CSU-LSAMP participants (estimated) †	1996	825	6	27	75	--	--	.007	.033	.091	--	--
			1997	873	7	38	91	--	--	.008	.044	.104	--	--
			1998	930	12	74	130	--	--	.013	.080	.140	--	--
			1999	1,046	14	67	126	--	--	.013	.064	.120	--	--
2000	1,077		12	83	165	207	230	.011	.077	.153	.192	.214		
2001	1,155		13	76	131	165	187	.011	.066	.113	.143	.162		
2002	1,095		20	78	144	172	194	.018	.071	.132	.157	.177		
2003	1,219		21	112	189	227	250	.017	.092	.155	.186	.205		
2004	1,388		35	128	218	264	292	.025	.092	.157	.190	.210		
2005	1,684		35	153	261	320	353	.021	.091	.155	.190	.210		
2006	1,896		43	190	330	394	439	.023	.100	.174	.208	.232		
2007	2,225		36	196	338	421	467	.016	.088	.152	.189	.210		
Benchmark‡	1996	1,069	11	60	134	--	--	.010	.056	.125	--	--		
	1997	1,115	11	74	156	--	--	.010	.066	.140	--	--		
	1998	1,146	24	112	187	--	--	.021	.098	.163	--	--		
	1999	1,304	17	98	192	--	--	.013	.075	.147	--	--		
	2000	1,279	21	123	223	270	294	.016	.096	.174	.211	.230		
	2001	1,374	18	109	185	227	251	.013	.079	.135	.165	.183		
	2002	1,303	28	110	197	240	263	.021	.084	.151	.184	.202		
	2003	1,507	42	176	271	317	343	.028	.117	.180	.210	.228		
	2004	1,602	53	189	306	355	385	.033	.118	.191	.222	.240		
	2005	1,900	48	195	323	393	432	.025	.103	.170	.207	.227		

Appendix Table 7 (continued): STEM Discipline Graduation Rates for CSU-LSAMP Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (1996-2011)

		Cohort	Number matriculating	Number graduating in a STEM major after:					STEM discipline graduation rate after:*				
				4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs
African American	CSU-LSAMP participants	1996	53	1	2	2	4	4	.019	.038	.038	.075	.075
		1997	66	0	8	10	11	11	.000	.121	.152	.167	.167
		1998	62	0	2	6	8	11	.000	.032	.097	.129	.177
		1999	82	2	11	19	21	23	.024	.134	.232	.256	.280
		2000	47	1	7	10	11	11	.021	.149	.213	.234	.234
		2001	68	0	7	10	13	13	.000	.103	.147	.191	.191
		2002	62	1	7	10	12	13	.016	.113	.161	.194	.210
		2003	64	2	7	10	10	10	.031	.109	.156	.156	.156
		2004	55	1	11	14	15	15	.018	.200	.255	.273	.273
		2005	63	4	9	12	13	15	.063	.143	.190	.206	.238
		2006	55	1	5	8	10	13	.018	.091	.145	.182	.236
		2007	33	0	1	7	8	10	.000	.030	.212	.242	.303
2008	35	0	4	12	13	--	.000	.114	.343	.371	--		
2009	38	1	8	13	--	--	.026	.211	.342	--	--		
2010	26	5	7	--	--	--	.192	.269	--	--	--		
2011	24	2	--	--	--	--	.083	--	--	--	--		
Non-CSU-LSAMP participants (estimated) †	1996	339	0	4	13	--	--	.000	.012	.038	--	--	
	1997	327	1	2	11	--	--	.003	.006	.034	--	--	
	1998	313	5	16	32	--	--	.016	.051	.102	--	--	
	1999	307	1	9	19	--	--	.003	.029	.062	--	--	
	2000	339	2	9	24	32	36	.006	.027	.071	.094	.106	
	2001	342	1	8	20	26	34	.003	.023	.058	.076	.099	
	2002	328	6	22	36	44	52	.018	.067	.110	.134	.159	
	2003	330	4	20	36	41	43	.012	.061	.109	.124	.130	
	2004	357	9	20	33	41	46	.025	.056	.092	.115	.129	
	2005	466	2	29	43	54	57	.004	.062	.092	.116	.122	
	2006	473	6	33	54	64	72	.013	.070	.114	.135	.152	
	2007	513	4	21	41	54	57	.008	.041	.080	.105	.111	
2008	570	8	34	67	76	--	.014	.060	.118	.133	--		
2009	458	7	38	59	--	--	.015	.083	.129	--	--		
2010	441	6	50	--	--	--	.014	.113	--	--	--		
2011	436	9	--	--	--	--	.021	--	--	--	--		
Benchmark‡	1996	392	1	6	15	--	--	.003	.015	.038	--	--	
	1997	393	1	10	21	--	--	.003	.025	.053	--	--	
	1998	375	5	18	38	--	--	.013	.048	.101	--	--	
	1999	389	3	20	38	--	--	.008	.051	.098	--	--	
	2000	386	3	16	34	43	47	.008	.041	.088	.111	.122	
	2001	410	1	15	30	39	47	.002	.037	.073	.095	.115	
	2002	390	7	29	46	56	65	.018	.074	.118	.144	.167	
	2003	394	6	27	46	51	53	.015	.069	.117	.129	.135	
	2004	412	10	31	47	56	61	.024	.075	.114	.136	.148	
	2005	529	6	38	55	67	72	.011	.072	.104	.127	.136	
	2006	528	7	38	62	74	85	.013	.072	.117	.140	.161	
	2007	546	4	22	48	62	67	.007	.040	.088	.114	.123	
2008	605	8	38	79	89	--	.013	.063	.131	.147	--		
2009	496	8	46	72	--	--	.016	.093	.145	--	--		
2010	467	11	57	--	--	--	.024	.122	--	--	--		
2011	460	11	--	--	--	--	.024	--	--	--	--		

Appendix Table 7 (continued): STEM Discipline Graduation Rates for CSU-LSAMP Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (1996-2011)

			Number matriculating	Number graduating in a STEM major after:					STEM discipline graduation rate after:*				
				4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs
Non-URM benchmark‡	Asian or Pacific Islander	1996	1,340	34	171	258	--	--	.025	.128	.193	--	--
		1997	1,669	45	177	301	--	--	.027	.106	.180	--	--
		1998	1,832	75	234	373	--	--	.041	.128	.204	--	--
		1999	2,059	88	262	425	--	--	.043	.127	.206	--	--
		2000	2,146	79	273	460	533	569	.037	.127	.214	.248	.265
		2001	2,165	61	235	409	488	521	.028	.109	.189	.225	.241
		2002	1,805	78	274	421	491	519	.043	.152	.233	.272	.288
		2003	1,679	65	245	376	434	459	.039	.146	.224	.258	.273
		2004	1,704	87	307	460	522	545	.051	.180	.270	.306	.320
		2005	1,894	82	302	492	579	611	.043	.159	.260	.306	.323
		2006	1,913	72	316	479	576	624	.038	.165	.250	.301	.326
		2007	2,006	79	355	601	710	745	.039	.177	.300	.301	.371
2008	2,434	152	534	824	949	--	.062	.219	.339	.301	--		
2009	2,257	179	628	890	--	--	.079	.278	.394	--	--		
2010	2,382	191	678	--	--	--	.080	.285	--	--	--		
2011	3,019	303	--	--	--	--	.100	--	--	--	--		
White		1996	1,452	51	208	296	--	--	.035	.143	.204	--	--
		1997	1,595	65	252	343	--	--	.041	.158	.215	--	--
		1998	1,722	95	283	388	--	--	.055	.164	.225	--	--
		1999	1,934	96	324	455	--	--	.050	.168	.235	--	--
		2000	1,855	88	325	445	499	520	.047	.175	.240	.269	.280
		2001	1,976	109	353	478	536	560	.055	.179	.242	.225	.283
		2002	1,920	122	382	544	589	611	.064	.199	.283	.272	.318
		2003	2,197	143	446	606	670	692	.065	.203	.276	.258	.315
		2004	2,120	165	476	643	700	724	.078	.225	.303	.306	.342
		2005	2,187	175	493	651	717	744	.080	.225	.298	.306	.340
		2006	2,370	136	507	699	777	802	.057	.214	.295	.301	.338
		2007	2,566	183	619	841	915	940	.071	.241	.328	.301	.366
2008	4,157	503	1,454	1,773	1,896	--	.121	.350	.427	.301	--		
2009	3,992	586	1,559	1,864	--	--	.147	.391	.467	--	--		
2010	3,798	651	1,587	--	--	--	.171	.418	--	--	--		
2011	4,204	760	--	--	--	--	.181	--	--	--	--		
Overall benchmark‡		1996	4,865	127	528	827	--	--	.026	.109	.170	--	--
		1997	5,484	154	614	968	--	--	.028	.112	.177	--	--
		1998	5,940	236	774	1,169	--	--	.040	.130	.197	--	--
		1999	6,606	249	846	1,305	--	--	.038	.128	.198	--	--
		2000	6,576	245	897	1,391	1,601	1,696	.037	.136	.212	.243	.258
		2001	6,896	251	900	1,358	1,570	1,669	.036	.131	.197	.225	.242
		2002	6,330	279	956	1,434	1,634	1,734	.044	.151	.227	.272	.274
		2003	6,585	309	1,032	1,503	1,694	1,777	.047	.157	.228	.258	.270
		2004	6,628	371	1,184	1,702	1,894	1,988	.056	.179	.257	.306	.300
		2005	7,351	364	1,189	1,736	2,006	2,121	.050	.162	.236	.306	.289
		2006	7,866	337	1,315	1,928	2,223	2,372	.043	.167	.245	.301	.302
		2007	8,659	386	1,465	2,248	2,596	2,726	.045	.169	.260	.301	.315
2008	11,551	868	2,783	3,827	4,258	--	.075	.241	.331	.301	--		
2009	11,626	1,014	3,209	4,273	--	--	.087	.276	.368	--	--		
2010	11,797	1,181	3,402	--	--	--	.100	.288	--	--	--		
2011	13,877	1,498	--	--	--	--	.108	--	--	--	--		

* Note: STEM discipline graduation rates reflect the percent of a cohort graduating in a STEM major.

† We estimated the number of non-LSAMP participants by subtracting the number of students in the LSAMP participant cohort from the number of students in the corresponding benchmark cohort.

‡ We obtained benchmark cohort information from the California State University Data for the Consortium for Student Retention Data Exchange (CSRDE). Benchmark cohorts for 1996-2007 include all students in the specified category at the 19 CSU campuses participating in Phase III of the CSU-LSAMP program. The 2008-2012 benchmark cohorts include students at the 22 CSU campuses participating in Senior Level I CSU-LSAMP. Seventh and eighth year graduation data is not available for 1996-1999 benchmark cohorts.

Appendix Table 8: Persistence Rates for CSU-LSAMP CCCT Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (2003-2014)

	Cohort	Year	Number matriculating	Number continuing or graduating in any major after:								Persistence rate after:							
				1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs		
Latino	CSU-LSAMP participants	2003	174	148	137	114	110	108	105	104	.851	.787	.655	.632	.621	.603	.598		
		2004	156	139	124	110	102	100	100	100	.891	.795	.705	.654	.641	.641	.641		
		2005	188	162	145	121	117	117	117	117	.862	.771	.644	.622	.622	.622	.622		
		2006	154	134	120	93	90	89	86	86	.870	.779	.604	.584	.578	.558	.558		
		2007	125	110	100	88	85	83	82	82	.880	.800	.704	.680	.664	.656	.656		
		2008	121	110	102	87	70	69	69	--	.909	.843	.719	.579	.570	.570	--		
		2009	126	113	103	56	51	51	--	--	.897	.817	.444	.405	.405	--	--		
		2010	158	144	138	120	116	--	--	--	.911	.873	.759	.734	--	--	--		
		2011	172	158	150	136	--	--	--	--	.919	.872	.791	--	--	--	--		
		2012	151	139	133	--	--	--	--	--	.921	.881	--	--	--	--	--		
		2013	142	135	131	--	--	--	--	--	.951	.923	--	--	--	--	--		
		2014	135	127	--	--	--	--	--	--	.941	--	--	--	--	--	--		
		Non-CSU-LSAMP participants (estimated) †	2003	6,824	5,695	5,132	4,904	4,936	4,952	4,983	5,019	.835	.752	.719	.723	.726	.730	.735	
			2004	7,458	6,165	5,609	5,395	5,418	5,458	5,496	5,527	.827	.752	.723	.726	.732	.737	.741	
2005	7,684		6,325	5,767	5,406	5,496	5,536	5,582	5,622	.823	.751	.704	.715	.720	.726	.732			
2006	8,184		6,803	6,141	5,786	5,864	5,906	5,984	6,009	.831	.750	.707	.717	.722	.731	.734			
2007	8,518		7,064	6,313	6,117	6,164	6,226	6,279	6,297	.829	.741	.718	.724	.731	.737	.739			
2008	7,879		6,490	6,010	5,777	5,874	5,931	5,979	--	.824	.763	.733	.746	.753	.759	--			
2009	9,396		7,933	7,306	7,057	7,157	7,214	--	--	.844	.778	.751	.762	.768	--	--			
2010	10,932		9,393	8,757	8,497	8,567	--	--	--	.859	.801	.777	.784	--	--	--			
2011	11,319		9,678	9,066	8,793	--	--	--	--	.855	.801	.777	--	--	--	--			
2012	12,912		11,147	10,527	--	--	--	--	--	.863	.815	--	--	--	--	--			
2013	16,393		14,300	13,444	--	--	--	--	--	.872	.820	--	--	--	--	--			
2014	17,343		15,114	--	--	--	--	--	--	.871	--	--	--	--	--	--			
Benchmark‡	2003	6,998	5,843	5,269	5,018	5,046	5,060	5,088	5,123	.835	.753	.717	.721	.723	.727	.732			
	2004	7,614	6,304	5,733	5,505	5,520	5,558	5,596	5,627	.828	.753	.723	.725	.730	.735	.739			
	2005	7,872	6,487	5,912	5,527	5,613	5,653	5,699	5,739	.824	.751	.702	.713	.718	.724	.729			
	2006	8,338	6,937	6,261	5,879	5,954	5,995	6,070	6,095	.832	.751	.705	.714	.719	.728	.731			
	2007	8,643	7,174	6,413	6,205	6,249	6,309	6,361	6,379	.830	.742	.718	.723	.730	.736	.738			
	2008	8,000	6,600	6,112	5,864	5,944	6,000	6,048	--	.825	.764	.733	.743	.750	.756	--			
	2009	9,522	8,046	7,409	7,113	7,208	7,265	--	--	.845	.778	.747	.757	.763	--	--			
	2010	11,090	9,537	8,895	8,617	8,683	--	--	--	.860	.802	.777	.783	--	--	--			
	2011	11,491	9,836	9,216	8,929	--	--	--	--	.856	.802	.777	--	--	--	--			
	2012	13,063	11,286	10,660	--	--	--	--	--	.864	.816	--	--	--	--	--			
	2013	16,535	14,435	13,575	--	--	--	--	--	.873	.821	--	--	--	--	--			
	2014	17,478	15,241	--	--	--	--	--	--	.872	--	--	--	--	--	--			

* Note: STEM discipline persistence rates reflect the percent of a cohort remaining or graduating in any major.

† We estimated the number of non-LSAMP participants by subtracting the number of students in the LSAMP participant cohort from the number of students in the corresponding benchmark cohort.

‡ We obtained benchmark cohort information from the California State University Data for the Consortium for Student Retention Data Exchange (CSRDE).

Appendix Table 8 (continued) : Persistence Rates for CSU-LSAMP CCCT Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (2003-2014)

	Cohort	Year	Number matriculating	Number continuing or graduating in any major after:								Persistence rate after:							
				1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs		
African American	CSU-LSAMP participants	2003	48	47	42	33	32	32	32	32	.979	.875	.688	.667	.667	.667	.667		
		2004	46	42	38	30	29	28	28	28	.913	.826	.652	.630	.609	.609	.609		
		2005	44	37	33	29	26	25	23	23	.841	.750	.659	.591	.568	.523	.523		
		2006	44	38	35	27	26	25	24	24	.864	.795	.614	.591	.568	.545	.545		
		2007	27	23	21	20	19	19	18	18	.852	.778	.741	.704	.704	.667	.667		
		2008	31	26	20	16	15	13	13	--	.839	.645	.516	.484	.419	.419	--		
		2009	30	26	24	15	11	11	--	--	.867	.800	.500	.367	.367	--	--		
		2010	21	19	18	14	14	--	--	--	.905	.857	.667	.667	--	--	--		
		2011	36	32	29	27	--	--	--	--	.889	.806	.750	--	--	--	--		
		2012	26	24	20	--	--	--	--	--	.923	.769	--	--	--	--	--		
		2013	32	29	28	--	--	--	--	--	.906	.875	--	--	--	--	--		
		2014	23	21	--	--	--	--	--	--	.913	--	--	--	--	--	--		
Non-CSU-LSAMP participants (estimated) †	2003	1,466	1,167	1,013	942	960	960	961	969	.796	.691	.643	.655	.655	.656	.661			
	2004	1,566	1,220	1,084	992	988	989	999	1,006	.779	.692	.633	.631	.632	.638	.642			
	2005	1,786	1,398	1,195	1,117	1,110	1,124	1,135	1,149	.783	.669	.625	.622	.629	.635	.643			
	2006	1,848	1,440	1,251	1,131	1,155	1,155	1,164	1,168	.779	.677	.612	.625	.625	.630	.632			
	2007	1,867	1,409	1,234	1,117	1,111	1,128	1,138	1,145	.755	.661	.598	.595	.604	.610	.613			
	2008	1,735	1,362	1,163	1,088	1,085	1,107	1,111	--	.785	.670	.627	.625	.638	.640	--			
	2009	1,659	1,303	1,180	1,082	1,097	1,109	--	--	.785	.712	.652	.661	.668	--	--			
	2010	1,482	1,241	1,162	1,079	1,077	--	--	--	.837	.784	.728	.727	--	--	--			
	2011	1,533	1,253	1,120	1,070	--	--	--	--	.817	.730	.698	--	--	--	--			
	2012	1,603	1,322	1,199	--	--	--	--	--	.825	.748	--	--	--	--	--			
	2013	1,932	1,623	1,476	--	--	--	--	--	.840	.764	--	--	--	--	--			
	2014	1,889	1,560	--	--	--	--	--	--	.826	--	--	--	--	--	--			
Benchmark	2003	1,514	1,214	1,055	975	992	992	993	1,001	.802	.697	.644	.655	.655	.656	.661			
	2004	1,612	1,262	1,122	1,022	1,017	1,017	1,027	1,034	.783	.696	.634	.631	.631	.637	.641			
	2005	1,830	1,435	1,228	1,146	1,136	1,149	1,158	1,172	.784	.671	.626	.621	.628	.633	.640			
	2006	1,892	1,478	1,286	1,158	1,181	1,180	1,188	1,192	.781	.680	.612	.624	.624	.628	.630			
	2007	1,894	1,432	1,255	1,137	1,130	1,147	1,156	1,163	.756	.663	.600	.597	.606	.610	.614			
	2008	1,766	1,388	1,183	1,104	1,100	1,120	1,124	--	.786	.670	.625	.623	.634	.636	--			
	2009	1,689	1,329	1,204	1,097	1,108	1,120	--	--	.787	.713	.649	.656	.663	--	--			
	2010	1,503	1,260	1,180	1,093	1,091	--	--	--	.838	.785	.727	.726	--	--	--			
	2011	1,569	1,285	1,149	1,097	--	--	--	--	.819	.732	.699	--	--	--	--			
	2012	1,629	1,346	1,219	--	--	--	--	--	.826	.748	--	--	--	--	--			
	2013	1,964	1,652	1,504	--	--	--	--	--	.841	.766	--	--	--	--	--			
	2014	1,912	1,581	--	--	--	--	--	--	.827	--	--	--	--	--	--			

Appendix Table 8 (continued) : Persistence Rates for CSU-LSAMP CCCT Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (2003-2014)

	Cohort	Year	Number matriculating	Number continuing or graduating in any major after:								Persistence rate after:							
				1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	1 yr	2 yr	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs		
Non-URM benchmark‡	Asian or Pacific Islander	2003	4,868	3,972	3,597	3,349	3,344	3,393	3,403	3,427	.816	.739	.688	.687	.697	.699	.704		
		2004	5,429	4,550	4,039	3,865	3,903	3,925	3,947	3,964	.838	.744	.712	.719	.723	.727	.730		
		2005	5,554	4,610	4,171	3,949	3,966	3,999	4,033	4,055	.830	.751	.711	.714	.720	.726	.730		
		2006	5,786	4,791	4,345	4,102	4,143	4,171	4,195	4,206	.828	.751	.709	.716	.721	.725	.727		
		2007	5,801	4,815	4,287	4,113	4,160	4,189	4,223	4,223	.830	.739	.709	.717	.722	.728	.728		
		2008	5,434	4,565	4,212	4,092	4,108	4,124	4,136	--	.840	.775	.753	.756	.759	.761	--		
		2009	5,170	4,410	4,095	3,914	3,950	3,976	--	--	.853	.792	.757	.764	.769	--	--		
		2010	6,259	5,351	4,975	4,851	4,876	--	--	--	.855	.795	.775	.779	--	--	--		
		2011	5,985	5,177	4,866	4,752	--	--	--	--	.865	.813	.794	--	--	--	--		
		2012	6,689	5,753	5,439	--	--	--	--	--	.860	.813	--	--	--	--	--		
		2013	8,127	7,087	6,689	--	--	--	--	--	.872	.823	--	--	--	--	--		
		2014	7,313	6,355	--	--	--	--	--	--	.869	--	--	--	--	--	--		
		White	2003	12,193	10,230	9,364	9,059	9,133	9,157	9,206	9,254	.839	.768	.743	.749	.751	.755	.759	
			2004	12,336	10,350	9,511	9,289	9,326	9,351	9,387	9,437	.839	.771	.753	.756	.758	.761	.765	
2005	12,538		10,482	9,667	9,328	9,379	9,428	9,479	9,504	.836	.771	.744	.748	.752	.756	.758			
2006	13,560		11,350	10,428	10,075	10,170	10,224	10,278	10,333	.837	.769	.743	.750	.754	.758	.762			
2007	13,375		11,195	10,285	9,964	10,005	10,045	10,111	10,138	.837	.769	.745	.748	.751	.756	.758			
2008	12,203		10,360	9,592	9,384	9,445	9,482	9,543	--	.849	.786	.769	.774	.777	.782	--			
2009	11,914		10,318	9,578	9,388	9,436	9,495	--	--	.866	.804	.788	.792	.797	--	--			
2010	13,261		11,603	10,940	10,715	10,754	--	--	--	.875	.825	.808	.811	--	--	--			
2011	12,623		11,020	10,364	10,137	--	--	--	--	.873	.821	.803	--	--	--	--			
2012	13,138		11,522	10,852	--	--	--	--	--	.877	.826	--	--	--	--	--			
2013	14,420		12,632	11,969	--	--	--	--	--	.876	.830	--	--	--	--	--			
2014	13,281		11,740	--	--	--	--	--	--	.884	--	--	--	--	--	--			
Overall benchmark‡	2003		32,199	26,854	24,375	23,280	23,409	23,537	23,634	23,795	.834	.757	.723	.727	.731	.734	.739		
	2004		33,273	27,716	25,221	24,322	24,456	24,588	24,721	24,855	.833	.758	.731	.735	.739	.743	.747		
	2005	33,742	28,006	25,542	24,294	24,463	24,632	24,801	24,901	.830	.757	.720	.725	.730	.735	.738			
	2006	35,652	29,627	26,953	25,634	25,919	26,062	26,240	26,347	.831	.756	.719	.727	.731	.736	.739			
	2007	35,860	29,728	26,860	25,891	26,106	26,249	26,465	26,500	.829	.749	.722	.728	.732	.738	.739			
	2008	32,848	27,461	25,228	24,472	24,668	24,833	24,965	--	.836	.768	.745	.751	.756	.760	--			
	2009	35,288	29,960	27,666	26,784	26,995	27,172	--	--	.849	.784	.759	.765	.770	--	--			
	2010	39,046	33,658	31,549	30,729	30,885	--	--	--	.862	.808	.787	.791	--	--	--			
	2011	37,774	32,486	30,484	29,690	--	--	--	--	.860	.807	.786	--	--	--	--			
	2012	41,072	35,445	33,350	--	--	--	--	--	.863	.812	--	--	--	--	--			
	2013	48,614	42,294	39,766	--	--	--	--	--	.870	.818	--	--	--	--	--			
	2014	47,332	41,274	--	--	--	--	--	--	.872	--	--	--	--	--	--			

Appendix Table 9: Graduation Rates for CSU-LSAMP CCCT Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (2003-2011)

		Cohort	Number matriculating	Number graduating in any major after:					Graduation rate after:*					
				4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	
Latino	CSU-LSAMP participants	2003	174	99	108	111	111	112	.569	.621	.638	.638	.644	
		2004	156	92	100	113	107	116	.590	.641	.724	.686	.744	
		2005	188	120	128	140	138	145	.638	.681	.745	.734	.771	
		2006	154	82	100	104	110	110	.532	.649	.675	.714	.714	
		2007	125	82	91	95	96	97	.656	.728	.760	.768	.776	
		2008	121	74	84	93	94	--	.612	.694	.769	.777	--	
		2009	126	73	91	90	--	--	.579	.722	.714	--	--	
		2010	158	108	119	--	--	--	.684	.753	--	--	--	
		2011	172	127	--	--	--	--	.738	--	--	--	--	
		Non-CSU-LSAMP participants (estimated) †	2003	6,824	4,261	4,630	4,781	4,886	4,948	.624	.678	.701	.716	.725
	2004		7,458	4,735	5,108	5,285	5,390	5,442	.635	.685	.709	.723	.730	
	2005		7,684	4,761	5,209	5,363	5,459	5,523	.620	.678	.698	.710	.719	
	2006		8,184	5,088	5,545	5,733	5,843	5,918	.622	.678	.701	.714	.723	
	2007		8,518	5,354	5,821	6,067	6,179	6,221	.629	.683	.712	.725	.730	
	2008		7,879	5,102	5,556	5,747	5,858	--	.648	.705	.729	.743	--	
	2009		9,396	6,316	6,812	7,042	--	--	.672	.725	.749	--	--	
	2010		10,932	7,810	8,816	--	--	--	.714	.806	--	--	--	
	2011		11,319	8,124	--	--	--	--	.718	--	--	--	--	
	Benchmark		2003	6,998	4,360	4,738	4,892	4,997	5,060	.623	.677	.699	.714	.723
		2004	7,614	4,827	5,208	5,398	5,497	5,558	.634	.684	.709	.722	.730	
		2005	7,872	4,881	5,337	5,503	5,597	5,668	.620	.678	.699	.711	.720	
		2006	8,338	5,170	5,645	5,837	5,953	6,028	.620	.677	.700	.714	.723	
		2007	8,643	5,436	5,912	6,162	6,275	6,318	.629	.684	.713	.726	.731	
		2008	8,000	5,176	5,640	5,840	5,952	--	.647	.705	.730	.744	--	
		2009	9,522	6,389	6,903	7,132	--	--	.671	.725	.749	--	--	
		2010	11,090	7,918	8,935	--	--	--	.714	.806	--	--	--	
		2011	11,491	8,251	--	--	--	--	.718	--	--	--	--	
		African American	CSU-LSAMP participants	2003	48	31	35	33	36	35	.646	.729	.688	.750
	2004			46	25	30	31	32	32	.543	.652	.674	.696	.696
	2005			44	19	23	23	23	23	.432	.523	.523	.523	.523
2006	44			23	25	28	29	29	.523	.568	.636	.659	.659	
2007	27			16	19	19	19	19	.593	.704	.704	.704	.704	
2008	31			16	16	19	19	--	.516	.516	.613	.613	--	
2009	30			17	20	23	--	--	.567	.667	.767	--	--	
2010	21			14	14	--	--	--	.667	.667	--	--	--	
2011	36			23	--	--	--	--	.639	--	--	--	--	
Non-CSU-LSAMP participants (estimated) †	2003			1,466	790	867	904	931	946	.539	.591	.617	.635	.645
	2004		1,566	857	931	960	980	992	.547	.595	.613	.626	.633	
	2005		1,786	944	1,040	1,088	1,115	1,134	.529	.582	.609	.624	.635	
	2006		1,848	957	1,067	1,105	1,133	1,142	.518	.577	.598	.613	.618	
	2007		1,867	937	1,028	1,081	1,112	1,125	.502	.551	.579	.596	.603	
	2008		1,735	927	1,019	1,064	1,087	--	.534	.587	.613	.627	--	
	2009		1,659	936	1,032	1,060	--	--	.564	.622	.639	--	--	
	2010		1,482	972	1,032	--	--	--	.656	.696	--	--	--	
	2011		1,533	970	--	--	--	--	.633	--	--	--	--	
	Benchmark		2003	1,514	821	902	937	967	981	.542	.596	.619	.639	.648
2004			1,612	882	961	991	1,012	1,024	.547	.596	.615	.628	.635	
2005			1,830	963	1,063	1,111	1,138	1,157	.526	.581	.607	.622	.632	
2006			1,892	980	1,092	1,133	1,162	1,171	.518	.577	.599	.614	.619	
2007			1,894	953	1,047	1,100	1,131	1,144	.503	.553	.581	.597	.604	
2008			1,766	943	1,035	1,083	1,106	--	.534	.586	.613	.626	--	
2009			1,689	953	1,052	1,083	--	--	.564	.623	.641	--	--	
2010			1,503	986	1,046	--	--	--	.656	.696	--	--	--	
2011			1,569	993	--	--	--	--	.633	--	--	--	--	

Appendix Table 9 (continued) : Graduation Rates for CSU-LSAMP CCCT Participant Cohorts, Non-LSAMP, and Benchmark Cohorts (2003-2011)

	Cohort	Number matriculating	Number graduating in any major after:					Graduation rate after:*						
			4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs		
Non-URM benchmark‡	Asian or Pacific Islander	2003	4,868	2,911	3,154	3,276	3,354	3,393	.598	.648	.673	.689	.697	
		2004	5,429	3,420	3,713	3,827	3,893	3,931	.630	.684	.705	.717	.724	
		2005	5,554	3,488	3,788	3,910	3,977	4,016	.628	.682	.704	.716	.723	
		2006	5,786	3,610	3,923	4,073	4,154	4,183	.624	.678	.704	.718	.723	
		2007	5,801	3,637	3,945	4,090	4,171	4,200	.627	.680	.705	.719	.724	
		2008	5,434	3,652	3,929	4,059	4,103	--	.672	.723	.747	.755	--	
		2009	5,170	3,516	3,805	3,898	--	--	.680	.736	.754	--	--	
		2010	6,259	4,425	4,732	--	--	--	.707	.756	--	--	--	
		2011	5,985	4,345	--	--	--	--	.726	--	--	--	--	
		White	2003	12,193	8,291	8,791	8,986	9,108	9,194	.680	.721	.737	.747	.754
			2004	12,336	8,524	9,005	9,203	9,301	9,375	.691	.730	.746	.754	.760
2005	12,538		8,563	9,078	9,278	9,391	9,454	.683	.724	.740	.749	.754		
2006	13,560		9,275	9,831	10,075	10,197	10,265	.684	.725	.743	.752	.757		
2007	13,375		9,135	9,684	9,911	10,031	10,098	.683	.724	.741	.750	.755		
2008	12,203		8,640	9,164	9,372	9,482	--	.708	.751	.768	.777	--		
2009	11,914		8,757	9,210	9,376	--	--	.735	.773	.787	--	--		
2010	13,261		10,052	10,489	--	--	--	.758	.791	--	--	--		
2011	12,623		9,518	--	--	--	--	.754	--	--	--	--		
Overall benchmark†	2003		32,199	20,736	22,250	22,926	23,312	23,570	.644	.691	.712	.724	.732	
	2004		33,273	21,860	23,391	24,056	24,422	24,655	.657	.703	.723	.734	.741	
	2005	33,742	21,831	23,451	24,126	24,497	24,699	.647	.695	.715	.726	.732		
	2006	35,652	23,031	24,742	25,527	25,919	26,133	.646	.694	.716	.727	.733		
	2007	35,860	23,166	24,923	25,747	26,142	26,321	.646	.695	.718	.729	.734		
	2008	32,848	22,074	23,683	24,373	24,702	--	.672	.721	.742	.752	--		
	2009	35,288	24,455	26,078	26,713	--	--	.693	.739	.757	--	--		
	2010	39,046	28,425	29,948	--	--	--	.728	.767	--	--	--		
	2011	37,774	27,537	--	--	--	--	.729	--	--	--	--		

* Note: Graduation rates reflect the percent of a cohort graduating in any major.

† We estimated the number of non-LSAMP participants by subtracting the number of students in the LSAMP participant cohort from the number of students in the corresponding benchmark cohort.

‡ We obtained benchmark cohort information from the California State University Data for the Consortium for Student Retention Data Exchange (CSRDE).

Appendix Table 10: Results of Attempt to Retrieve CSU-ERS and/or NSC Enrollment and Graduation Records for CSU-LSAMP Participants, 1994-2016

		Entered CSU-LSAMP during:					Total
		Phase I 1994-1998	Phase II 1999-2003	Phase III 2004-2008	Senior level I 2009-2013	Senior level II 2014-2016	
Number	Data retrieved	3,746	5,778	4,421	3,854	2,738	20,537
	Data not retrieved	887	1,649	1,365	449	245	4,595
	Total	4,633	7,427	5,786	4,303	2,983	25,132
Percent	Data retrieved	80.9%	77.8%	76.4%	89.6%	91.8%	81.7%
	Data not retrieved	19.1%	22.2%	23.6%	10.4%	8.2%	18.3%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Appendix Table 11: Baccalaureate Degree Attainment, CSU-LSAMP Participants by Entry Phase, 1994-2016

			Entered CSU-LSAMP during:					Total
			Phase I 1994- 1998	Phase II 1999- 2003	Phase III 2004- 2008	Senior Level I 2009- 2013	Senior Level II 2014- 2016	
Number	URM	STEM degree	1,372	1,645	2,154	1,880	521	7,572
		Non-STEM degree	767	1,098	877	262	35	3,039
		Currently enrolled	137	401	1,013	960	1,616	4,127
		No degree, not currently enrolled	1,182	941	195	13	3	2,334
		Total	3,458	4,085	4,239	3,115	2,175	17,072
	Non-URM	STEM degree	124	661	116	443	187	1,531
		Non-STEM degree	50	321	23	40	12	446
		Currently enrolled	2	58	30	97	318	505
		No degree, not currently enrolled	62	261	2	2	1	328
		Total	238	1,301	171	582	518	2,810
	Not reported	STEM degree	24	212	9	91	16	352
		Non-STEM degree	9	97	0	26	2	134
		Currently enrolled	1	13	2	37	27	80
		No degree, not currently enrolled	16	70	0	3	0	89
		Total	50	392	11	157	45	655
	Total	STEM degree	1,520	2,518	2,279	2,414	724	9,455
		Non-STEM degree	826	1,516	900	328	49	3,619
		Currently enrolled	140	472	1,045	1,094	1,961	4,712
		No degree, not currently enrolled	1,260	1,272	197	18	4	2,751
		Total	3,746	5,778	4,421	3,854	2,738	20,537
Percent	URM	STEM degree	39.7%	40.3%	50.8%	60.4%	24.0%	44.4%
		Non-STEM degree	22.2%	26.9%	20.7%	8.4%	1.6%	17.8%
		Currently enrolled	4.0%	9.8%	23.9%	30.8%	74.3%	24.2%
		No degree, not currently enrolled	34.2%	23.0%	4.6%	0.4%	0.1%	13.7%
		Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Non-URM	STEM degree	52.1%	50.8%	67.8%	76.1%	36.1%	54.5%
		Non-STEM degree	21.0%	24.7%	13.5%	6.9%	2.3%	15.9%
		Currently enrolled	0.8%	4.5%	17.5%	16.7%	61.4%	18.0%
		No degree, not currently enrolled	26.1%	20.1%	1.2%	0.3%	0.2%	11.7%
		Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Not reported	STEM degree	48.0%	54.1%	81.8%	58.0%	35.6%	53.7%
		Non-STEM degree	18.0%	24.7%	0.0%	16.6%	4.4%	20.5%
		Currently enrolled	2.0%	3.3%	18.2%	23.6%	60.0%	12.2%
		No degree, not currently enrolled	32.0%	17.9%	0.0%	1.9%	0.0%	13.6%
		Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Total	STEM degree	40.6%	43.6%	51.5%	62.6%	26.4%	46.0%
		Non-STEM degree	22.1%	26.2%	20.4%	8.5%	1.8%	17.6%
		Currently enrolled	3.7%	8.2%	23.6%	28.4%	71.6%	22.9%
		No degree, not currently enrolled	33.6%	22.0%	4.5%	0.5%	0.1%	13.4%
		Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Data source: Longitudinal CSU-LSAMP participant database constructed from WebAMP records and matched to ERS and NSC records.

Appendix Table 12: Participant Characteristics, Senior Level II CSU-LSAMP through 2015-2016

		Number			Percent		
		Continuing from earlier phase	Entering During Senior Level II	Total	Continuing from earlier phase	Entering During Senior Level II	Total
Gender	Male	1,426	1,594	3,020	57.8%	53.4%	55.4%
	Female	1,043	1,386	2,429	42.2%	46.5%	44.6%
	Unknown	0	3	3	0.0%	0.2%	0.1%
	Total	2,469	2,983	5,452	100.0%	100.0%	100.0%
Race/ Ethnicity	Latino/Latina	1,738	1,981	3,719	70.4%	66.4%	68.2%
	African American	287	267	554	11.6%	9.0%	10.2%
	Native American/Alaska Native	21	33	54	0.9%	1.1%	1.0%
	Native Hawaiian/Pacific Islander	38	35	73	1.5%	1.2%	1.3%
	More than one URM group	65	50	115	2.6%	1.7%	2.1%
	Non-minority	298	567	865	12.1%	19.0%	15.9%
	Race not reported	22	50	72	0.9%	1.7%	1.3%
	Total	2,469	2,983	5,452	100.0%	100.0%	100.0%
Class Level at Program Entry	Freshman	847	686	1,533	34.3%	23.0%	28.1%
	Sophomore	479	474	953	19.4%	15.9%	17.5%
	Junior	544	667	1,211	22.0%	22.4%	22.2%
	Senior	599	1,156	1,755	24.3%	38.8%	32.2%
	Total	2,469	2,983	5,452	100.0%	100.0%	100.0%
Division at Program Entry	Lower	1,326	1,160	2,486	53.7%	38.9%	45.6%
	Upper	1,143	1,823	2,966	46.3%	61.1%	54.4%
	Total	2,469	2,983	5,452	100.0%	100.0%	100.0%
Discipline*	Agriculture	19	34	53	0.8%	1.1%	1.0%
	Architecture	0	1	1	0.0%	0.0%	0.0%
	Biological Sciences	762	983	1,745	30.9%	33.0%	32.0%
	Business and Management	5	2	7	0.2%	0.1%	0.1%
	Computer Science	150	213	363	6.1%	7.1%	6.7%
	Engineering	11	48	59	0.4%	1.6%	1.1%
	Engineering Technologies	946	963	1,909	38.3%	32.3%	35.0%
	Interdisciplinary Studies	1	4	5	0.0%	0.1%	0.1%
	Mathematics	163	199	362	6.6%	6.7%	6.6%
	Natural Resources & Conservation	45	49	94	1.8%	1.6%	1.7%
	Physical Sciences	349	468	817	14.1%	15.7%	15.0%
	Non-STEM, undeclared	18	19	37	0.7%	0.6%	0.7%
	Total	2,469	2,983	5,452	100.0%	100.0%	100.0%
Campus*	Bakersfield	38	77	115	1.5%	2.6%	2.1%
	Channel Islands	11	45	56	0.4%	1.5%	1.0%
	Chico	67	130	197	2.7%	4.4%	3.6%
	Dominguez Hills	137	130	267	5.5%	4.4%	4.9%
	East Bay	20	35	55	0.8%	1.2%	1.0%
	Fresno	124	169	293	5.0%	5.7%	5.4%
	Fullerton	57	95	152	2.3%	3.2%	2.8%
	Humboldt	80	139	219	3.2%	4.7%	4.0%
	Long Beach	55	66	121	2.2%	2.2%	2.2%
	Los Angeles	528	274	802	21.4%	9.2%	14.7%
	Maritime Academy	1	44	45	0.0%	1.5%	0.8%
	Monterey Bay	34	73	107	1.4%	2.4%	2.0%
	Northridge	245	253	498	9.9%	8.5%	9.1%
	Pomona	268	210	478	10.9%	7.0%	8.8%
	Sacramento	162	135	297	6.6%	4.5%	5.4%
	San Bernardino	124	126	250	5.0%	4.2%	4.6%
	San Diego	83	111	194	3.4%	3.7%	3.6%
	San Francisco	38	98	136	1.5%	3.3%	2.5%
	San Jose	184	228	412	7.5%	7.6%	7.6%
	San Luis Obispo	81	213	294	3.3%	7.1%	5.4%
San Marcos	43	171	214	1.7%	5.7%	3.9%	
Sonoma	54	74	128	2.2%	2.5%	2.3%	
Stanislaus	35	87	122	1.4%	2.9%	2.2%	
Total	2,469	2,983	5,452	100.0%	100.0%	100.0%	

Source: WebAMP

* Discipline and campus for most recent participation year.

Appendix Table 13: Selected Participant Characteristics by First Year of Participation, Senior Level II CSU-LSAMP through 2015-2016

		Number				Percent			
		Continuing from earlier phase	1 st Year of CSU-LSAMP Participation	2 nd Year of CSU-LSAMP Participation	3 rd Year of CSU-LSAMP Participation	Continuing from earlier phase	1 st Year of CSU-LSAMP Participation	2 nd Year of CSU-LSAMP Participation	3 rd Year of CSU-LSAMP Participation
			Year 1 2013-2014	Year 2 2014-2015	Year 3 2015-2016		Year 1 2013-2014	Year 2 2014-2015	Year 3 2015-2016
Gender	Male	1,426	618	539	437	57.8%	55.9%	54.4%	49.3%
	Female	1,043	487	452	447	42.2%	44.1%	45.6%	50.4%
	Unknown	0	0	0	3	0.0%	0.0%	0.0%	0.3%
	Total	2,469	1,105	991	887	100.0%	100.0%	100.0%	100.0%
Race/ Ethnicity	Latino/Latina	1,738	761	625	595	70.4%	68.9%	63.1%	67.1%
	African American	287	106	98	63	11.6%	9.6%	9.9%	7.1%
	Native American/Alaska Native	21	9	12	12	0.9%	0.8%	1.2%	1.4%
	Native Hawaiian/Pacific Islander	38	12	15	8	1.5%	1.1%	1.5%	0.9%
	More than one URM group	65	27	16	7	2.6%	2.4%	1.6%	0.8%
	Non-minority	298	180	205	182	12.1%	16.3%	20.7%	20.5%
	Race not reported	22	10	20	20	0.9%	0.9%	2.0%	2.3%
	Total	2,469	1,105	991	887	100.0%	100.0%	100.0%	100.0%
Class Level at Program Entry	Freshman	847	313	201	172	34.3%	28.3%	20.3%	19.4%
	Sophomore	479	172	169	133	19.4%	15.6%	17.1%	15.0%
	Junior	544	258	218	191	22.0%	23.3%	22.0%	21.5%
	Senior	599	362	403	391	24.3%	32.8%	40.7%	44.1%
	Total	2,469	1,105	991	887	100.0%	100.0%	100.0%	100.0%
Discipline*	Agriculture	19	5	13	16	0.8%	0.5%	1.3%	1.8%
	Architecture	0	0	1	0	0.0%	0.0%	0.1%	0.0%
	Biological Sciences	762	338	332	313	30.9%	30.6%	33.5%	35.3%
	Business and Management	5	1	0	1	0.2%	0.1%	0.0%	0.1%
	Computer Science	150	81	72	60	6.1%	7.3%	7.3%	6.8%
	Engineering	11	10	28	10	0.4%	0.9%	2.8%	1.1%
	Engineering Technologies	946	409	308	246	38.3%	37.0%	31.1%	27.7%
	Interdisciplinary Studies	1	1	0	3	0.0%	0.1%	0.0%	0.3%
	Mathematics	163	67	70	62	6.6%	6.1%	7.1%	7.0%
	Natural Resources & Conservation	45	19	8	22	1.8%	1.7%	0.8%	2.5%
	Physical Sciences	18	13	5	1	0.7%	1.2%	0.5%	0.1%
	Non-STEM, undeclared	349	161	154	153	14.1%	14.6%	15.5%	17.2%
	Total	2,469	1,105	991	887	100.0%	100.0%	100.0%	100.0%
Campus*	Bakersfield	38	4	35	38	1.5%	0.4%	3.5%	4.3%
	Channel Islands	11	15	18	12	0.4%	1.4%	1.8%	1.4%
	Chico	67	52	43	35	2.7%	4.7%	4.3%	3.9%
	Dominguez Hills	137	44	40	46	5.5%	4.0%	4.0%	5.2%
	East Bay	20	11	14	10	0.8%	1.0%	1.4%	1.1%
	Fresno	124	38	65	66	5.0%	3.4%	6.6%	7.4%
	Fullerton	57	37	19	39	2.3%	3.3%	1.9%	4.4%
	Humboldt	80	45	40	54	3.2%	4.1%	4.0%	6.1%
	Long Beach	55	26	20	20	2.2%	2.4%	2.0%	2.3%
	Los Angeles	528	113	72	89	21.4%	10.2%	7.3%	10.0%
	Maritime Academy	1	19	17	8	0.0%	1.7%	1.7%	0.9%
	Monterey Bay	34	19	17	37	1.4%	1.7%	1.7%	4.2%
	Northridge	245	98	154	1	9.9%	8.9%	15.5%	0.1%
	Pomona	268	115	59	36	10.9%	10.4%	6.0%	4.1%
	Sacramento	162	58	44	33	6.6%	5.2%	4.4%	3.7%
	San Bernardino	124	42	36	48	5.0%	3.8%	3.6%	5.4%
	San Diego	83	55	32	24	3.4%	5.0%	3.2%	2.7%
	San Francisco	38	35	35	28	1.5%	3.2%	3.5%	3.2%
	San Jose	184	101	56	71	7.5%	9.1%	5.7%	8.0%
	San Luis Obispo	81	54	67	92	3.3%	4.9%	6.8%	10.4%
	San Marcos	43	90	59	22	1.7%	8.1%	6.0%	2.5%
	Sonoma	54	7	17	50	2.2%	0.6%	1.7%	5.6%
	Stanislaus	35	27	32	28	1.4%	2.4%	3.2%	3.2%
	Total	2,469	1,105	991	887	100.0%	100.0%	100.0%	100.0%

Source: WebAMP

* Discipline and campus for most recent participation year.

Appendix Table 14: Estimated URM-STEM Participation Rate by Gender, Senior Level II CSU-LSAMP through 2015-2016

	URM-STEM enrollment				URM-STEM participants				Estimated participation rate			
	Fall 2013	Fall 2014	Fall 2015	Average	Year 1 2013-2014	Year 2 2014-2015	Year 3 2015-2016	Average	Year 1 2013-2014	Year 2 2014-2015	Year 3 2015-2016	Average
Male	19,289	20,801	15,311	18,467	1,748	1,672	1,173	1,531	9%	8%	8%	8%
Female	13,313	14,324	23,032	16,890	1,251	1,217	1,491	1,320	9%	8%	6%	8%
Total	32,602	35,125	38,343	35,357	2,999	2,889	2,664	2,851	9%	8%	7%	8%

Data sources: CSU Analytic Studies Division ERS enrollment files and Longitudinal CSU-LSAMP participant database, constructed from WebAMP records

Appendix Table 15: Estimated URM-STEM Participation Rate by Race/Ethnicity, Senior Level II CSU-LSAMP through 2015-2016

	URM-STEM enrollment				URM-STEM participants				Estimated participation rate			
	Fall 2013	Fall 2014	Fall 2015	Average	Year 1 2013-2014	Year 2 2014-2015	Year 3 2015-2016	Average	Year 1 2013-2014	Year 2 2014-2015	Year 3 2015-2016	Average
Latino/Latina	27,137	29,718	32,695	29,850	2,441	2,373	2,235	2,350	9%	8%	7%	8%
African American	2,808	2,745	2,910	2,821	398	371	304	358	14%	14%	10%	13%
Native American	273	230	227	243	30	33	36	33	11%	14%	16%	14%
Native Hawaiian/ Pacific Islander	395	370	287	351	54	51	40	48	14%	14%	14%	14%
More than one race reported—minority	1,989	2,062	2,224	2,092	76	61	49	62	4%	3%	2%	3%
Total	32,602	35,125	38,343	35,357	2,999	2,889	2,664	2,851	9%	8%	7%	8%

Data sources: CSU Analytic Studies Division ERS enrollment files and Longitudinal CSU-LSAMP participant database, constructed from WebAMP records

Appendix Table 16: Estimated URM-STEM Participation Rate by Discipline, Senior Level II CSU-LSAMP through 2015-2016

	URM-STEM enrollment				URM-STEM participants				Estimated participation rate			
	Fall 2013	Fall 2014	Fall 2015	Average	Year 1 2013- 2014	Year 2 2014- 2015	Year 3 2015- 2016	Average	Year 1 2013- 2014	Year 2 2014- 2015	Year 3 2015- 2016	Average
Agriculture	2,012	1,412	1,395	1,606	21	24	31	25	1%	2%	2%	2%
Architecture		304	329	211	n/a	0	0	0	n/a	0%	0%	0%
Biological Sciences	10,746	11,390	11,586	11,241	900	867	828	865	8%	8%	7%	8%
Business & Management	n/a	17	30	16	n/a	5	2	2	n/a	29%	7%	15%
Computer Science	3,457	3,940	5,160	4,186	198	207	179	195	6%	5%	3%	5%
Engineering	n/a	715	805	507	n/a	37	30	22	n/a	5%	4%	4%
Engineering Technologies	11,095	11,337	12,555	11,662	1,232	1,137	993	1,121	11%	10%	8%	10%
Interdisciplinary Studies	n/a	200	216	139	n/a	2	3	2	n/a	1%	1%	1%
Mathematics	2,133	2,211	2,281	2,208	191	186	179	185	9%	8%	8%	8%
Natural Resources & Conservation	805	1,073	1,235	1,038	39	32	38	36	5%	3%	3%	4%
Physical Sciences	2,354	2,526	2,750	2,543	418	392	381	397	18%	16%	14%	16%
Total	32,602	35,125	38,343	35,357	2,999	2,889	2,664	2,851	9%	8%	7%	8%

Data sources: CSU Analytic Studies Division ERS enrollment files and Longitudinal CSU-LSAMP participant database, constructed from WebAMP records

Appendix Table 17: Estimated URM-STEM Participation Rate by Campus, Senior Level II LSAMP through 2015-2016

	URM STEM enrollment				URM STEM participants				Estimated participation rate			
	Fall 2013	Fall 2014	Fall 2015	Average	Year 1 2013-2014	Year 2 2014-2015	Year 3 2015-2016	Average	Year 1 2013-2014	Year 2 2014-2015	Year 3 2015-2016	Average
Bakersfield	836	1,067	1,276	1,060	37	32	46	38	4%	3%	4%	4%
Channel Islands	426	537	608	524	15	16	14	15	4%	3%	2%	3%
Chico	1,022	1,129	1,291	1,147	116	127	125	123	11%	11%	10%	11%
Dominguez Hills	963	1,039	1,057	1,020	165	157	152	158	17%	15%	14%	15%
East Bay	604	691	749	681	22	11	8	14	4%	2%	1%	2%
Fresno	2,194	2,031	2,204	2,143	138	149	155	147	6%	7%	7%	7%
Fullerton	2,084	2,282	2,478	2,281	68	67	73	69	3%	3%	3%	3%
Humboldt	937	1,113	1,184	1,078	92	84	104	93	10%	8%	9%	9%
Long Beach	2,413	2,265	2,332	2,337	56	60	58	58	2%	3%	2%	2%
Los Angeles	2,419	2,614	3,135	2,723	531	413	380	441	22%	16%	12%	16%
Maritime Academy	104	33	39	59	12	13	13	13	12%	39%	33%	22%
Monterey Bay	470	797	859	709	33	28	38	33	7%	4%	4%	5%
Northridge	2,455	2,726	3,052	2,744	270	370	183	274	11%	14%	6%	10%
Pomona	3,403	3,782	3,790	3,658	355	280	251	295	10%	7%	7%	8%
Sacramento	1,767	1,951	2,224	1,981	191	158	156	168	11%	8%	7%	8%
San Bernardino	1,820	2,045	2,337	2,067	141	174	145	153	8%	9%	6%	7%
San Diego	2,012	2,149	2,315	2,159	107	102	84	98	5%	5%	4%	5%
San Francisco	1,555	1,604	1,571	1,577	57	52	58	56	4%	3%	4%	4%
San Jose	1,555	1,549	1,736	1,613	280	268	262	270	18%	17%	15%	17%
San Luis Obispo	1,916	1,843	2,016	1,925	101	106	130	112	5%	6%	6%	6%
San Marcos	691	848	975	838	119	141	122	127	17%	17%	13%	15%
Sonoma	378	423	464	422	49	39	67	52	13%	9%	14%	12%
Stanislaus	578	607	651	612	44	42	40	42	8%	7%	6%	7%
Total	32,602	35,125	38,343	35,357	2,999	2,889	2,664	2,851	9%	8%	7%	8%

Data sources: CSU Analytic Studies Division ERS enrollment files and Longitudinal CSU-LSAMP participant database, constructed from WebAMP records

Appendix Table 18: Activity Participation, Senior Level II CSU-LSAMP through 2015-2016

		Year 1 2013-2014	Year 2 2014-2015	Year 3 2015-2016	Undup- licated Participants for Years 1-3
Common Objective	Clubs	285	375	464	737
	Communications	3,029	2,980	2,905	4,818
	Conferences (attending only)	551	540	546	1,123
	LSAMP Advising/Counseling	2,865	2,961	2,769	4,756
	Meetings/Seminars	517	618	624	1,025
	Student Cohesion Activities	180	294	309	585
	Peer Mentoring	182	120	134	387
	Total	7,609	7,888	7,751	13,431
Objective 1	Academic Excellence Workshops	1,026	982	855	1,814
	Other Academic Support Activities	203	194	206	509
	Summer Bridge Program (STEM)	219	287	343	641
	Total	1,448	1,463	1,404	1,150
Objective 2	CC Transfer Student First Year Activities	4	3	34	41
	Freshman First Year Program	47	34	17	98
	Orientation Programs	292	319	359	707
	Other Transition Activities	10	13	9	28
	Summer Bridge Program (non-STEM)	2	0	8	10
	Total	355	369	427	884
Objective 3	Internships	89	69	148	222
	International Activities	40	45	63	136
	LSAMP Funded Research	343	373	424	834
	Other Funded Research	521	504	652	1,216
	Total	993	991	1,287	2,408
Objective 4	CSU-LSAMP Student Scholar	11	0	0	11
	Facilitators, Mentors, & Trainers	196	209	195	409
	Graduate School Preparation Activities	629	664	758	1,429
	Other Professional Development Activities	103	204	272	442
	Presentation/Publication of Research	376	501	592	1,058
	Total	1,315	1,578	1,817	3,349
Material Support	1,405	955	863	2,066	
Total units of activities	13,125	13,244	13,549	19,939	
Unduplicated number of participants by objective	Common Objective Activities	3,497	3,454	3,225	5,447
	Objective 1 Activities	1,262	1,195	1,086	2,256
	Objective 2 Activities	350	360	422	855
	Objective 3 Activities	836	812	990	1,800
	Objective 4 Activities	892	1,044	1,186	2,119
	Objective 1 or 2 Activities	1,376	1,271	1,211	2,505
	Objective 3 or 4 Activities	1,170	1,248	1,429	2,553
	Objective 3 Research Activities	772	754	897	1,675

Source: Longitudinal CSU-LSAMP participant database, constructed from WebAMP records.

Appendix Table 19: Estimated Baccalaureate Degree Attainment for Senior Level I and Senior Level II CSU-LSAMP Participants by Year and URM-STEM Category

		Senior Level I and Senior Level II CSU-LSAMP participants for whom CSU-ERS and/or NSC records were successfully retrieved:								Estimated number of Senior Level I and Senior Level II CSU-LSAMP participants*				
		Number				Percent				URM	Non-URM	Not reported	Total	
		URM	Non-URM	Not reported	Total	URM	Non-URM	Not reported	Total					
Overall	Bachelor's degree	4,167	764	141	5,072	57.6%	64.0%	67.8%	58.8%	4,630	849	157	5,635	
	Currently enrolled	2,990	425	64	3,479	41.3%	35.6%	30.8%	40.3%	3,322	472	71	3,865	
	No degree, not enrolled	75	4	3	82	1.0%	0.3%	1.4%	0.9%	83	4	3	91	
	Total	7,232	1,193	208	8,633	100.0%	100.0%	100.0%	100.0%	8,035	1,325	231	9,591	
STEM and non-STEM bachelor's degrees	STEM degree	3,653	700	113	4,466	50.5%	58.7%	54.3%	51.7%	4,059	777	125	4,962	
	Non-STEM degree	514	64	28	606	7.1%	5.4%	13.5%	7.0%	571	71	31	673	
	Currently enrolled	2,990	425	64	3,479	41.3%	35.6%	30.8%	40.3%	3,322	472	71	3,865	
	No degree, not enrolled	75	4	3	82	1.0%	0.3%	1.4%	0.9%	83	4	3	91	
Total	7,232	1,193	208	8,633	100.0%	100.0%	100.0%	100.0%	8,035	1,325	231	9,591		
All bachelor's degrees by year†	Senior I	Year 1 2008-2009	335	19	1	355	4.6%	1.6%	0.5%	4.1%	372	21	1	394
		Year 2 2009-2010	377	44	4	425	5.2%	3.7%	1.9%	4.9%	419	49	4	472
		Year 3 2010-2011	408	62	8	478	5.6%	5.2%	3.8%	5.5%	453	69	9	531
		Year 4 2011-2012	469	68	40	577	6.5%	5.7%	19.2%	6.7%	521	76	44	641
		Year 5 2012-2013	501	101	20	622	6.9%	8.5%	9.6%	7.2%	557	112	22	691
	Senior II	Year 1 2013-2014	542	124	21	687	7.5%	10.4%	10.1%	8.0%	602	138	23	763
		Year 2 2014-2015	640	135	19	794	8.8%	11.3%	9.1%	9.2%	711	150	21	882
		Year 3 2015-2016	659	161	21	841	9.1%	13.5%	10.1%	9.7%	732	179	23	934
		Year 4 2016-2017	236	50	7	293	3.3%	4.2%	3.4%	3.4%	262	56	8	326
	Currently enrolled	2,990	425	64	3,479	41.3%	35.6%	30.8%	40.3%	3,322	472	71	3,865	
	No degree, not enrolled	75	4	3	82	1.0%	0.3%	1.4%	0.9%	83	4	3	91	
	Total	7,232	1,193	208	8,633	100.0%	100.0%	100.0%	100.0%	8,035	1,325	231	9,591	

Source: WebAMP participant data matched to CSU ERS and NSC records.

* The estimated number of participants in each category was obtained by applying the percentages for participants for whom follow-up tracking information is available (e.g., those whose CSU-ERS and/or NSC records were successfully retrieved) to the total number of participants. These estimates may not sum due to rounding.

† We collapsed tracking information to describe the number of degrees awarded annually. The CSU ERS system records the year and term in which the CSU awarded a degree and the NSC system records the date. Data is included through spring 2017.

Appendix Table 19 (continued): Estimated Baccalaureate Degree Attainment for Senior Level I and Senior Level II CSU-LSAMP Participants by Year and URM-STEM Category

				Senior Level I and Senior Level II CSU-LSAMP participants for whom CSU-ERS and/or NSC records were successfully retrieved:								Estimated number of Senior Level I and Senior Level II CSU-LSAMP participants*			
				Number				Percent							
				URM	Non-URM	Not reported	Total	URM	Non-URM	Not reported	Total	URM	Non-URM	Not reported	Total
STEM and non-STEM bachelor's degrees by year†	STEM degrees	Senior I	08-09	314	16	1	331	4.3%	1.3%	0.5%	3.8%	349	18	1	368
			09-10	345	41	4	390	4.8%	3.4%	1.9%	4.5%	383	46	4	433
			10-11	359	58	7	424	5.0%	4.9%	3.4%	4.9%	399	64	8	471
			11-12	396	62	39	497	5.5%	5.2%	18.8%	5.8%	440	69	43	552
			12-13	432	94	20	546	6.0%	7.9%	9.6%	6.3%	480	104	22	607
	Senior II	13-14	477	112	14	603	6.6%	9.4%	6.7%	7.0%	530	124	16	670	
		14-15	560	120	13	693	7.7%	10.1%	6.3%	8.0%	622	133	14	770	
		15-16	578	152	10	740	8.0%	12.7%	4.8%	8.6%	642	169	0	822	
		16-17	192	45	5	242	2.7%	3.8%	2.4%	2.8%	213	50	6	269	
	Non-STEM degrees	Senior I	08-09	192	45	5	242	2.7%	3.8%	2.4%	2.8%	213	50	6	269
			09-10	21	3	0	24	0.3%	0.3%	0.0%	0.3%	23	3	0	27
			10-11	32	3	0	35	0.4%	0.3%	0.0%	0.4%	36	3	0	39
			11-12	49	4	1	54	0.7%	0.3%	0.5%	0.6%	54	4	1	60
12-13			73	6	1	80	1.0%	0.5%	0.5%	0.9%	81	7	1	89	
Senior II		13-14	69	7	0	76	1.0%	0.6%	0.0%	0.9%	77	8	0	84	
		14-15	65	12	7	84	0.9%	1.0%	3.4%	1.0%	72	13	8	93	
		15-16	80	15	6	101	1.1%	1.3%	2.9%	1.2%	89	17	7	112	
		16-17	44	5	2	51	0.6%	0.4%	1.0%	0.6%	49	6	2	57	
Currently enrolled				2,990	425	64	3,479	41.3%	35.6%	30.8%	40.3%	3,322	472	71	3,865
No degree, not enrolled				75	4	3	82	1.0%	0.3%	1.4%	0.9%	83	4	3	91
Total				7,232	1,193	208	8,633	100.0%	100.0%	100.0%	100.0%	8,035	1,325	231	9,591

Source: WebAMP participant data matched to CSU ERS and NSC records.

* The estimated number of participants in each category was obtained by applying the percentages for participants for whom follow-up tracking information is available (e.g., those whose CSU-ERS and/or NSC records were successfully retrieved) to the total number of participants. These estimates may not sum due to rounding.

† We collapsed tracking information to describe the number of degrees awarded annually. The CSU ERS system records the year and term in which the CSU awarded a degree and the NSC system records the date. Data is included through spring 2017.