The Effects of COVID-19 on Transfer-Intending Students in California's Community Colleges

Technical Appendices

CONTENTS

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Appendix A. Student-level Data

Student Longitudinal Data

Our quantitative approach utilizes student-level longitudinal data from the California Community College Chancellor's Office Management Information System (MIS). The dataset includes students enrolled across the 115 credit-bearing community colleges that comprise the California Community College system, and includes demographic information, transcripts (grades and credits earned), and course elements (levels below transfer-level, credit status, transfer status, mode of instruction, and minimum/maximum number of credits).

Our analysis does not double count students enrolled across multiple colleges and excludes special admit students, a majority of whom are high school students dually enrolled in community college. To identify individual students, we use SSNs and college local student identifiers when SSNs are invalid. To avoid double counting students enrolled across multiple colleges at the same time, we assign students to the college in which they attempted the most credit units within a year of the term of interest. We strictly focus on students enrolled in at least one credit course and exclude outcomes from non-credit enrollments. Please see the glossary of terms in the main report for a description of key variables derived from the MIS data.

Outcomes and Variables

Outcomes:

- Course outcomes: enrollment; excused withdrawal; successful course completion
- One-term outcomes among fall enrollees: enrollment in term; successful completion of at least one course in the term; persistence into subsequent terms; credit and transferrable units attempted in the term; credit and transferable units earned in the term; GPA in the term
- Cumulative outcomes from fall-to-fall and fall-to-second-fall: cumulative credit and transferrable units attempted; cumulative credit and transferable units earned; cumulative GPA; success in a transfer-level English course; success in a transfer level math course; success in TL English and math and 30 transferable units earned; success in TL English and math and 60 transferable units earned
- Cumulative outcomes before the fall: total credit and transferable units attempted before the fall; total credit and transferable units earned before the fall; total GPA before the fall; success in transfer-level English before the fall; success in transfer-level math before the fall; success in TL English and math and 30 transferable units earned before the fall; success in TL English and math and 60 transferable units earned before the fall
- Total cumulative outcomes in all terms up to the following fall and second fall: cumulative transferable units attempted; cumulative transferable units earned; cumulative success in transfer-level English; cumulative success in transfer-level math; cumulative success in TL English and math and 30 transferable units; cumulative success in TL English and math and 60 transferable units earned; transfer within 1 year of fall term; transfer within 2 years of fall term; transfer within 3 years of fall term

Student-level explanatory variables: academic goal; transfer-intending status; years since first enrollment in college (first-time student, 1 year, 2 years, 3 years, 4 years, 5+ years); race/ethnicity; gender; CPG/PELL grant recipient; education level; citizenship status; special program status (participant in Mesa, Puente, or UMOJA programs); previous foster child status; EOPS program participant; previous enrollment in basic skills English course; previous or current disability; first-generation student status; non-traditional age (25 year or older); prior dual enrollment student

Notes on Variable Construction

Student characteristics and demographics are identified by what is reported in the MIS data in the term of interest. Considering our analyses are strictly focused on students enrolled in fall terms, we identify students by what is reported in the fall of interest for each respective group of enrollees. For example, for the group of students enrolled in fall 2019, their demographics and characteristics are identified using what they reported in the fall 2019 term only. When we make comparisons across outcomes in subsequent terms, or analyze cumulative outcomes, we continue to employ a consistent identification strategy and only utilize what students reported in the fall "cohort" term of interest. Transfer-intentions are similarly identified in the fall of interest.

We consider a student to be transfer-intending if they stated a goal to transfer to a four-year institution, with or without an associate's degree, in the fall of interest. We base our identification on the Student Educational Goal variable provided by MIS' Student Basis Data Record file. For first-time students, the informed goal is declared in the term of enrollment after students have reviewed assessment results, gone through orientation, or received other services that help them understand what it would take to achieve the goal. In our analysis, a student—whether first-time or continuing—enrolled in fall 2019 is considered transfer-intending if they had stated a transfer goal in the fall 2019 term specifically. Though it is likely that some students changed their academic goals in subsequent terms, or had stated a different goal in terms prior, for the purposes of the analyses in this report, we only utilize student's stated intentions in the fall of interest for each enrollee group.

We consider first-time students to be those whose first enrollment in a credit course anywhere in the community college system is in the term of interest. Continuing students are those who ever previously enrolled in a credit course in the community college system before the term of interest. Throughout the report, we compare transfer-intending students that enrolled across different fall terms. If the fall term of interest was the student's first term enrolling in a credit course in the system, they would be identified as a first-time student, and if not, they would be considered a continuing student. For our group of students enrolled in fall 2019, first-time students are those who enrolled for the first time in fall 2019. If such students enrolled again in the following fall, they would be considered continuing students among the fall 2020 enrollee group.

Caveats and Limitations of this Study

1. Our analysis focuses strictly on transfer-intending students which limits the scope of our findings and subsequent policy recommendations. Such a focus is motivated by the fact that transfer-intending students account for more than half of all community college students, and the general transfer pathway across colleges has clear and easily measurable milestones and key outcomes. On the other hand, students with goals to earn an associate's degree and CTE account for around 11 percent and 3 percent of all students enrolled in at least one credit course, respectively, and have a variety of pathway options that are not as easily generalized. Nevertheless, such groups represent essential components of the state's community college systems and, as we briefly discuss in Technical Appendix E, experienced unique enrollment impacts as a result of the pandemic.

2. We are greatly restricted in our ability to analyze changes in the non-demographic composition of students as a result of the pandemic – including unobservable or less apparent characteristics such as motivation, academic preparation, skills, needs, and resources. Importantly, we lack high school transcript data which would provide essential information on students' relative academic preparation, strengths, and needs before entering the community college system. Such information would allow us to more accurately assess whether the pandemic uniquely disadvantaged students with weaker academic backgrounds and greater needs for support. In an attempt to address this deficiency, we analyze, and in our regressions control for, the community college academic histories of continuing students.

3. The pandemic exposed and widened disparities in economic well-being across the state, in effect, likely disproportionately impacting low-income students and students with greater financial needs. Unfortunately, our ability to analyze the effects of the pandemic by income status is limited. Commonly, our approach is to compare outcomes between CPG and PELL grant recipients and non-recipients. However, we have reason to believe that, as reported in the MIS data, counts for CPG and PELL grant recipients during the pandemic do not accurately reflect the number of students receiving such financial aid or exhibiting high financial need. Notably, counts for recipients dropped significantly in fall 2020 and fall 2021, while counts for non-recipients increased. This seems to especially be the case among first-time transfer intending students. Appendix Table C6 displays how only 435 of the 116,226 first-time transfer-intending students enrolled in fall 2021 were reported as CPG/PELL grant recipients, whereas 67 and 60 percent of first-time students were identified as such in fall 2019 and 2020, respectively. Such disparities limited our trust in any analysis based on income status, and thus, we decided to not report on these findings in our report.

4. Assembly Bill 705, implemented in 2019, has completely reshaped how California community colleges place and remediate students, in effect, widening access to, and success in, gateway transfer-level courses in English and math. In anticipation of the bill, and as a result of other reforms aimed at improving student success along the transfer pathway, many colleges made structural changes to their transfer pathways before the fall 2019 term, likely causing student outcomes (such as unit accumulation and milestone completion) to improve over time. Such trends make it difficult to isolate the effects of the pandemic from reforms implemented before and during the fall 2019 to fall 2021 terms. As a result, we are limited in our ability to confidently identify the actual independent effects of the pandemic when analyzing student outcomes.

Appendix B. Qualitative Interview Analysis

B1. Description of Qualitative Analysis

As part of our previous work on AB 705, we conducted 41 semi-structured interviews with community college faculty, staff, and administrators at 22 colleges. In this report, we occasionally draw from these interviews to contextualize our quantitative findings.

The main goal of these interviews was to learn more about the ways colleges are addressing racial equity gaps in access to, and completion of, introductory transfer-level math and English courses after AB 705, as well as the persistent challenges they are facing, including those related to the COVID-19 pandemic and the sudden shift to an online learning environment. Several of our questions, and subsequent insights from these interviews, are directly related to the effects of the pandemic on student outcomes. Such insights appear throughout the report in the form of textboxes and are embedded in our policy recommendations.

Interview Protocol

We purposefully selected colleges to be inclusive of different scales of implementation and rates of early enrollment and success post-AB 705. Specifically, in order to obtain a diverse pool of interviewees, we selected colleges based on several criteria regarding their levels of relative success in expanding equitable access to, and success in, gateway English and math courses.

Interviews were conducted over Zoom over the course of three months (April 2021 to June 2021) and were about one hour each. We asked each interviewee a variety of questions related to the implementation of AB 705. Because our interviews took place during the spring 2021 semester, when the shift to distance education as a result of COVID-19 had been in place for a year, we also asked about how the pandemic affected the implementation of AB 705 and student outcomes more broadly. Of specific interest was learning more about the transition of courses and student services online, the training and resources faculty received to ease the change, and the challenges students faced amid the disruptions. We audio recorded and kept notes during each interview to accurately capture the observations and thoughts of each interviewee, as well as to synthesize themes, observations, and insights to investigate further and inform other interviews.

Analytical Methods

In this study, we employ an explanatory sequential mixed methods design. This approach involves collecting and analyzing quantitative data and then explaining the quantitative results with in-depth qualitative data (Creswell and Plano Clark 2011; Ivankova, Creswell and Stick 2006).

The qualitative analysis in this report is grounded by a social constructivist framework in which themes and main ideas are uncovered by interpreting the meaning derived by interviewees and relying on their points of view as experts, educational partners, and contributors to the situation of interest, in this case a post-AB 705 community college landscape (Creswell and Poth 2017). More specifically, we incorporate an inductive analytical method, developing ideas through a generalization of unique perspectives and insights into broader themes. Considering the role researcher interpretation and individual interviewee experiences play in such a framework, it is important to note that the qualitative insights discussed below are co-constructed among several actors and reflect multiple realities that may be simultaneously true due to a wide diversity in environments and experiences.

Our qualitative analytical methods broadly followed a multi-step process that began once all interviews were completed. First, initial notes for each interview were updated and revised, and direct quotes were verified, using interview transcripts and Zoom recordings. Since at least one interviewer and one designated note-taker attended each interview, multiple researchers documented specific insights. Subsequent discussions among the research

team provided opportunities to review and validate such insights. Once all notes were completed, common insights among interviewees were categorized into general themes, while one-off viewpoints or perspectives were documented as unique examples. The last step of the analytical process involved developing a narrative that accurately represented our interview findings, while also answering broad questions of interest and contextualizing the findings from our quantitative analysis.

B2. Interview Sample

In summary, our 41 interviews can be broken down into the following categories:

- 15 interviews with English instructors, department chairs, and AB 705 coordinators that focused on corequisites, classroom experiences, and assessment and placement practices
- 18 interviews with Mathematics instructors, department chairs, and AB 705 coordinators that focused on corequisites, classroom experiences and assessment and placement practices
- 5 interviews with student services staff and counselors that focused on holistic supports, and math and English assessment and placement practices
- 3 interviews with district-level administrators that focused on AB 705 implementation, resources needed, and alignment across reform efforts

In this report, we highlight findings from our all of these interviews, focusing specifically on insights relevant to the pandemic's effects on students, faculty, and the community college experience. We also shed light on the actions taken by instructors, staff, departments, and colleges as a whole, to promote persistence and success, most notably through the provision of expanded resources and academic supports.

Among our interview pool, we find that the colleges represented in our sample are similar to the college-level state average in various aspects, including the share of fall 2019 transfer-intending students that are Latino and Black, the share of students that successfully completed a course in the following fall term, and the cumulative number of transfer level units and cumulative GPA earned among transfer-intending students from fall to fall (Table B1). Our interview pool, however, does have colleges that had relatively large enrollment in fall 2019 and 2020, and a relatively large decline between those terms. It should be noted, though, that more than half of the colleges in our interview sample had enrollment counts that were below the college-level average. Furthermore, the relatively large decline in enrollment from fall 2019 to fall 2020 is mostly caused by declines in two colleges that were more than 40 percent.

TABLE B1
Descriptive statistics on transfer-intending students for colleges represented in interview sample compared to statewide college-average

	All Colleges	Interviewees
Number of Colleges	115	22
Enrollment in fall 2019	6486	8662
Share that are Latino	49.4	51.1
Share that are Black	6.6	7.4
Share that completed at least one course in the next fall	41.8	43.0
Cumulative transfer-level units earned from fall to fall (2019 to 2020)	17.8	18.2
GPA from fall to fall (2019 to 2020)	2.53	2.55
Enrollment in fall 2020	5865	7808
Percent change in enrollment from fall 2019 to 2020	-6.1	-12.7

SOURCE: Authors' calculations using MIS data.

NOTE: Restricted to transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. See the glossary of terms in the main report for definitions. Descriptive statistics represent college-level averages among each group.

Appendix C. Figures and Tables: Enrollment and Outcomes among Fall Transfer-Intending Students

This section (except for Table C1) strictly presents enrollment outcomes among transfer-intending students enrolled in the community college system who attempted at least one credit course in the fall term of interest. We exclude special admit students and outcomes from non-credit course enrollments.

TABLE C1
Fall student counts by academic goal over time

Academic Goal	Fall Student Counts							Share of All Students						
	2015	2016	2017	2018	2019	2020	2021	2015	2016	2017	2018	2019	2020	2021
ALL STUDENTS	**1,378,035**	**1,364,016**	**1,357,428**	**1,334,502**	**1,301,421**	**1,151,392**	**1,045,004**	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Transfer	747,810	770,625	779,538	759,067	745,936	674,493	593,604	54.3	56.5	57.4	56.9	57.3	58.6	56.8
AA	140,138	140,539	142,044	142,613	144,660	127,728	120,000	10.2	10.3	10.5	10.7	11.1	11.1	11.5
Earn a CTE	37,210	40,077	43,816	43,913	45,285	34,146	35,568	2.7	2.9	3.2	3.3	3.5	3.0	3.4
Other/Unknown	452,877	412,775	392,030	388,909	365,540	315,025	295,832	32.9	30.3	28.9	29.1	28.1	27.4	28.3
FIRST-TIME	**258,481**	**254,028**	**262,512**	**253,673**	**252,193**	**202,806**	**201,027**	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Transfer	140,310	145,608	146,729	143,548	144,714	121,061	116,226	54.3	57.3	55.9	56.6	57.4	59.7	57.8
AA	20,983	21,399	22,010	23,100	22,863	17,642	19,645	8.1	8.4	8.4	9.1	9.1	8.7	9.8
Earn a CTE	6,002	5,924	6,862	6,797	7,033	4,716	5,510	2.3	2.3	2.6	2.7	2.8	2.3	2.7
Other/Unknown	91,186	81,097	86,911	80,228	77,583	59,387	59,646	35.3	31.9	33.1	31.6	30.8	29.3	29.7
CONTINUING	**1,119,554**	**1,109,988**	**1,094,916**	**1,080,829**	**1,049,228**	**948,586**	**843,977**	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Transfer	607,500	625,017	632,809	615,519	601,222	553,432	477,378	54.3	56.3	57.8	56.9	57.3	58.3	56.6
AA	119,155	119,140	120,034	119,513	121,797	110,086	100,355	10.6	10.7	11.0	11.1	11.6	11.6	11.9
Earn a CTE	31,208	34,153	36,954	37,116	38,252	29,430	30,058	2.8	3.1	3.4	3.4	3.6	3.1	3.6
Other/Unknown	361,691	331,678	305,119	308,681	287,957	255,638	236,186	32.3	29.9	27.9	28.6	27.4	26.9	28.0

SOURCE: Authors' calculations using MIS data.

NOTE: Other/Unknown goals include 4-year student taking courses, maintain certificate or license, complete credits for high school diploma or GED, undecided, and several others. Restricted to students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students.

TABLE C2
Counts of all transfer-intending students enrolled in fall terms from 2016 to 2021

	Fall Transfer-Intending Student Counts						Percent Change					
	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees	2016-2017 Enrollees	2017-2018 Enrollees	2018-2019 Enrollees	2019-2020 Enrollees	2020-2021 Enrollees	**2019-2021 Enrollees**
Total Students	770,625	779,538	759,067	745,936	674,493	593,604	1.2	-2.6	-1.7	-9.6	-12.0	**-20.4**
Years Since First Enrollment												
First-time student	145,608	146,729	143,548	144,714	121,061	116,226	0.8	-2.2	0.8	-16.3	-4.0	**-19.7**
1 year	163,409	163,574	160,238	158,476	144,631	116,439	0.1	-2.0	-1.1	-8.7	-19.5	**-26.5**
2 years	123,295	123,904	120,965	117,667	106,058	94,911	0.5	-2.4	-2.7	-9.9	-10.5	**-19.3**
3 years	83,113	84,950	80,986	78,210	69,261	60,979	2.2	-4.7	-3.4	-11.4	-12.0	**-22.0**
4 years	54,017	55,788	53,779	51,638	46,358	41,032	3.3	-3.6	-4.0	-10.2	-11.5	**-20.5**
5+ years	201,183	204,593	199,551	195,231	187,124	164,017	1.7	-2.5	-2.2	-4.2	-12.3	**-16.0**
Race/Ethnicity												
Asian	102,391	103,215	102,759	99,174	90,381	78,778	0.8	-0.4	-3.5	-8.9	-12.8	**-20.6**
Black	49,351	49,117	47,416	44,543	38,569	34,547	-0.5	-3.5	-6.1	-13.4	-10.4	**-22.4**
Latino	379,006	384,864	382,077	383,549	344,312	300,381	1.5	-0.7	0.4	-10.2	-12.8	**-21.7**
Native American	3,229	3,384	2,646	2,544	2,067	1,756	4.8	-21.8	-3.9	-18.8	-15.0	**-31.0**
Pacific Islander	3,510	3,538	3,196	3,286	3,125	2,727	0.8	-9.7	2.8	-4.9	-12.7	**-17.0**
Two or more races	33,910	34,990	34,175	32,618	31,387	28,712	3.2	-2.3	-4.6	-3.8	-8.5	**-12.0**
White	184,463	181,863	171,453	155,899	144,640	127,964	-1.4	-5.7	-9.1	-7.2	-11.5	**-17.9**
Unknown	14,765	18,567	15,345	24,323	20,012	18,739	25.8	-17.4	58.5	-17.7	-6.4	**-23.0**
Gender												
Female	409,140	415,873	407,948	403,405	380,033	327,454	1.6	-1.9	-1.1	-5.8	-13.8	**-18.8**
Male	354,510	356,338	343,999	334,624	286,843	257,994	0.5	-3.5	-2.7	-14.3	-10.1	**-22.9**
Unknown	6,975	7,321	7,116	7,698	7,027	6,642	5.0	-2.8	8.2	-8.7	-5.5	**-13.7**
Non-Binary	0	6	4	209	590	1,514	#DIV/0!	-33.3	5125.0	182.3	156.6	**624.4**
PELL or California College Promise Grant recipient												
Non-Recipient	195,482	204,844	202,818	199,894	195,241	289,135	4.8	-1.0	-1.4	-2.3	48.1	**44.6**
Recipient	575,143	574,694	556,249	546,042	479,252	304,469	-0.1	-3.2	-1.8	-12.2	-36.5	**-44.2**
Education Level												
Not a HS graduate	9,760	10,508	9,327	7,917	6,748	5,564	7.7	-11.2	-15.1	-14.8	-17.5	**-29.7**
Adult education	2,347	2,448	2,410	2,158	1,866	1,530	4.3	-1.6	-10.5	-13.5	-18.0	**-29.1**
HS diploma	626,964	629,892	620,854	618,952	561,124	495,124	0.5	-1.4	-0.3	-9.3	-11.8	**-20.0**
GED	31,798	29,905	27,476	23,337	20,651	17,341	-6.0	-8.1	-15.1	-11.5	-16.0	**-25.7**
CA HS Prof. Certificate	13,029	11,767	9,950	8,661	7,391	5,893	-9.7	-15.4	-13.0	-14.7	-20.3	**-32.0**
Foreign HS degree	33,249	33,774	32,396	29,494	25,215	20,050	1.6	-4.1	-9.0	-14.5	-20.5	**-32.0**
AA	21,787	24,752	25,279	23,226	20,748	18,600	13.6	2.1	-8.1	-10.7	-10.4	**-19.9**
BA	10,743	12,563	12,821	12,436	12,813	11,651	16.9	2.1	-3.0	3.0	-9.1	**-6.3**
Unknown	20,948	23,929	18,554	19,755	17,937	17,851	14.2	-22.5	6.5	-9.2	-0.5	**-9.6**

	Fall Transfer-Intending Student Counts						Percent Change					
	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees	2016-2017 Enrollees	2017-2018 Enrollees	2018-2019 Enrollees	2019-2020 Enrollees	2020-2021 Enrollees	**2019-2021 Enrollees**
Citizenship status												
Non-Citizen	101,640	103,193	98,390	92,462	78,003	63,960	1.5	-4.7	-6.0	-15.6	-18.0	**-30.8**
Citizen	668,985	676,345	660,677	653,474	596,490	529,644	1.1	-2.3	-1.1	-8.7	-11.2	**-18.9**
Special program status: Mesa, Puente or Umoja student												
Non-participant	763,415	771,220	749,522	735,038	665,640	585,759	1.0	-2.8	-1.9	-9.4	-12.0	**-20.3**
Participant	7,210	8,318	9,545	10,898	8,853	7,845	15.4	14.8	14.2	-18.8	-11.4	**-28.0**
Foster status: Student is now, or has ever been, in a court-ordered out-of-home placement												
Non-Foster Student	760,349	769,717	749,061	735,868	665,534	585,156	1.2	-2.7	-1.8	-9.6	-12.1	**-20.5**
Foster Student	10,276	9,821	10,006	10,068	8,959	8,448	-4.4	1.9	0.6	-11.0	-5.7	**-16.1**
Student is part of the EOPS program												
Non-participant	717,755	725,586	703,760	690,100	630,496	556,553	1.1	-3.0	-1.9	-8.6	-11.7	**-19.4**
Participant	52,870	53,952	55,307	55,836	43,997	37,051	2.0	2.5	1.0	-21.2	-15.8	**-33.6**
Student has enrolled in Basic Skills Course before												
No	736,175	744,747	726,310	717,679	652,426	576,914	1.2	-2.5	-1.2	-9.1	-11.6	**-19.6**
Yes	34,450	34,791	32,757	28,257	22,067	16,690	1.0	-5.8	-13.7	-21.9	-24.4	**-40.9**
Student was ever reported with a disability during their academic career												
No	732,380	741,974	721,024	707,274	645,321	565,833	1.3	-2.8	-1.9	-8.8	-12.3	**-20.0**
Yes	38,245	37,564	38,043	38,662	29,172	27,771	-1.8	1.3	1.6	-24.5	-4.8	**-28.2**
Student is a first generation student												
Non-first generation	179,772	190,998	199,317	209,752	202,418	181,381	6.2	4.4	5.2	-3.5	-10.4	**-13.5**
First-generation	270,339	270,740	290,151	297,160	266,875	228,782	0.1	7.2	2.4	-10.2	-14.3	**-23.0**
Unknown	320,514	317,800	269,599	239,024	205,200	183,441	-0.8	-15.2	-11.3	-14.2	-10.6	**-23.3**
Student is age 25 or older in given term												
College-age	567,251	569,485	552,814	543,829	480,671	421,671	0.4	-2.9	-1.6	-11.6	-12.3	**-22.5**
Non-traditional age	203,374	210,053	206,253	202,107	193,822	171,933	3.3	-1.8	-2.0	-4.1	-11.3	**-14.9**
Previous dual enrollment student												
No	724,915	726,025	699,257	678,712	606,084	530,113	0.2	-3.7	-2.9	-10.7	-12.5	**-21.9**
Yes	45,710	53,513	59,810	67,224	68,409	63,491	17.1	11.8	12.4	1.8	-7.2	**-5.6**

SOURCE: Authors' calculations using MIS data.

NOTE: Restricted to transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students.

TABLE C3
Counts of first-time transfer-intending students enrolled in fall terms from 2016 to 2021

	Fall First-Time Transfer-Intending Student Counts						Percent Change					
	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees	2016-2017 Enrollees	2017-2018 Enrollees	2018-2019 Enrollees	2019-2020 Enrollees	2020-2021 Enrollees	**2019-2021 Enrollees**
Total Students	145,608	146,729	143,548	144,714	121,061	116,226	0.8	-2.2	0.8	-16.3	-4.0	**-19.7**
Years Since First Enrollment												
First-time student	145,608	146,729	143,548	144,714	121,061	116,226	0.8	-2.2	0.8	-16.3	-4.0	**-19.7**
1 year												
2 years												
3 years												
4 years												
5+ years												
Race/Ethnicity												
Asian	18,223	18,491	19,337	18,997	14,943	14,811	1.5	4.6	-1.8	-21.3	-0.9	**-22.0**
Black	8,302	8,630	8,158	7,608	6,076	5,676	4.0	-5.5	-6.7	-20.1	-6.6	**-25.4**
Latino	74,421	73,727	73,137	74,168	61,747	56,751	-0.9	-0.8	1.4	-16.7	-8.1	**-23.5**
Native American	576	591	472	523	321	300	2.6	-20.1	10.8	-38.6	-6.5	**-42.6**
Pacific Islander	650	686	650	714	598	506	5.5	-5.2	9.8	-16.2	-15.4	**-29.1**
Two or more races	6,641	6,879	6,499	6,020	5,945	5,710	3.6	-5.5	-7.4	-1.2	-4.0	**-5.1**
White	33,862	33,818	31,754	27,997	27,211	26,788	-0.1	-6.1	-11.8	-2.8	-1.6	**-4.3**
Unknown	2,933	3,907	3,541	8,687	4,220	5,684	33.2	-9.4	145.3	-51.4	34.7	**-34.6**
Gender												
Female	73,018	73,522	72,550	74,013	63,303	59,129	0.7	-1.3	2.0	-14.5	-6.6	**-20.1**
Male	70,664	71,575	69,439	68,795	56,300	55,313	1.3	-3.0	-0.9	-18.2	-1.8	**-19.6**
Unknown	1,926	1,632	1,559	1,860	1,269	1,283	-15.3	-4.5	19.3	-31.8	1.1	**-31.0**
Non-Binary	0	0	0	46	189	501	#DIV/0!	#DIV/0!	#DIV/0!	310.9	165.1	**989.1**
PELL or California College Promise Grant recipient												
Non-Recipient	47,986	49,923	48,861	48,430	48,299	115,791	4.0	-2.1	-0.9	-0.3	139.7	**139.1**
Recipient	97,622	96,806	94,687	96,284	72,762	435	-0.8	-2.2	1.7	-24.4	-99.4	**-99.5**
Education Level												
Not a HS graduate	2,281	2,084	1,683	1,437	1,263	1,053	-8.6	-19.2	-14.6	-12.1	-16.6	**-26.7**
Adult education	553	536	491	423	306	284	-3.1	-8.4	-13.8	-27.7	-7.2	**-32.9**
HS diploma	122,478	125,467	124,969	127,108	107,201	102,497	2.4	-0.4	1.7	-15.7	-4.4	**-19.4**
GED	4,115	3,661	3,415	2,855	1,884	1,880	-11.0	-6.7	-16.4	-34.0	-0.2	**-34.2**
CA HS Prof. Certificate	2,039	1,384	1,060	1,030	704	627	-32.1	-23.4	-2.8	-31.7	-10.9	**-39.1**
Foreign HS degree	6,274	6,139	5,543	4,928	3,186	3,156	-2.2	-9.7	-11.1	-35.3	-0.9	**-36.0**
AA	786	845	799	658	545	482	7.5	-5.4	-17.6	-17.2	-11.6	**-26.7**
BA	1,066	1,385	1,272	998	1,026	931	29.9	-8.2	-21.5	2.8	-9.3	**-6.7**
Unknown	6,016	5,228	4,316	5,277	4,946	5,316	-13.1	-17.4	22.3	-6.3	7.5	**0.7**

	Fall First-Time Transfer-Intending Student Counts						Percent Change					
	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees	2016-2017 Enrollees	2017-2018 Enrollees	2018-2019 Enrollees	2019-2020 Enrollees	2020-2021 Enrollees	**2019-2021 Enrollees**
Citizenship status												
Non-Citizen	20,738	20,978	19,798	18,301	12,702	11,957	1.2	-5.6	-7.6	-30.6	-5.9	**-34.7**
Citizen	124,870	125,751	123,750	126,413	108,359	104,269	0.7	-1.6	2.2	-14.3	-3.8	**-17.5**
Special program status: Mesa, Puente or Umoja student												
Non-participant	144,467	145,358	141,971	142,501	119,650	114,860	0.6	-2.3	0.4	-16.0	-4.0	**-19.4**
Participant	1,141	1,371	1,577	2,213	1,411	1,366	20.2	15.0	40.3	-36.2	-3.2	**-38.3**
Foster status: Student is now, or has ever been, in a court-ordered out-of-home placement												
Non-Foster Student	143,503	144,764	141,585	142,727	119,663	114,857	0.9	-2.2	0.8	-16.2	-4.0	**-19.5**
Foster Student	2,105	1,965	1,963	1,987	1,398	1,369	-6.7	-0.1	1.2	-29.6	-2.1	**-31.1**
Student is part of the EOPS program												
Non-participant	137,036	138,108	134,262	135,093	116,519	111,152	0.8	-2.8	0.6	-13.7	-4.6	**-17.7**
Participant	8,572	8,621	9,286	9,621	4,542	5,074	0.6	7.7	3.6	-52.8	11.7	**-47.3**
Student has enrolled in Basic Skills Course before												
No	140,399	141,262	139,072	141,399	119,183	114,673	0.6	-1.6	1.7	-15.7	-3.8	**-18.9**
Yes	5,209	5,467	4,476	3,315	1,878	1,553	5.0	-18.1	-25.9	-43.3	-17.3	**-53.2**
Student was ever reported with a disability during their academic career												
No	139,164	140,309	137,067	137,705	116,969	111,583	0.8	-2.3	0.5	-15.1	-4.6	**-19.0**
Yes	6,444	6,420	6,481	7,009	4,092	4,643	-0.4	1.0	8.1	-41.6	13.5	**-33.8**
Student is a first generation student												
Non-first generation	35,967	38,314	40,253	43,726	38,804	37,232	6.5	5.1	8.6	-11.3	-4.1	**-14.9**
First-generation	52,906	52,134	53,263	55,566	43,989	40,057	-1.5	2.2	4.3	-20.8	-8.9	**-27.9**
Unknown	56,735	56,281	50,032	45,422	38,268	38,937	-0.8	-11.1	-9.2	-15.8	1.7	**-14.3**
Student is age 25 or older in given term												
College-age	135,165	135,662	132,877	134,573	112,355	105,571	0.4	-2.1	1.3	-16.5	-6.0	**-21.6**
Non-traditional age	10,443	11,067	10,671	10,141	8,706	10,655	6.0	-3.6	-5.0	-14.2	22.4	**5.1**
Previous dual enrollment student												
No	136,135	133,431	130,045	128,503	106,262	103,489	-2.0	-2.5	-1.2	-17.3	-2.6	**-19.5**
Yes	9,473	13,298	13,503	16,211	14,799	12,737	40.4	1.5	20.1	-8.7	-13.9	**-21.4**

SOURCE: Authors' calculations using MIS data.

NOTE: Restricted to first-time transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students.

TABLE C4

Counts of continuing transfer-intending students enrolled in fall terms from 2016 to 2021

	Fall Continuing Transfer-Intending Student Counts						Percent Change					
	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees	2016-2017 Enrollees	2017-2018 Enrollees	2018-2019 Enrollees	2019-2020 Enrollees	2020-2021 Enrollees	**2019-2021 Enrollees**
Total Students	625,017	632,809	615,519	601,222	553,432	477,378	1.2	-2.7	-2.3	-7.9	-13.7	**-20.6**
Years Since First Enrollment												
First-time student 1 year	163,409	163,574	160,238	158,476	144,631	116,439	0.1	-2.0	-1.1	-8.7	-19.5	**-26.5**
2 years	123,295	123,904	120,965	117,667	106,058	94,911	0.5	-2.4	-2.7	-9.9	-10.5	**-19.3**
3 years	83,113	84,950	80,986	78,210	69,261	60,979	2.2	-4.7	-3.4	-11.4	-12.0	**-22.0**
4 years	54,017	55,788	53,779	51,638	46,358	41,032	3.3	-3.6	-4.0	-10.2	-11.5	**-20.5**
5+ years	201,183	204,593	199,551	195,231	187,124	164,017	1.7	-2.5	-2.2	-4.2	-12.3	**-16.0**
Race/Ethnicity												
Asian	84,168	84,724	83,422	80,177	75,438	63,967	0.7	-1.5	-3.9	-5.9	-15.2	**-20.2**
Black	41,049	40,487	39,258	36,935	32,493	28,871	-1.4	-3.0	-5.9	-12.0	-11.1	**-21.8**
Latino	304,585	311,137	308,940	309,381	282,565	243,630	2.2	-0.7	0.1	-8.7	-13.8	**-21.3**
Native American	2,653	2,793	2,174	2,021	1,746	1,456	5.3	-22.2	-7.0	-13.6	-16.6	**-28.0**
Pacific Islander	2,860	2,852	2,546	2,572	2,527	2,221	-0.3	-10.7	1.0	-1.7	-12.1	**-13.6**
Two or more races	27,269	28,111	27,676	26,598	25,442	23,002	3.1	-1.5	-3.9	-4.3	-9.6	**-13.5**
White	150,601	148,045	139,699	127,902	117,429	101,176	-1.7	-5.6	-8.4	-8.2	-13.8	**-20.9**
Unknown	11,832	14,660	11,804	15,636	15,792	13,055	23.9	-19.5	32.5	1.0	-17.3	**-16.5**
Gender												
Female	336,122	342,351	335,398	329,392	316,730	268,325	1.9	-2.0	-1.8	-3.8	-15.3	**-18.5**
Male	283,846	284,763	274,560	265,829	230,543	202,681	0.3	-3.6	-3.2	-13.3	-12.1	**-23.8**
Unknown	5,049	5,689	5,557	5,838	5,758	5,359	12.7	-2.3	5.1	-1.4	-6.9	**-8.2**
Non-Binary	0	6	4	163	401	1,013	#DIV/0!	-33.3	3975.0	146.0	152.6	**521.5**
PELL or California College Promise Grant recipient												
Non-Recipient	147,496	154,921	153,957	151,464	146,942	173,344	5.0	-0.6	-1.6	-3.0	18.0	**14.4**
Recipient	477,521	477,888	461,562	449,758	406,490	304,034	0.1	-3.4	-2.6	-9.6	-25.2	**-32.4**
Education Level												
Not a HS graduate	7,479	8,424	7,644	6,480	5,485	4,511	12.6	-9.3	-15.2	-15.4	-17.8	**-30.4**
Adult education	1,794	1,912	1,919	1,735	1,560	1,246	6.6	0.4	-9.6	-10.1	-20.1	**-28.2**
HS diploma	504,486	504,425	495,885	491,844	453,923	392,627	0.0	-1.7	-0.8	-7.7	-13.5	**-20.2**
GED	27,683	26,244	24,061	20,482	18,767	15,461	-5.2	-8.3	-14.9	-8.4	-17.6	**-24.5**
CA HS Prof. Certificate	10,990	10,383	8,890	7,631	6,687	5,266	-5.5	-14.4	-14.2	-12.4	-21.3	**-31.0**
Foreign HS degree	26,975	27,635	26,853	24,566	22,029	16,894	2.4	-2.8	-8.5	-10.3	-23.3	**-31.2**
AA	21,001	23,907	24,480	22,568	20,203	18,118	13.8	2.4	-7.8	-10.5	-10.3	**-19.7**
BA	9,677	11,178	11,549	11,438	11,787	10,720	15.5	3.3	-1.0	3.1	-9.1	**-6.3**
Unknown	14,932	18,701	14,238	14,478	12,991	12,535	25.2	-23.9	1.7	-10.3	-3.5	**-13.4**

	Fall Continuing Transfer-Intending Student Counts						Percent Change					
	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees	2016-2017 Enrollees	2017-2018 Enrollees	2018-2019 Enrollees	2019-2020 Enrollees	2020-2021 Enrollees	**2019-2021 Enrollees**
Citizenship status												
Non-Citizen	80,902	82,215	78,592	74,161	65,301	52,003	1.6	-4.4	-5.6	-11.9	-20.4	**-29.9**
Citizen	544,115	550,594	536,927	527,061	488,131	425,375	1.2	-2.5	-1.8	-7.4	-12.9	**-19.3**
Special program status: Mesa, Puente or Umoja student												
Non-participant	618,948	625,862	607,551	592,537	545,990	470,899	1.1	-2.9	-2.5	-7.9	-13.8	**-20.5**
Participant	6,069	6,947	7,968	8,685	7,442	6,479	14.5	14.7	9.0	-14.3	-12.9	**-25.4**
Foster status: Student is now, or has ever been, in a court-ordered out-of-home placement												
Non-Foster Student	616,846	624,953	607,476	593,141	545,871	470,299	1.3	-2.8	-2.4	-8.0	-13.8	**-20.7**
Foster Student	8,171	7,856	8,043	8,081	7,561	7,079	-3.9	2.4	0.5	-6.4	-6.4	**-12.4**
Student is part of the EOPS program												
Non-participant	580,719	587,478	569,498	555,007	513,977	445,401	1.2	-3.1	-2.5	-7.4	-13.3	**-19.7**
Participant	44,298	45,331	46,021	46,215	39,455	31,977	2.3	1.5	0.4	-14.6	-19.0	**-30.8**
Student has enrolled in Basic Skills Course before												
No	595,776	603,485	587,238	576,280	533,243	462,241	1.3	-2.7	-1.9	-7.5	-13.3	**-19.8**
Yes	29,241	29,324	28,281	24,942	20,189	15,137	0.3	-3.6	-11.8	-19.1	-25.0	**-39.3**
Student was ever reported with a disability during their academic career												
No	593,216	601,665	583,957	569,569	528,352	454,250	1.4	-2.9	-2.5	-7.2	-14.0	**-20.2**
Yes	31,801	31,144	31,562	31,653	25,080	23,128	-2.1	1.3	0.3	-20.8	-7.8	**-26.9**
Student is a first generation student												
Non-first generation	143,805	152,684	159,064	166,026	163,614	144,149	6.2	4.2	4.4	-1.5	-11.9	**-13.2**
First-generation	217,433	218,606	236,888	241,594	222,886	188,725	0.5	8.4	2.0	-7.7	-15.3	**-21.9**
Unknown	263,779	261,519	219,567	193,602	166,932	144,504	-0.9	-16.0	-11.8	-13.8	-13.4	**-25.4**
Student is age 25 or older in given term												
College-age	432,086	433,823	419,937	409,256	368,316	316,100	0.4	-3.2	-2.5	-10.0	-14.2	**-22.8**
Non-traditional age	192,931	198,986	195,582	191,966	185,116	161,278	3.1	-1.7	-1.8	-3.6	-12.9	**-16.0**
Previous dual enrollment student												
No	588,780	592,594	569,212	550,209	499,822	426,624	0.6	-3.9	-3.3	-9.2	-14.6	**-22.5**
Yes	36,237	40,215	46,307	51,013	53,610	50,754	11.0	15.1	10.2	5.1	-5.3	**-0.5**

SOURCE: Authors' calculations using MIS data.

NOTE: Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students.

Racial and ethnic breakdown of percent changes in enrollment across fall terms among transfer-intending students

	Percent Change in Fall Transfer-Intending Student Counts						
	2015-2016 Enrollees	2016-2017 Enrollees	2017-2018 Enrollees	2018-2019 Enrollees	*Average 2015-2019 Enrollees*	2019-2020 Enrollees	2020-2021 Enrollees
First-Time Students							
Asian	3.4	1.5	4.6	-1.8	**1.9**	**-21.3**	-0.9
Black	0.8	4.0	-5.5	-6.7	**-1.9**	**-20.1**	-6.6
Latino	6.0	-0.9	-0.8	1.4	**1.4**	**-16.7**	-8.1
Native American	-9.4	2.6	-20.1	10.8	**-4.0**	**-38.6**	-6.5
Pacific Islander	-5.7	5.5	-5.2	9.8	**1.1**	**-16.2**	-15.4
Two or more races	7.9	3.6	-5.5	-7.4	**-0.4**	**-1.2**	-4.0
White	-0.5	-0.1	-6.1	-11.8	**-4.6**	**-2.8**	-1.6
Unknown	7.1	33.2	-9.4	145.3	**44.1**	**-51.4**	34.7
Continuing Students							
Asian	4.1	0.7	-1.5	-3.9	**-0.2**	**-5.9**	-15.2
Black	-4.1	-1.4	-3.0	-5.9	**-3.6**	**-12.0**	-11.1
Latino	5.6	2.2	-0.7	0.1	**1.8**	**-8.7**	-13.8
Native American	-0.5	5.3	-22.2	-7.0	**-6.1**	**-13.6**	-16.6
Pacific Islander	-1.1	-0.3	-10.7	1.0	**-2.8**	**-1.7**	-12.1
Two or more races	4.9	3.1	-1.5	-3.9	**0.6**	**-4.3**	-9.6
White	-0.5	-1.7	-5.6	-8.4	**-4.1**	**-8.2**	-13.8
Unknown	-4.1	23.9	-19.5	32.5	**8.2**	**1.0**	-17.3

SOURCE: Authors' calculations using MIS data.

NOTE: Restricted to transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. See Appendix Tables C2, C3, and C4 for student counts.

TABLE C6

Demographic composition of first-time and continuing transfer-intending students enrolled in fall terms from 2016 to 2021

	Fall First-Time Transfer-Intending Student Counts						Fall Continuing Transfer-Intending Student Counts					
	2019 Enrollees	2020 Enrollees	2021 Enrollees	2019 Share	2020 Share	2021 Share	2019 Enrollees	2020 Enrollees	2021 Enrollees	2019 Share	2020 Share	2021 Share
Total Students	144,714	121,061	116,226	100.0	100.0	100.0	601,222	553,432	477,378	100.0	100.0	100.0
Years Since First Enrollment												
First-time student	144,714	121,061	116,226	100.0	100.0	100.0						
1 year							158,476	144,631	116,439	26.4	26.1	24.4
2 years							117,667	106,058	94,911	19.6	19.2	19.9
3 years							78,210	69,261	60,979	13.0	12.5	12.8
4 years							51,638	46,358	41,032	8.6	8.4	8.6
5+ years							195,231	187,124	164,017	32.5	33.8	34.4
Race/Ethnicity												
Asian	18,997	14,943	14,811	13.1	12.3	12.7	80,177	75,438	63,967	13.3	13.6	13.4
Black	7,608	6,076	5,676	5.3	5.0	4.9	36,935	32,493	28,871	6.1	5.9	6.0
Latino	74,168	61,747	56,751	51.3	51.0	48.8	309,381	282,565	243,630	51.5	51.1	51.0
Native American	523	321	300	0.4	0.3	0.3	2,021	1,746	1,456	0.3	0.3	0.3
Pacific Islander	714	598	506	0.5	0.5	0.4	2,572	2,527	2,221	0.4	0.5	0.5
Two or more races	6,020	5,945	5,710	4.2	4.9	4.9	26,598	25,442	23,002	4.4	4.6	4.8
White	27,997	27,211	26,788	19.3	22.5	23.0	127,902	117,429	101,176	21.3	21.2	21.2
Unknown	8,687	4,220	5,684	6.0	3.5	4.9	15,636	15,792	13,055	2.6	2.9	2.7
Gender												
Female	74,013	63,303	59,129	51.1	52.3	50.9	329,392	316,730	268,325	54.8	57.2	56.2
Male	68,795	56,300	55,313	47.5	46.5	47.6	265,829	230,543	202,681	44.2	41.7	42.5
Unknown	1,860	1,269	1,283	1.3	1.0	1.1	5,838	5,758	5,359	1.0	1.0	1.1
Non-Binary	46	189	501	0.0	0.2	0.4	163	401	1,013	0.0	0.1	0.2
PELL or California College Promise Grant recipient												
Non-Recipient	48,430	48,299	115,791	33.5	39.9	99.6	151,464	146,942	173,344	25.2	26.6	36.3
Recipient	96,284	72,762	435	66.5	60.1	0.4	449,758	406,490	304,034	74.8	73.4	63.7
Education Level												
Not a HS graduate	1,437	1,263	1,053	1.0	1.0	0.9	6,480	5,485	4,511	1.1	1.0	0.9
Adult education	423	306	284	0.3	0.3	0.2	1,735	1,560	1,246	0.3	0.3	0.3
HS diploma	127,108	107,201	102,497	87.8	88.6	88.2	491,844	453,923	392,627	81.8	82.0	82.2
GED	2,855	1,884	1,880	2.0	1.6	1.6	20,482	18,767	15,461	3.4	3.4	3.2
CA HS Prof. Certificate	1,030	704	627	0.7	0.6	0.5	7,631	6,687	5,266	1.3	1.2	1.1
Foreign HS degree	4,928	3,186	3,156	3.4	2.6	2.7	24,566	22,029	16,894	4.1	4.0	3.5
AA	658	545	482	0.5	0.5	0.4	22,568	20,203	18,118	3.8	3.7	3.8
BA	998	1,026	931	0.7	0.8	0.8	11,438	11,787	10,720	1.9	2.1	2.2
Unknown	5,277	4,946	5,316	3.6	4.1	4.6	14,478	12,991	12,535	2.4	2.3	2.6

	Fall First-Time Transfer-Intending Student Counts						Fall Continuing Transfer-Intending Student Counts					
	2019 Enrollees	2020 Enrollees	2021 Enrollees	2019 Share	2020 Share	2021 Share	2019 Enrollees	2020 Enrollees	2021 Enrollees	2019 Share	2020 Share	2021 Share
Citizenship status												
Non-Citizen	18,301	12,702	11,957	12.6	10.5	10.3	74,161	65,301	52,003	12.3	11.8	10.9
Citizen	126,413	108,359	104,269	87.4	89.5	89.7	527,061	488,131	425,375	87.7	88.2	89.1
Special program status: Mesa, Puente or Umoja student												
Non-participant	142,501	119,650	114,860	98.5	98.8	98.8	592,537	545,990	470,899	98.6	98.7	98.6
Participant	2,213	1,411	1,366	1.5	1.2	1.2	8,685	7,442	6,479	1.4	1.3	1.4
Foster status: Student is now, or has ever been, in a court-ordered out-of-home placement												
Non-Foster Student	142,727	119,663	114,857	98.6	98.8	98.8	593,141	545,871	470,299	98.7	98.6	98.5
Foster Student	1,987	1,398	1,369	1.4	1.2	1.2	8,081	7,561	7,079	1.3	1.4	1.5
Student is part of the EOPS program												
Non-participant	135,093	116,519	111,152	93.4	96.2	95.6	555,007	513,977	445,401	92.3	92.9	93.3
Participant	9,621	4,542	5,074	6.6	3.8	4.4	46,215	39,455	31,977	7.7	7.1	6.7
Student has enrolled in Basic Skills Course before												
No	141,399	119,183	114,673	97.7	98.4	98.7	576,280	533,243	462,241	95.9	96.4	96.8
Yes	3,315	1,878	1,553	2.3	1.6	1.3	24,942	20,189	15,137	4.1	3.6	3.2
Student was ever reported with a disability during their academic career												
No	137,705	116,969	111,583	95.2	96.6	96.0	569,569	528,352	454,250	94.7	95.5	95.2
Yes	7,009	4,092	4,643	4.8	3.4	4.0	31,653	25,080	23,128	5.3	4.5	4.8
Student is a first generation student												
Non-first generation	43,726	38,804	37,232	30.2	32.1	32.0	166,026	163,614	144,149	27.6	29.6	30.2
First-generation	55,566	43,989	40,057	38.4	36.3	34.5	241,594	222,886	188,725	40.2	40.3	39.5
Unknown	45,422	38,268	38,937	31.4	31.6	33.5	193,602	166,932	144,504	32.2	30.2	30.3
Student is age 25 or older in given term												
College-age	134,573	112,355	105,571	93.0	92.8	90.8	409,256	368,316	316,100	68.1	66.6	66.2
Non-traditional age	10,141	8,706	10,655	7.0	7.2	9.2	191,966	185,116	161,278	31.9	33.4	33.8
Previous dual enrollment student												
No	128,503	106,262	103,489	88.8	87.8	89.0	550,209	499,822	426,624	91.5	90.3	89.4
Yes	16,211	14,799	12,737	11.2	12.2	11.0	51,013	53,610	50,754	8.5	9.7	10.6

SOURCE: Authors' calculations using MIS data.

NOTE: Counts of CPG/PELL grant recipients must be taken with caution given that financial aid status is often updated over time in the MIS data, so actual recipients may not have been reported in the term of interest. This would explain why we see such a large increase in non-recipients and a significantly large decrease in recipients. Accordingly, CPG/PELL grant status counts likely do not accurately reflect the share of students with higher financial need. This seems to especially be the case for first-time transfer intending students. Appendix Table C6 displays how only 435 of the 116,226 first-time transfer-intending students enrolled in fall 2021 were reported as CPG/PELL grant recipients, whereas 67 and 60 percent of first-time students were identified as such in fall 2019 and 2020, respectively. Restricted to transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students.

TABLE C7
Pre-fall community college academic history of continuing transfer-intending students enrolled in fall terms from 2016 to 2021

	Fall Transfer-Intending Student Averages or Shares					
	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees
1 YEAR SINCE FIRST ENROLLMENT						
STUDENT COUNT	163,409	163,574	160,238	158,476	144,631	116,439
Averages:						
Total Units Attempted	19.98	19.93	20.46	20.84	22.32	21.89
Total Units Earned	16.14	16.12	16.51	16.72	17.77	17.59
TL Units Attempted	14.45	14.72	15.84	17.67	20.72	20.45
TL Units Earned	11.84	12.09	13.02	14.45	16.62	16.53
GPA	2.69	2.71	2.74	2.76	2.93	2.88
Shares:						
Complete TL English	28.5	31.8	36.0	42.7	48.7	48.0
Complete TL Math	16.3	17.3	19.6	23.5	32.8	34.1
Complete TL English and Math + 30 TL units	3.7	4.1	5.5	7.6	11.4	12.3
2 YEARS SINCE FIRST ENROLLMENT						
STUDENT COUNT	123,295	123,904	120,965	117,667	106,058	94,911
Averages:						
Total Units Attempted	43.24	44.14	44.57	44.55	46.14	46.30
Total Units Earned	35.12	35.75	36.09	35.83	36.75	36.41
TL Units Attempted	33.54	34.50	35.58	36.96	41.34	43.43
TL Units Earned	27.52	28.24	29.14	30.10	33.21	34.30
GPA	2.63	2.65	2.67	2.68	2.79	2.84
Shares:						
Complete TL English	53.3	56.2	59.8	63.5	68.9	69.5
Complete TL Math	32.1	34.0	36.2	39.0	48.7	54.2
Complete TL English and Math + 30 TL units	20.9	22.6	24.7	27.2	35.0	39.2
3 YEARS SINCE FIRST ENROLLMENT						
STUDENT COUNT	78,711	83,113	84,950	80,986	78,210	69,261
Averages:						
Total Units Attempted	57.05	60.01	61.91	62.79	62.72	63.29
Total Units Earned	45.53	47.37	48.48	49.09	48.85	48.72
TL Units Attempted	45.11	47.63	49.16	50.16	51.18	53.87
TL Units Earned	36.20	37.80	38.75	39.49	40.16	41.71
GPA	2.57	2.56	2.55	2.57	2.58	2.66
Shares:						
Complete TL English	59.9	63.2	65.7	68.8	71.7	73.3
Complete TL Math	36.1	38.9	40.6	43.0	49.9	54.2
Complete TL English and Math + 30 TL units	59.9	63.2	65.7	68.8	71.7	73.3
4 YEARS SINCE FIRST ENROLLMENT						
STUDENT COUNT	51,455	54,017	55,788	53,779	51,638	46,358
Averages:						
Total Units Attempted	66.36	70.13	72.48	74.85	74.72	75.60
Total Units Earned	50.99	53.59	54.89	56.20	55.83	55.89
TL Units Attempted	52.26	55.81	57.85	59.80	60.07	62.62
TL Units Earned	40.33	42.82	43.95	45.08	45.11	46.47
GPA	2.49	2.48	2.48	2.48	2.48	2.55
Shares:						
Complete TL English	55.6	60.0	63.2	66.5	68.8	71.7
Complete TL Math	32.4	35.2	38.1	40.9	42.3	49.0
Complete TL English and Math + 30 TL units	24.6	27.9	30.4	33.1	34.6	40.2

	Fall Transfer-Intending Student Averages or Shares					
	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees
5+ YEARS SINCE FIRST ENROLLMENT						
STUDENT COUNT	197,193	201,183	204,593	199,551	195,231	187,124
Averages:						
Total Units Attempted	71.52	75.78	79.44	82.70	85.44	87.83
Total Units Earned	50.01	53.02	55.49	57.61	59.17	59.76
TL Units Attempted	55.49	59.20	62.34	65.27	67.83	70.88
TL Units Earned	39.14	41.71	43.83	45.73	47.27	48.47
GPA	2.55	2.54	2.54	2.53	2.52	2.54
Shares:						
Complete TL English	46.3	49.6	52.8	55.8	59.3	62.2
Complete TL Math	24.4	26.8	29.4	31.8	34.7	39.9
Complete TL English and Math + 30 TL units	17.2	19.4	21.8	24.2	26.9	30.9

SOURCE: Authors' calculations using MIS data.

NOTE: Pre-fall cumulated outcomes are up until the fall term of interest. Course transfer status indicates whether a course is transferable to UC and/or the CSU systems on the basis of articulation agreements. Transfer-level English courses are introductory college composition courses that fulfill English composition general education requirements for transfer to a four-year institution. Transfer-level math courses include college algebra, trigonometry, pre-calculus, finite math, applied calculus, statistics, liberal arts math, math for teachers and other quantitative reasoning courses that meet transfer requirements to UC or CSU systems. Restricted to transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in credit courses.

TABLE C8

Share of fall-enrolled transfer-intending students that enrolled and successfully completed at least one course in the fall term, the next fall term, and the second fall term (separated by non-pandemic-affected and pandemic-affected fall enrollee groups)

	Completion of at least one course in Fall			Fall Enrollment in One Year			Fall completion of at least one course in One Year			Fall Enrollment in Two Years			Fall completion of at least one course in Two Years		
	Non-Pandemic Affected Avg.	Pandemic-Affected Avg.	Diff	Non-Pandemic Affected Avg.	Pandemic-Affected Avg.	Diff	Non-Pandemic Affected Avg.	Pandemic-Affected Avg.	Diff	Non-Pandemic Affected Avg.	Pandemic-Affected Avg.	Diff	Non-Pandemic Affected Avg.	Pandemic-Affected Avg.	Diff
First-Time Student	81.6	74.5	**-7.1**	67.1	62.3	**-4.8**	56.5	50.5	**-6.0**	49.5	43.0	**-6.5**	41.9	34.7	**-7.2**
1 Year Student	84.8	82.3	**-2.5**	67.8	63.3	**-4.6**	58.6	52.7	**-5.9**	47.2	41.0	**-6.2**	39.2	32.7	**-6.5**
2 Year Student	85.4	82.4	**-3.0**	62.0	56.0	**-6.0**	52.2	45.2	**-6.9**	42.1	37.1	**-5.0**	33.9	28.7	**-5.2**
3 Year Student	82.9	79.5	**-3.4**	56.9	52.1	**-4.9**	46.2	40.5	**-5.6**	39.0	34.1	**-4.9**	30.5	25.8	**-4.7**
4 Year Student	79.8	76.8	**-3.0**	54.5	49.7	**-4.8**	43.1	38.1	**-5.0**	36.9	32.7	**-4.3**	28.3	24.1	**-4.2**
5+ Year Student	77.9	75.8	**-2.1**	50.5	47.4	**-3.2**	40.0	36.4	**-3.6**	33.4	31.0	**-2.4**	25.8	23.4	**-2.4**
Asian	87.8	86.7	**-1.2**	63.0	59.1	**-3.9**	55.5	51.5	**-4.1**	42.8	38.8	**-4.0**	36.8	32.9	**-3.9**
Black	73.6	70.8	**-2.8**	52.1	50.2	**-1.9**	40.1	37.2	**-2.9**	34.7	32.0	**-2.7**	26.0	23.2	**-2.8**
Latino	79.6	75.0	**-4.6**	62.2	56.2	**-6.0**	50.1	43.1	**-7.0**	44.9	38.8	**-6.1**	35.4	29.1	**-6.4**
Native American	78.0	73.1	**-4.9**	47.0	48.2	**1.2**	38.3	37.4	**-0.9**	27.8	27.6	**-0.2**	22.2	20.8	**-1.4**
Pacific Islander	77.8	74.8	**-3.0**	52.3	51.7	**-0.6**	41.6	40.1	**-1.4**	33.2	31.6	**-1.6**	25.6	23.9	**-1.7**
Two or more races	81.6	79.2	**-2.4**	57.5	55.0	**-2.5**	48.0	44.4	**-3.6**	38.3	35.1	**-3.2**	31.3	27.6	**-3.6**
Unknown	85.3	80.7	**-4.6**	49.5	47.0	**-2.5**	43.3	39.3	**-4.0**	25.4	24.7	**-0.7**	21.8	20.1	**-1.7**
White	85.7	82.7	**-3.0**	58.9	55.7	**-3.2**	51.1	47.4	**-3.7**	39.4	35.3	**-4.0**	33.4	29.2	**-4.1**
All Students	**81.9**	**78.4**	**-3.6**	**60.3**	**55.7**	**-4.6**	**50.1**	**44.6**	**-5.4**	**41.8**	**37.0**	**-4.8**	**33.9**	**28.8**	**-5.1**

SOURCE: Authors' calculations using MIS data.

NOTE: Years indicate years since first enrollment in the community college system. Shares represent averages among relevant fall enrollee groups according to the outcome of interest. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. For one year (next fall) outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. For two-year (second fall) outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our one year (next fall) outcomes we exclude students who transferred out of the community college system within one year. For our two-year (second fall) outcomes we exclude students who transferred within two years. Restricted to transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in credit courses.

TABLE C9

Racial and ethnic composition of non-pandemic and pandemic affected fall-enrolled first-time transfer-intending students by completion of at least one course in the fall term, next fall term, and second fall term

	FALL ONE-TERM OUTCOMES							
	COMPLETE AT LEAST ONE COURSE IN FALL TERM				DID NOT COMPLETE AT LEAST ONE COURSE			
	Non-Pandemic Affected (2015-2019)	Pandemic Affected (2020-2021)	Share (Non-Pandemic Affected)	Share (Pandemic-Affected)	Non-Pandemic Affected (2015-2019)	Pandemic Affected (2020-2021)	Share (Non-pandemic Affected)	Share (Pandemic-Affected)
Total Students	588,429	176,855	100.0	100.0	132,480	60,432	100.0	100.0
Asian	82,739	25,568	14.1	14.5	9,929	4,186	7.5	6.9
Black	29,130	7,659	5.0	4.3	11,807	4,093	8.9	6.8
Latino	288,798	83,973	49.1	47.5	76,855	34,525	58.0	57.1
Nat-American	2,114	404	0.4	0.2	684	217	0.5	0.4
Pacific Islander	2,595	787	0.4	0.4	794	317	0.6	0.5
Two + races	26,247	8,993	4.5	5.1	5,947	2,662	4.5	4.4
White	138,425	41,965	23.5	23.7	23,038	12,034	17.4	19.9
Unknown	18,381	7,506	3.1	4.2	3,426	2,398	2.6	4.0
	ONE YEAR (NEXT FALL) OUTCOMES							
	COMPLETE AT LEAST ONE COURSE IN NEXT FALL TERM				DID NOT COMPLETE AT LEAST ONE COURSE			
	Non-Pandemic Affected (2015-2018)	Pandemic Affected (2019-2020)	Share (Non-Pandemic Affected)	Share (Pandemic-Affected)	Non-Pandemic Affected (2015-2018)	Pandemic Affected (2019-2020)	Share (Non-Pandemic Affected)	Share (Pandemic-Affected)
Total Students	321,332	132,444	100.0	100.0	247,454	129,883	100.0	100.0
Asian	49,869	21,913	15.5	16.5	22,803	11,568	9.2	8.9
Black	13,807	5,100	4.3	3.9	18,998	8,368	7.7	6.4
Latino	156,265	62,329	48.6	47.1	132,945	72,637	53.7	55.9
Nat-American	885	304	0.3	0.2	1,352	530	0.5	0.4
Pacific Islander	1,194	570	0.4	0.4	1,431	726	0.6	0.6
Two + races	14,224	6,149	4.4	4.6	11,469	5,606	4.6	4.3
White	78,449	30,732	24.4	23.2	52,096	23,068	21.1	17.8
Unknown	6,639	5,347	2.1	4.0	6,360	7,380	2.6	5.7
	TWO YEAR (SECOND FALL) OUTCOMES							
	COMPLETE AT LEAST ONE COURSE IN SECOND FALL TERM				DID NOT COMPLETE AT LEAST ONE COURSE			
	Non-Pandemic Affected (2015-2017)	Pandemic Affected (2018-2019)	Share (Non-Pandemic Affected)	Share (Pandemic-Affected)	Non-Pandemic Affected (2015-2017)	Pandemic Affected (2018-2019)	Share (Non-Pandemic Affected)	Share (Pandemic-Affected)
Total Students	171,936	93,056	100.0	100.0	238,368	175,227	100.0	100.0
Asian	25,693	15,715	14.9	16.9	25,384	19,241	10.6	11.0
Black	6,884	3,787	4.0	4.1	17,088	11,178	7.2	6.4
Latino	87,865	46,263	51.1	49.7	123,144	93,652	51.7	53.4
Nat-American	399	181	0.2	0.2	1,311	754	0.5	0.4

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Pacific Islander	585	356	0.3	0.4	1,337	940	0.6	0.5
Two + races	7,250	4,030	4.2	4.3	11,111	7,424	4.7	4.2
White	40,631	20,101	23.6	21.6	52,440	33,159	22.0	18.9
Unknown	2,629	2,623	1.5	2.8	6,553	8,879	2.7	5.1

SOURCE: Authors' calculations using MIS data.

NOTE: Shares represent averages among relevant fall enrollee groups according to the outcome of interest. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. For one year (next fall) outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. For two year (second fall) outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our one year outcomes we exclude students who transferred out of the community college system within one year. For our two year outcomes we exclude students who transferred within two years. Restricted to first-time transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in credit courses.

TABLE C10

Racial and ethnic composition of non-pandemic and pandemic affected fall-enrolled continuing transfer-intending students by completion of at least one course in the fall term, next fall term, and second fall term

	FALL ONE-TERM OUTCOMES							
	COMPLETE AT LEAST ONE COURSE IN FALL TERM				DID NOT COMPLETE AT LEAST ONE COURSE IN FALL			
	Non-Pandemic Affected (2015-2019)	Pandemic Affected (2020-2021)	Share (Non-Pandemic Affected)	Share (Pandemic-Affected)	Non-Pandemic Affected (2015-2019)	Pandemic Affected (2020-2021)	Share (Non-pandemic Affected)	Share (Pandemic-Affected)
Total Students	2,526,745	817,285	100.0	100.0	555,322	213,525	100.0	100.0
Asian	361,802	121,142	14.3	14.8	51,576	18,263	9.3	8.6
Black	148,629	44,116	5.9	5.4	51,890	17,248	9.3	8.1
Latino	1,213,907	399,969	48.0	48.9	308,668	126,226	55.6	59.1
Nat-American	9,647	2389	0.4	0.3	2659	813	0.5	0.4
Pacific Islander	10,716	3587	0.4	0.4	3005	1161	0.5	0.5
Two + races	110,706	38,593	4.4	4.7	24,951	9,851	4.5	4.6
White	614,891	183,695	24.3	22.5	102,752	34,910	18.5	16.3
Unknown	56,447	23,794	2.2	2.9	9,821	5,053	1.8	2.4
	NEXT FALL OUTCOMES							
	COMPLETE AT LEAST ONE COURSE IN NEXT FALL TERM				DID NOT COMPLETE AT LEAST ONE COURSE			
	Non-Pandemic Affected (2015-2018)	Pandemic Affected (2019-2020)	Share (Non-Pandemic Affected)	Share (Pandemic-Affected)	Non-Pandemic Affected (2015-2018)	Pandemic Affected (2019-2020)	Share (Non-Pandemic Affected)	Share (Pandemic-Affected)
Total Students	1,105,834	449,870	100.0	100.0	1,176,267	591,598	100.0	100.0
Asian	158,425	66,524	14.3	14.8	143,914	71,460	12.2	12.1
Black	61,179	23,855	5.5	5.3	93,043	40,708	7.9	6.9
Latino	553,211	228,214	50.0	50.7	574,622	310,628	48.9	52.5
Nat-American	3668	1299	0.3	0.3	5,990	2162	0.5	0.4
Pacific Islander	4,183	1827	0.4	0.4	6,116	2849	0.5	0.5
Two + races	45,972	19,841	4.2	4.4	53,771	26,905	4.6	4.5
White	259,723	97,203	23.5	21.6	270,691	118,736	23.0	20.1
Unknown	19,473	11,107	1.8	2.5	28,120	18,150	2.4	3.1

	SECOND FALL OUTCOMES							
	COMPLETE AT LEAST ONE COURSE IN SECOND FALL TERM				DID NOT COMPLETE AT LEAST ONE COURSE			
	Non-Pandemic Affected (2015-2017)	Pandemic Affected (2018-2019)	Share (Non-Pandemic Affected)	Share (Pandemic-Affected)	Non-Pandemic Affected (2015-2017)	Pandemic Affected (2018-2019)	Share (Non-Pandemic Affected)	Share (Pandemic-Affected)
Total Students	487,549	265,397	100.0	100.0	1,047,475	708,910	100.0	100.0
Asian	64,907	36,621	13.3	13.8	130,331	87,281	12.4	12.3
Black	27,705	14,891	5.7	5.6	81,451	50,649	7.8	7.1
Latino	257,589	141,990	52.8	53.5	506,260	365,855	48.3	51.6
Nat-American	1,545	750	0.3	0.3	5,498	2,790	0.5	0.4
Pacific Islander	1,751	965	0.4	0.4	5,464	3,274	0.5	0.5
Two + races	19,114	10,916	3.9	4.1	46,907	31,714	4.5	4.5
White	108,269	54,913	22.2	20.7	244,552	147,970	23.3	20.9
Unknown	6,669	4,351	1.4	1.6	27,012	19,377	2.6	2.7

SOURCE: Authors' calculations using MIS data.

NOTE: Shares represent averages among relevant fall enrollee groups according to the outcome of interest. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. For one year (next fall) outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. For two year (second fall) outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our one year outcomes we exclude students who transferred out of the community college system within one year. For our two year outcomes we exclude students who transferred within two years. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in credit courses.

Average pre-fall outcomes among non-pandemic affected (fall 2015-2019 enrollees) and pandemic-affected (fall 2020-2021 enrollees) transfer-intending students by completion of at least one course in fall term

PRE-FALL CUMULATED OUTCOMES	COMPLETE AT LEAST ONE COURSE IN FALL TERM		DID NOT COMPLETE AT LEAST ONE COURSE IN FALL TERM	
	Non-Pandemic Affected (2015-2019)	Pandemic Affected (2020-2021)	Non-Pandemic Affected (2015-2019)	Pandemic Affected (2020-2021)
1 YEAR SINCE FIRST ENROLLMENT				
Total Units Attempted	20.54	22.73	17.02	19.32
Total Units Earned	17.32	19.33	9.63	10.07
Total Transferable Units Attempted	15.86	21.25	11.66	17.59
Total Transferable Units Earned	13.54	18.17	6.59	9.23
GPA	2.88	3.12	1.81	1.87
Successful completion of TL English	35.9%	52.6%	15.5%	29.0%
Successful completion of TL Math	20.6%	37.5%	5.3%	14.6%
Completion of TL English/Math + 30 TL units	5.6%	14.0%	0.5%	1.6%
2 YEARS SINCE FIRST ENROLLMENT				
Total Units Attempted	44.74	47.39	36.17	40.73
Total Units Earned	37.45	39.34	22.37	23.72
Total Transferable Units Attempted	35.79	43.57	26.62	36.51
Total Transferable Units Earned	30.22	36.36	16.50	21.37
GPA	2.77	2.98	1.92	2.02
Successful completion of TL English	60.4%	73.4%	32.5%	49.3%
Successful completion of TL Math	37.5%	56.4%	13.6%	27.5%
Completion of TL English/Math + 30 TL units	25.5%	41.9%	6.1%	14.1%
3 YEARS SINCE FIRST ENROLLMENT				
Total Units Attempted	62.37	64.42	53.87	58.86
Total Units Earned	50.57	51.30	34.85	36.17
Total Transferable Units Attempted	50.12	56.51	41.54	50.83
Total Transferable Units Earned	40.88	45.22	26.88	31.27
GPA	2.67	2.82	2.03	2.10
Successful completion of TL English	66.5%	75.9%	44.9%	59.1%
Successful completion of TL Math	41.8%	56.4%	21.8%	34.5%
Completion of TL English/Math + 30 TL units	33.3%	46.6%	14.5%	24.0%
4 YEARS SINCE FIRST ENROLLMENT				
Total Units Attempted	73.01	76.00	66.68	72.87
Total Units Earned	57.10	58.47	43.32	45.09
Total Transferable Units Attempted	58.43	64.06	52.25	61.00
Total Transferable Units Earned	45.90	49.46	33.89	37.69
GPA	2.59	2.71	2.06	2.10
Successful completion of TL English	65.9%	75.4%	50.5%	62.0%
Successful completion of TL Math	40.9%	54.4%	25.5%	37.7%
Completion of TL English/Math + 30 TL units	33.0%	45.6%	18.6%	28.9%
5+ YEARS SINCE FIRST ENROLLMENT				
Total Units Attempted	78.52	87.89	80.52	92.59
Total Units Earned	56.78	62.57	48.98	53.82
Total Transferable Units Attempted	61.71	71.31	63.09	75.22
Total Transferable Units Earned	44.98	51.14	38.43	43.59
GPA	2.64	2.68	2.16	2.14
Successful completion of TL English	54.6%	65.5%	46.2%	56.3%
Successful completion of TL Math	31.3%	44.5%	22.8%	33.6%
Completion of TL English/Math + 30 TL units	23.4%	34.9%	16.4%	25.4%

SOURCE: Authors' calculations using MIS data.

NOTE: Years indicate years since first enrollment in the community college system. Outcomes represent averages/shares among relevant fall enrollee groups according to the outcome of interest. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in credit courses.

Average pre-fall outcomes among non-pandemic affected (fall 2015-2018 enrollees) and pandemic-affected (fall 2019-2020 enrollees) transfer-intending students by completion of at least one course in fall of next year

PRE-FALL CUMULATED OUTCOMES	COMPLETE AT LEAST ONE COURSE IN FALL OF NEXT YEAR		DID NOT COMPLETE AT LEAST ONE COURSE IN FALL OF NEXT YEAR	
	Non-Pandemic Affected (2015-2018)	Pandemic Affected (2019-2020)	Non-Pandemic Affected (2015-2018)	Pandemic Affected (2019-2020)
1 YEAR SINCE FIRST ENROLLMENT				
Total Units Attempted	19.92	20.81	18.63	20.81
Total Units Earned	16.90	17.38	13.60	15.20
Total Transferable Units Attempted	14.54	18.37	13.55	18.29
Total Transferable Units Earned	12.41	15.47	10.15	13.60
GPA	2.88	3.04	2.40	2.55
Successful completion of TL English	34.5%	49.8%	21.6%	37.0%
Successful completion of TL Math	18.3%	28.8%	12.2%	22.3%
Completion of TL English/Math + 30 TL units	3.1%	7.4%	3.5%	7.5%
2 YEARS SINCE FIRST ENROLLMENT				
Total Units Attempted	42.23	43.47	41.17	43.42
Total Units Earned	34.69	35.04	31.65	32.96
Total Transferable Units Attempted	31.96	36.54	32.26	37.26
Total Transferable Units Earned	26.34	29.62	25.21	28.68
GPA	2.69	2.79	2.47	2.56
Successful completion of TL English	56.6%	68.6%	45.1%	57.4%
Successful completion of TL Math	29.9%	40.4%	28.0%	37.6%
Completion of TL English/Math + 30 TL units	17.0%	25.9%	18.1%	25.2%
3 YEARS SINCE FIRST ENROLLMENT				
Total Units Attempted	58.64	60.68	57.87	60.51
Total Units Earned	46.27	47.05	43.83	45.06
Total Transferable Units Attempted	45.19	49.16	46.02	50.37
Total Transferable Units Earned	35.73	38.21	35.15	37.83
GPA	2.58	2.66	2.44	2.49
Successful completion of TL English	61.5%	71.1%	54.0%	63.5%
Successful completion of TL Math	32.4%	41.9%	32.8%	41.3%
Completion of TL English/Math + 30 TL units	23.5%	31.9%	24.5%	31.9%
4 YEARS SINCE FIRST ENROLLMENT				
Total Units Attempted	68.77	72.15	68.19	72.82
Total Units Earned	52.47	53.88	50.20	52.54
Total Transferable Units Attempted	53.44	57.48	54.32	59.48
Total Transferable Units Earned	40.81	42.95	40.18	43.14
GPA	2.52	2.56	2.38	2.42
Successful completion of TL English	61.4%	70.4%	55.5%	65.0%
Successful completion of TL Math	32.8%	41.4%	32.6%	41.6%
Completion of TL English/Math + 30 TL units	24.7%	32.4%	25.0%	33.0%
5+ YEARS SINCE FIRST ENROLLMENT				
Total Units Attempted	74.18	81.70	76.26	86.06
Total Units Earned	52.62	56.81	51.87	57.78
Total Transferable Units Attempted	56.91	64.21	60.00	69.11
Total Transferable Units Earned	40.58	44.87	41.12	46.62
GPA	2.62	2.62	2.46	2.45
Successful completion of TL English	51.0%	60.1%	47.6%	57.3%
Successful completion of TL Math	25.0%	33.2%	26.0%	35.3%
Completion of TL English/Math + 30 TL units	17.6%	24.5%	18.8%	27.0%

SOURCE: Authors' calculations using MIS data.

NOTE: Years indicate years since first enrollment in the community college system. Outcomes represent averages/shares among relevant fall enrollee groups according to the outcome of interest. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. Furthermore, for our one year outcomes we exclude students who transferred out of the community college system within one year. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in credit courses.

Average pre-fall outcomes among non-pandemic affected (fall 2015-2017 enrollees) and pandemic-affected (fall 2018-2019 enrollees) transfer-intending students by completion of at least one course in fall in two years

PRE-FALL CUMULATED OUTCOMES	COMPLETE AT LEAST ONE COURSE IN FALL IN TWO YEARS		DID NOT COMPLETE AT LEAST ONE COURSE IN FALL IN TWO YEARS	
	Non-Pandemic Affected (2015-2017)	Pandemic Affected (2018-2019)	Non-Pandemic Affected (2015-2017)	Pandemic Affected (2018-2019)
1 YEAR SINCE FIRST ENROLLMENT				
Total Units Attempted	18.34	18.81	18.43	19.12
Total Units Earned	15.10	15.27	13.98	14.37
Total Transferable Units Attempted	12.49	14.46	13.14	15.14
Total Transferable Units Earned	10.29	11.83	10.14	11.63
GPA	2.76	2.83	2.51	2.56
Successful completion of TL English	27.5%	38.4%	21.9%	31.6%
Successful completion of TL Math	12.9%	17.0%	12.4%	16.2%
Completion of TL English/Math + 30 TL units	1.4%	2.8%	2.1%	3.5%
2 YEARS SINCE FIRST ENROLLMENT				
Total Units Attempted	39.69	41.00	39.63	41.22
Total Units Earned	31.55	32.27	30.50	31.40
Total Transferable Units Attempted	28.83	31.27	30.15	32.75
Total Transferable Units Earned	22.92	24.69	23.45	25.27
GPA	2.56	2.61	2.47	2.48
Successful completion of TL English	48.7%	58.5%	42.3%	51.4%
Successful completion of TL Math	22.7%	28.0%	24.2%	29.0%
Completion of TL English/Math + 30 TL units	11.3%	15.5%	13.3%	17.2%
3 YEARS SINCE FIRST ENROLLMENT				
Total Units Attempted	55.36	57.74	55.32	58.65
Total Units Earned	42.58	43.70	41.77	43.78
Total Transferable Units Attempted	41.72	44.23	43.18	46.62
Total Transferable Units Earned	32.08	33.46	32.79	35.07
GPA	2.49	2.51	2.42	2.43
Successful completion of TL English	55.3%	63.0%	50.4%	58.5%
Successful completion of TL Math	26.8%	32.2%	27.9%	33.8%
Completion of TL English/Math + 30 TL units	18.2%	22.8%	19.4%	24.6%
4 YEARS SINCE FIRST ENROLLMENT				
Total Units Attempted	64.94	69.03	65.17	70.49
Total Units Earned	48.34	50.65	48.18	51.16
Total Transferable Units Attempted	49.57	53.09	51.27	56.01
Total Transferable Units Earned	36.87	38.89	38.04	40.81
GPA	2.44	2.45	2.39	2.38
Successful completion of TL English	55.0%	63.9%	52.4%	60.4%
Successful completion of TL Math	27.5%	33.1%	28.6%	35.4%
Completion of TL English/Math + 30 TL units	19.6%	24.9%	21.0%	26.8%
5+ YEARS SINCE FIRST ENROLLMENT				
Total Units Attempted	71.72	78.47	72.64	81.30
Total Units Earned	49.66	53.69	49.79	55.52
Total Transferable Units Attempted	54.09	60.19	56.71	64.29
Total Transferable Units Earned	37.61	41.31	39.15	44.13
GPA	2.57	2.55	2.49	2.47
Successful completion of TL English	46.5%	53.3%	45.3%	53.0%
Successful completion of TL Math	21.0%	26.2%	23.5%	30.1%
Completion of TL English/Math + 30 TL units	14.1%	18.7%	16.4%	22.3%

SOURCE: Authors' calculations using MIS data.

NOTE: Years indicate years since first enrollment in the community college system. Outcomes represent averages/shares among relevant fall enrollee groups according to the outcome of interest. For two year outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our two year outcomes we exclude students who transferred out of the community college system within two years. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in credit courses.

TABLE C14

Total cumulative transferable units attempted (excluding excused withdrawal) in the fall term, from fall to the next fall term, and from fall to the second fall term among fall-enrolled transfer-intending students by years since first enrollment in CCC

	2015 Enrollees	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees
Transferable units attempted in fall term							
First-Time Student	7.20	7.43	7.76	8.84	10.48	10.12	10.34
1 Year Student	9.19	9.31	9.51	9.91	10.85	10.65	10.92
2 Year Student	9.68	9.81	9.79	9.95	10.24	9.77	9.99
3 Year Student	8.90	8.85	8.86	8.87	9.11	8.59	8.66
4 Year Student	7.96	7.94	7.90	7.99	8.17	7.86	7.89
5+ Year Student	6.78	6.78	6.77	6.84	7.11	6.99	6.96
All students	**8.14**	**8.23**	**8.32**	**8.66**	**9.33**	**9.00**	**9.12**
Cumulative transferable units attempted in one year (from fall to next fall)							
First-Time Student	22.47	23.26	23.86	26.72	27.02	27.24	N/A
1 Year Student	26.44	26.82	27.23	28.09	27.66	28.45	N/A
2 Year Student	25.19	25.57	25.22	25.64	24.02	23.95	N/A
3 Year Student	22.11	21.91	21.75	21.82	20.54	20.37	N/A
4 Year Student	19.51	19.43	19.27	19.48	18.35	18.57	N/A
5+ Year Student	16.43	16.46	16.40	16.75	16.19	16.67	N/A
All students	**21.96**	**22.24**	**22.33**	**23.28**	**22.70**	**22.85**	N/A
Cumulative transferable units attempted in two years (from fall to second fall)							
First-Time Student	33.99	35.04	35.48	37.08	37.01	N/A	N/A
1 Year Student	36.87	37.14	37.45	36.59	36.02	N/A	N/A
2 Year Student	33.30	33.58	32.95	32.19	30.36	N/A	N/A
3 Year Student	29.00	28.65	28.30	27.44	26.19	N/A	N/A
4 Year Student	25.83	25.57	25.33	24.77	23.54	N/A	N/A
5+ Year Student	21.74	21.69	21.71	21.50	21.09	N/A	N/A
All students	**30.29**	**30.54**	**30.51**	**30.38**	**29.72**	N/A	N/A

SOURCE: Authors' calculations using MIS data.

NOTE: Years indicate years since first enrollment in the community college system. Course transfer status indicates whether a course is transferable to UC and/or the CSU systems on the basis of articulation agreements. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. For two year outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our one year outcomes we exclude students who transferred out of the community college system within one year. For our two year outcomes we exclude students who transferred within two years. Restricted to transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in transferable courses.

TABLE C15

Total cumulative transferable units attempted (excluding excused withdrawal) in the fall term, from fall to the next fall term, and from fall to the second fall term among fall-enrolled transfer-intending students by race and ethnicity

	2015 Enrollees	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees
Transferable units attempted in fall term							
Asian	9.17	9.35	9.40	9.72	10.20	9.91	9.93
Black	7.52	7.61	7.70	7.99	8.74	8.29	8.53
Latino	7.66	7.71	7.85	8.21	9.04	8.67	8.81
Native American	7.52	7.65	7.92	8.23	8.84	8.32	8.61
Pacific Islander	7.88	8.20	8.37	8.85	9.52	8.84	9.25
Two or more races	8.71	8.81	8.88	9.18	9.75	9.33	9.54
Unknown	9.01	9.21	8.78	9.30	9.74	9.73	9.64
White	8.56	8.66	8.73	9.06	9.54	9.23	9.34
All students	**8.14**	**8.23**	**8.32**	**8.66**	**9.33**	**9.00**	**9.12**
Cumulative transferable units attempted in one year (from fall to next fall)							
Asian	26.17	26.87	26.72	27.53	27.02	26.65	N/A
Black	18.89	19.13	19.35	20.32	19.65	20.52	N/A
Latino	20.89	21.01	21.21	22.22	21.62	21.83	N/A
Native American	19.05	19.48	19.99	21.04	20.12	20.04	N/A
Pacific Islander	20.47	21.39	21.52	23.02	22.05	22.44	N/A
Two or more races	22.83	23.37	23.32	24.08	23.47	23.62	N/A
Unknown	24.42	24.78	23.45	24.69	23.82	24.38	N/A
White	22.43	22.75	22.86	23.75	23.29	23.29	N/A
All students	**21.96**	**22.24**	**22.33**	**23.28**	**22.70**	**22.85**	N/A
Cumulative transferable units attempted in two years (from fall to second fall)							
Asian	36.35	37.28	36.63	36.38	35.73	N/A	N/A
Black	25.54	25.73	26.10	26.05	25.98	N/A	N/A
Latino	29.39	29.38	29.51	29.27	28.52	N/A	N/A
Native American	25.43	26.36	27.15	26.79	25.97	N/A	N/A
Pacific Islander	27.80	28.39	28.67	29.50	28.99	N/A	N/A
Two or more races	31.15	31.82	31.46	31.24	30.81	N/A	N/A
Unknown	32.57	32.79	31.42	31.80	30.97	N/A	N/A
White	30.16	30.47	30.43	30.52	29.91	N/A	N/A
All students	**30.29**	**30.54**	**30.51**	**30.38**	**29.72**	N/A	N/A

SOURCE: Authors' calculations using MIS data.

NOTE: Years indicate years since first enrollment in the community college system. Course transfer status indicates whether a course is transferable to UC and/or the CSU systems on the basis of articulation agreements. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. For two year outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our one year outcomes we exclude students who transferred out of the community college system within one year. For our two year outcomes we exclude students who transferred within two years. Restricted to transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in transferable courses.

TABLE C16

Total cumulative transferable units earned in the fall term, from fall to the next fall term, and from fall to the second fall term among fall-enrolled transfer-intending students by years since first enrollment in CCC

	2015 Enrollees	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees
Transferable units earned in fall term							
First-Time Student	5.38	5.60	5.83	6.59	7.54	7.34	7.13
1 Year Student	7.09	7.26	7.41	7.70	8.34	8.45	8.55
2 Year Student	7.50	7.64	7.66	7.78	7.92	7.74	7.72
3 Year Student	6.66	6.63	6.64	6.68	6.79	6.56	6.33
4 Year Student	5.74	5.72	5.76	5.78	5.90	5.84	5.58
5+ Year Student	4.89	4.89	4.90	4.94	5.11	5.23	4.93
All students	**6.12**	**6.21**	**6.29**	**6.53**	**6.94**	**6.87**	**6.71**
Cumulative transferable units earned in one year (from fall to next fall)							
First-Time Student	17.12	17.80	18.22	20.28	21.05	20.67	N/A
1 Year Student	20.62	21.10	21.35	21.94	22.39	22.54	N/A
2 Year Student	19.24	19.61	19.39	19.63	19.12	18.38	N/A
3 Year Student	16.25	16.18	15.98	16.06	15.79	15.03	N/A
4 Year Student	13.95	13.91	13.87	13.95	13.81	13.47	N/A
5+ Year Student	11.88	11.94	11.91	12.14	12.29	12.25	N/A
All students	**16.56**	**16.86**	**16.91**	**17.57**	**17.79**	**17.39**	N/A
Cumulative transferable units earned in two years (from fall to second fall)							
First-Time Student	25.89	26.72	26.91	28.53	28.28	N/A	N/A
1 Year Student	28.03	28.39	28.46	28.22	27.91	N/A	N/A
2 Year Student	24.48	24.71	24.26	24.13	22.94	N/A	N/A
3 Year Student	20.56	20.42	20.03	19.91	19.27	N/A	N/A
4 Year Student	17.96	17.75	17.69	17.64	17.00	N/A	N/A
5+ Year Student	15.43	15.43	15.44	15.60	15.48	N/A	N/A
All students	**22.38**	**22.63**	**22.54**	**22.84**	**22.45**	N/A	N/A

SOURCE: Authors' calculations using MIS data.

NOTE: Years indicate years since first enrollment in the community college system. Course transfer status indicates whether a course is transferable to UC and/or the CSU systems on the basis of articulation agreements. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. For two year outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our one year outcomes we exclude students who transferred out of the community college system within one year. For our two year outcomes we exclude students who transferred within two years. Restricted to transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in transferable courses.

TABLE C17

Total cumulative transferable units earned in the fall term, from fall to the next fall term, and from fall to the second fall term among fall-enrolled transfer-intending students by race and ethnicity

	2015 Enrollees	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees
Transferable units earned in fall term							
Asian	7.37	7.55	7.63	7.90	8.26	8.43	8.20
Black	4.92	5.02	5.11	5.28	5.67	5.50	5.53
Latino	5.55	5.60	5.71	5.94	6.43	6.29	6.11
Native American	5.21	5.47	5.55	5.97	6.05	5.83	5.93
Pacific Islander	5.37	5.74	5.80	6.14	6.44	6.36	6.35
Two or more races	6.41	6.56	6.62	6.90	7.28	7.10	7.14
Unknown	7.23	7.50	7.05	7.37	7.37	7.74	7.34
White	6.77	6.89	6.96	7.26	7.60	7.51	7.33
All students	**6.12**	**6.21**	**6.29**	**6.53**	**6.94**	**6.87**	**6.71**
Cumulative transferable units earned in one year (from fall to next fall)							
Asian	21.01	21.71	21.63	22.33	22.98	22.47	N/A
Black	12.60	12.84	13.02	13.63	13.70	13.78	N/A
Latino	15.23	15.37	15.46	16.12	16.28	15.73	N/A
Native American	13.52	13.99	14.11	15.27	14.72	14.02	N/A
Pacific Islander	14.03	15.13	15.03	15.74	15.98	15.93	N/A
Two or more races	16.86	17.50	17.49	18.04	18.35	17.98	N/A
Unknown	19.83	20.38	18.87	19.69	19.12	19.56	N/A
White	17.74	18.09	18.23	18.97	19.27	18.90	N/A
All students	**16.56**	**16.86**	**16.91**	**17.57**	**17.79**	**17.39**	**N/A**
Cumulative transferable units earned in two years (from fall to second fall)							
Asian	28.63	29.50	29.01	29.58	29.62	N/A	N/A
Black	16.73	16.95	17.15	17.47	17.48	N/A	N/A
Latino	21.05	21.03	21.02	21.19	20.62	N/A	N/A
Native American	17.71	18.59	18.81	19.33	18.38	N/A	N/A
Pacific Islander	18.71	19.51	19.38	20.15	20.31	N/A	N/A
Two or more races	22.51	23.26	22.96	23.19	23.21	N/A	N/A
Unknown	26.21	26.65	24.92	25.41	24.37	N/A	N/A
White	23.33	23.69	23.70	24.18	23.98	N/A	N/A
All students	**22.38**	**22.63**	**22.54**	**22.84**	**22.45**	**N/A**	**N/A**

SOURCE: Authors' calculations using MIS data.

NOTE: Years indicate years since first enrollment in the community college system. Course transfer status indicates whether a course is transferable to UC and/or the CSU systems on the basis of articulation agreements. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. For two year outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our one year outcomes we exclude students who transferred out of the community college system within one year. For our two year outcomes we exclude students who transferred within two years. Restricted to transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in transferable courses.

TABLE C18

Total cumulative GPA in the fall term, from fall to the next fall term, and from fall to the second fall term among fall-enrolled transfer-intending students by years since first enrollment in CCC

	2015 Enrollees	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees
GPA in fall term							
First-Time Student	2.17	2.21	2.22	2.22	2.20	2.22	2.13
1 Year Student	2.32	2.38	2.39	2.42	2.44	2.55	2.54
2 Year Student	2.39	2.43	2.47	2.49	2.50	2.57	2.55
3 Year Student	2.32	2.35	2.37	2.39	2.41	2.47	2.40
4 Year Student	2.25	2.26	2.30	2.30	2.33	2.39	2.31
5+ Year Student	2.31	2.33	2.34	2.35	2.37	2.45	2.35
All students	**2.30**	**2.33**	**2.35**	**2.36**	**2.37**	**2.45**	**2.38**
Cumulative one-year GPA (fall to next fall)							
First-Time Student	2.15	2.18	2.20	2.20	2.26	2.20	N/A
1 Year Student	2.33	2.38	2.39	2.41	2.51	2.51	N/A
2 Year Student	2.36	2.40	2.43	2.45	2.54	2.51	N/A
3 Year Student	2.31	2.33	2.34	2.37	2.48	2.43	N/A
4 Year Student	2.25	2.27	2.30	2.30	2.43	2.40	N/A
5+ Year Student	2.35	2.37	2.39	2.39	2.49	2.47	N/A
All students	**2.30**	**2.33**	**2.35**	**2.36**	**2.45**	**2.42**	N/A
Cumulative two-year GPA (fall to second fall)							
First-Time Student	2.13	2.16	2.17	2.19	2.20	N/A	N/A
1 Year Student	2.26	2.31	2.32	2.36	2.40	N/A	N/A
2 Year Student	2.27	2.30	2.33	2.39	2.43	N/A	N/A
3 Year Student	2.24	2.26	2.28	2.34	2.40	N/A	N/A
4 Year Student	2.21	2.22	2.26	2.30	2.37	N/A	N/A
5+ Year Student	2.34	2.35	2.37	2.41	2.46	N/A	N/A
All students	**2.25**	**2.28**	**2.29**	**2.34**	**2.37**	N/A	N/A

SOURCE: Authors' calculations using MIS data.

NOTE: Years indicate years since first enrollment in the community college system. Course transfer status indicates whether a course is transferable to UC and/or the CSU systems on the basis of articulation agreements. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. For two year outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our one year outcomes we exclude students who transferred out of the community college system within one year. For our two year outcomes we exclude students who transferred within two years. Restricted to transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in transferable courses.

TABLE C19
Total cumulative GPA in the fall term, from fall to the next fall term, and from fall to the second fall term among fall-enrolled transfer-intending students by race and ethnicity

	2015 Enrollees	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2021 Enrollees
GPA in fall term							
Asian	2.58	2.63	2.67	2.70	2.72	2.89	2.81
Black	1.88	1.91	1.95	1.96	1.97	2.04	1.99
Latino	2.14	2.16	2.19	2.19	2.21	2.26	2.20
Native American	2.14	2.24	2.15	2.26	2.21	2.20	2.19
Pacific Islander	2.05	2.14	2.12	2.11	2.14	2.22	2.21
Two or more races	2.29	2.34	2.36	2.39	2.43	2.47	2.45
Unknown	2.54	2.62	2.57	2.54	2.43	2.61	2.49
White	2.54	2.59	2.61	2.64	2.67	2.72	2.62
All students	**2.30**	**2.33**	**2.35**	**2.36**	**2.37**	**2.45**	**2.38**
Cumulative one-year GPA (fall to next fall)							
Asian	2.61	2.66	2.69	2.72	2.86	2.89	N/A
Black	1.87	1.91	1.93	1.95	2.03	2.02	N/A
Latino	2.14	2.17	2.18	2.19	2.28	2.23	N/A
Native American	2.12	2.20	2.12	2.24	2.25	2.16	N/A
Pacific Islander	2.04	2.13	2.09	2.09	2.23	2.21	N/A
Two or more races	2.28	2.33	2.35	2.37	2.49	2.45	N/A
Unknown	2.58	2.64	2.58	2.56	2.51	2.61	N/A
White	2.54	2.58	2.61	2.63	2.73	2.70	N/A
All students	**2.30**	**2.33**	**2.35**	**2.36**	**2.45**	**2.42**	N/A
Cumulative two-year GPA (fall to second fall)							
Asian	2.56	2.61	2.64	2.71	2.79	N/A	N/A
Black	1.84	1.88	1.90	1.94	1.97	N/A	N/A
Latino	2.11	2.12	2.14	2.18	2.21	N/A	N/A
Native American	2.07	2.15	2.10	2.22	2.18	N/A	N/A
Pacific Islander	2.00	2.07	2.05	2.08	2.18	N/A	N/A
Two or more races	2.22	2.28	2.29	2.33	2.41	N/A	N/A
Unknown	2.55	2.62	2.55	2.57	2.47	N/A	N/A
White	2.49	2.53	2.55	2.60	2.65	N/A	N/A
All students	**2.25**	**2.28**	**2.29**	**2.34**	**2.37**	N/A	N/A

SOURCE: Authors' calculations using MIS data.

NOTE: Years indicate years since first enrollment in the community college system. Course transfer status indicates whether a course is transferable to UC and/or the CSU systems on the basis of articulation agreements. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. For two year outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our one year outcomes we exclude students who transferred out of the community college system within one year. For our two year outcomes we exclude students who transferred within two years. Restricted to transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in transferable courses.

TABLE C20

Cumulative fall to next fall progress towards transfer among fall-enrolled first-time transfer-intending cohorts

	Student Counts						Share of Total					
	2015 Enrollees	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees	2015 Enrollees	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2020 Enrollees
Fall First-Time Transfer-Intending Students (exc. transfer within 1 year)												
Asian	17317	18017	18261	19077	18744	14737	100.0	100.0	100.0	100.0	100.0	100.0
Black	8108	8160	8486	8051	7496	5972	100.0	100.0	100.0	100.0	100.0	100.0
Latino	69672	73875	73060	72603	73679	61287	100.0	100.0	100.0	100.0	100.0	100.0
Native American	629	562	582	464	517	317	100.0	100.0	100.0	100.0	100.0	100.0
Pacific Islander	678	639	670	638	705	591	100.0	100.0	100.0	100.0	100.0	100.0
Two or more races	6043	6516	6764	6370	5925	5830	100.0	100.0	100.0	100.0	100.0	100.0
Unknown	2711	2914	3854	3520	8559	4168	100.0	100.0	100.0	100.0	100.0	100.0
White	33352	33095	33048	31050	27388	26412	100.0	100.0	100.0	100.0	100.0	100.0
Total	**138510**	**143778**	**144725**	**141773**	**143013**	**119314**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Students Completing Transfer-level Math and English in One Year (as of Next Fall)												
Asian	4351	4932	5372	6917	7714	6125	25.1	27.4	29.4	36.3	41.2	41.6
Black	473	523	671	890	1093	931	5.8	6.4	7.9	11.1	14.6	15.6
Latino	7962	9239	10419	13912	17409	14693	11.4	12.5	14.3	19.2	23.6	24.0
Native American	50	66	54	60	83	49	7.9	11.7	9.3	12.9	16.1	15.5
Pacific Islander	59	69	83	96	157	146	8.7	10.8	12.4	15.0	22.3	24.7
Two or more races	942	1192	1340	1500	1717	1662	15.6	18.3	19.8	23.5	29.0	28.5
Unknown	588	622	674	844	2051	1257	21.7	21.3	17.5	24.0	24.0	30.2
White	6025	6861	7284	8139	8828	8229	18.1	20.7	22.0	26.2	32.2	31.2
Total	**20450**	**23504**	**25897**	**32358**	**39052**	**33092**	**14.8**	**16.3**	**17.9**	**22.8**	**27.3**	**27.7**
Students Completing 30 TL Units in One Year (as of Next Fall)												
Asian	6137	6822	7157	8963	9303	7139	35.4	37.9	39.2	47.0	49.6	48.4
Black	953	1019	1139	1470	1437	1181	11.8	12.5	13.4	18.3	19.2	19.8
Latino	11234	13136	14253	18228	20319	17468	16.1	17.8	19.5	25.1	27.6	28.5
Native American	91	88	99	91	99	69	14.5	15.7	17.0	19.6	19.1	21.8
Pacific Islander	95	119	132	140	178	166	14.0	18.6	19.7	21.9	25.2	28.1
Two or more races	1475	1849	1963	2149	2180	2095	24.4	28.4	29.0	33.7	36.8	35.9
Unknown	949	1023	1184	1318	2811	1489	35.0	35.1	30.7	37.4	32.8	35.7
White	9494	10129	10655	11665	11100	10586	28.5	30.6	32.2	37.6	40.5	40.1
Total	**30428**	**34185**	**36582**	**44024**	**47427**	**40193**	**22.0**	**23.8**	**25.3**	**31.1**	**33.2**	**33.7**
Students Completing 30 TL Units + TL Math and English in One Year (as of Next Fall)												
Asian	3485	4033	4419	5808	6423	5138	20.1	22.4	24.2	30.4	34.3	34.9
Black	331	375	482	676	766	693	4.1	4.6	5.7	8.4	10.2	11.6
Latino	5640	6581	7664	10504	12963	11150	8.1	8.9	10.5	14.5	17.6	18.2
Native American	29	44	42	43	55	36	4.6	7.8	7.2	9.3	10.6	11.4
Pacific Islander	37	50	66	69	113	114	5.5	7.8	9.9	10.8	16.0	19.3
Two or more races	728	925	1029	1204	1321	1316	12.0	14.2	15.2	18.9	22.3	22.6
Unknown	495	547	584	745	1629	1014	18.3	18.8	15.2	21.2	19.0	24.3
White	4708	5342	5742	6569	6909	6541	14.1	16.1	17.4	21.2	25.2	24.8
Total	**15453**	**17897**	**20028**	**25618**	**30179**	**26002**	**11.2**	**12.4**	**13.8**	**18.1**	**21.1**	**21.8**

SOURCE: Authors' calculations using MIS data.

NOTE: Course transfer status indicates whether a course is transferable to UC and/or the CSU systems on the basis of articulation agreements. Transfer-level English courses are introductory college composition courses that fulfill English composition general education requirements for transfer to a four-year institution. Transfer-level math courses include college algebra, trigonometry, pre-calculus, finite math, applied calculus, statistics, liberal arts math, math for teachers and other quantitative reasoning courses that meet transfer requirements to UC or CSU systems. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. Furthermore, for our one year outcomes we exclude students who transferred out of the community college system within one year. Restricted to first-time transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in transferable courses.

TABLE C21

Cumulative fall to second fall progress towards transfer among fall-enrolled first-time transfer-intending cohorts

	Student Counts					Share of Total				
	2015 Enrollees	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees	2015 Enrollees	2016 Enrollees	2017 Enrollees	2018 Enrollees	2019 Enrollees
Fall First-Time Transfer-Intending Student Counts (exc. transfer within 2 years)										
Asian	16617	17179	17281	17597	17359	100.0	100.0	100.0	100.0	100.0
Black	7862	7899	8211	7725	7240	100.0	100.0	100.0	100.0	100.0
Latino	68113	72086	70810	69629	70286	100.0	100.0	100.0	100.0	100.0
Native American	603	546	561	438	497	100.0	100.0	100.0	100.0	100.0
Pacific Islander	658	616	648	616	680	100.0	100.0	100.0	100.0	100.0
Two or more races	5754	6211	6396	5925	5529	100.0	100.0	100.0	100.0	100.0
Unknown	2641	2825	3716	3391	8111	100.0	100.0	100.0	100.0	100.0
White	31344	30990	30737	28399	24861	100.0	100.0	100.0	100.0	100.0
Total	**133592**	**138352**	**138360**	**133720**	**134563**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Students Completing Transfer-level Math and English in Two Years (as of Second Fall)										
Asian	5900	6576	6833	7970	8155	35.5	38.3	39.5	45.3	47.0
Black	782	858	1073	1264	1289	9.9	10.9	13.1	16.4	17.8
Latino	12329	13920	15300	17786	19110	18.1	19.3	21.6	25.5	27.2
Native American	71	82	75	75	103	11.8	15.0	13.4	17.1	20.7
Pacific Islander	98	109	108	127	170	14.9	17.7	16.7	20.6	25.0
Two or more races	1253	1547	1665	1706	1850	21.8	24.9	26.0	28.8	33.5
Unknown	796	824	921	1030	2193	30.1	29.2	24.8	30.4	27.0
White	7837	8502	9026	9253	9037	25.0	27.4	29.4	32.6	36.4
Total	**29066**	**32418**	**35001**	**39211**	**41907**	**21.8**	**23.4**	**25.3**	**29.3**	**31.1**
Students Completing 30 TL Units in Two Years (as of Second Fall)										
Asian	9093	9753	9607	10554	10314	54.7	56.8	55.6	60.0	59.4
Black	1924	1990	2146	2202	2009	24.5	25.2	26.1	28.5	27.7
Latino	23454	25762	25471	26178	25347	34.4	35.7	36.0	37.6	36.1
Native American	174	159	165	132	132	28.9	29.1	29.4	30.1	26.6
Pacific Islander	184	198	194	201	234	28.0	32.1	29.9	32.6	34.4
Two or more races	2287	2737	2718	2656	2486	39.7	44.1	42.5	44.8	45.0
Unknown	1309	1384	1693	1611	3325	49.6	49.0	45.6	47.5	41.0
White	14095	14506	14588	13890	12199	45.0	46.8	47.5	48.9	49.1
Total	**52520**	**56489**	**56582**	**57424**	**56046**	**39.3**	**40.8**	**40.9**	**42.9**	**41.7**
Students Completing 30 TL Units + TL Math and English in Two Years (as of Second Fall)										
Asian	5608	6250	6408	7482	7502	33.7	36.4	37.1	42.5	43.2
Black	715	784	973	1120	1101	9.1	9.9	11.8	14.5	15.2
Latino	11403	12811	13878	15955	16391	16.7	17.8	19.6	22.9	23.3
Native American	63	73	69	64	80	10.4	13.4	12.3	14.6	16.1
Pacific Islander	87	97	99	111	146	13.2	15.7	15.3	18.0	21.5
Two or more races	1171	1430	1515	1546	1618	20.4	23.0	23.7	26.1	29.3
Unknown	758	794	886	979	1933	28.7	28.1	23.8	28.9	23.8
White	7310	7906	8319	8452	7958	23.3	25.5	27.1	29.8	32.0
Total	**27115**	**30145**	**32147**	**35709**	**36729**	**20.3**	**21.8**	**23.2**	**26.7**	**27.3**

SOURCE: Authors' calculations using MIS data.

NOTE: Course transfer status indicates whether a course is transferable to UC and/or the CSU systems on the basis of articulation agreements. Transfer-level English courses are introductory college composition courses that fulfill English composition general education requirements for transfer to a four-year institution. Transfer-level math courses include college algebra, trigonometry, pre-calculus, finite math, applied calculus, statistics, liberal arts math, math for teachers and other quantitative reasoning courses that meet transfer requirements to UC or CSU systems. For two year outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our two year outcomes we exclude students who transferred within two years. Restricted to first-time transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in transferable courses.

TABLE C22

Cumulative progress towards transfer up until the next fall among fall-enrolled continuing transfer-intending cohorts

	Fall Transfer-Intending Student Counts (exc. transfer within 1 year)						Students Completing 30 TL Units + TL Math and English in One Year (as of Next Fall)						Share of Total					
	2015	2016	2017	2018	2019	2020	2015	2016	2017	2018	2019	2020	2015	2016	2017	2018	2019	2020
1 Year Student	**156332**	**157844**	**157712**	**153435**	**149929**	**135398**	**38309**	**41832**	**44072**	**48146**	**53993**	**54785**	**24.5**	**26.5**	**27.9**	**31.4**	**36.0**	**40.5**
Asian	23120	24048	23609	23215	22494	21552	8750	9601	9869	10212	11237	11426	37.8	39.9	41.8	44.0	50.0	53.0
Black	9141	8394	8491	8404	7929	6673	1123	1178	1261	1520	1760	1755	12.3	14.0	14.9	18.1	22.2	26.3
Latino	75177	76392	76729	75617	75333	65570	14641	16282	17522	20183	23700	23621	19.5	21.3	22.8	26.7	31.5	36.0
Native American	529	590	569	464	422	362	84	99	100	104	114	111	15.9	16.8	17.6	22.4	27.0	30.7
Pacific Islander	768	712	700	624	668	663	126	141	134	156	175	229	16.4	19.8	19.1	25.0	26.2	34.5
Two or more races	6666	6898	7118	6840	6611	6190	1661	1846	2079	2254	2374	2517	24.9	26.8	29.2	33.0	35.9	40.7
Unknown	3749	3584	4407	3568	5107	5975	1452	1375	1412	1281	1908	2661	38.7	38.4	32.0	35.9	37.4	44.5
White	37182	37226	36089	34703	31365	28413	10472	11310	11695	12436	12725	12465	28.2	30.4	32.4	35.8	40.6	43.9
2 Year Student	**107496**	**111205**	**111024**	**107184**	**102212**	**91957**	**36110**	**40775**	**42275**	**44202**	**45312**	**44897**	**33.6**	**36.7**	**38.1**	**41.2**	**44.3**	**48.8**
Asian	15976	17036	17315	16664	15337	14302	7855	8916	9042	9168	8754	8765	49.2	52.3	52.2	55.0	57.1	61.3
Black	6086	6101	5678	5602	5412	4763	1172	1360	1319	1499	1688	1702	19.3	22.3	23.2	26.8	31.2	35.7
Latino	52640	54732	54736	53671	52393	46573	15228	17299	18145	19747	20939	20993	28.9	31.6	33.2	36.8	40.0	45.1
Native American	355	317	400	315	270	244	74	78	99	116	101	93	20.8	24.6	24.8	36.8	37.4	38.1
Pacific Islander	482	465	441	450	405	385	131	134	153	148	149	161	27.2	28.8	34.7	32.9	36.8	41.8
Two or more races	4662	4871	4821	4654	4330	4229	1463	1764	1814	1939	1970	1998	31.4	36.2	37.6	41.7	45.5	47.2
Unknown	2139	2387	2883	2470	2704	2758	1025	1253	1334	1095	1235	1426	47.9	52.5	46.3	44.3	45.7	51.7
White	25156	25296	24750	23358	21361	18703	9162	9971	10369	10490	10476	9759	36.4	39.4	41.9	44.9	49.0	52.2
3 Year Student	**69341**	**73151**	**74144**	**70074**	**66814**	**59993**	**24527**	**27814**	**29847**	**30263**	**31273**	**30192**	**35.4**	**38.0**	**40.3**	**43.2**	**46.8**	**50.3**
Asian	9396	10020	10325	10114	9300	8464	4594	5314	5733	5596	5497	5211	48.9	53.0	55.5	55.3	59.1	61.6
Black	4264	4033	4130	3684	3419	3193	885	1003	1061	1058	1144	1213	20.8	24.9	25.7	28.7	33.5	38.0
Latino	35117	38393	38331	36693	36210	31805	11459	13225	14063	14647	15795	15196	32.6	34.4	36.7	39.9	43.6	47.8
Native American	229	220	248	221	190	162	52	58	70	85	83	70	22.7	26.4	28.2	38.5	43.7	43.2
Pacific Islander	287	324	331	279	293	245	87	112	114	119	123	110	30.3	34.6	34.4	42.7	42.0	44.9
Two or more races	3071	3163	3246	3029	2810	2585	1036	1104	1285	1253	1314	1257	33.7	34.9	39.6	41.4	46.8	48.6
Unknown	1222	1095	1595	1264	1471	1335	505	524	689	601	624	668	41.3	47.9	43.2	47.5	42.4	50.0
White	15755	15903	15938	14790	13121	12204	5909	6474	6832	6904	6693	6467	37.5	40.7	42.9	46.7	51.0	53.0
4 Year Student	**45921**	**47981**	**49473**	**47392**	**45152**	**41000**	**15102**	**17531**	**19413**	**20403**	**20705**	**20533**	**32.9**	**36.5**	**39.2**	**43.1**	**45.9**	**50.1**
Asian	5899	5977	6032	6071	5764	5253	2647	2938	3116	3389	3216	3267	44.9	49.2	51.7	55.8	55.8	62.2
Black	3001	2888	2895	2665	2375	2190	561	670	770	773	770	811	18.7	23.2	26.6	29.0	32.4	37.0
Latino	23493	25695	26808	25924	25089	22651	7349	8887	9955	10573	10962	10824	31.3	34.6	37.1	40.8	43.7	47.8
Native American	155	155	193	142	133	97	46	38	61	47	59	48	29.7	24.5	31.6	33.1	44.4	49.5
Pacific Islander	202	202	213	179	174	170	54	57	68	80	82	81	26.7	28.2	31.9	44.7	47.1	47.6
Two or more races	2028	2073	2157	2104	1963	1804	617	717	792	883	888	914	30.4	34.6	36.7	42.0	45.2	50.7
Unknown	699	639	843	674	859	833	251	240	324	262	379	370	35.9	37.6	38.4	38.9	44.1	44.4
White	10444	10352	10332	9633	8795	8002	3577	3984	4327	4396	4349	4218	34.2	38.5	41.9	45.6	49.4	52.7
5+ Year Student	**183356**	**186880**	**188871**	**183285**	**177697**	**171316**	**44470**	**49989**	**55377**	**61073**	**67820**	**70811**	**24.3**	**26.7**	**29.3**	**33.3**	**38.2**	**41.3**
Asian	19535	19754	19383	18850	18113	17405	6408	7125	7534	8010	8504	8822	32.8	36.1	38.9	42.5	46.9	50.7
Black	18069	17301	16937	16458	15148	13461	2373	2625	2937	3328	3839	3882	13.1	15.2	17.3	20.2	25.3	28.8
Latino	83570	89265	92070	92780	92541	90677	20078	23824	27263	31380	35925	38024	24.0	26.7	29.6	33.8	38.8	41.9
Native American	1244	1209	1204	899	845	736	237	230	235	251	252	235	19.1	19.0	19.5	27.9	29.8	31.9
Pacific Islander	974	948	917	801	820	853	232	245	226	244	286	291	23.8	25.8	24.6	30.5	34.9	34.1
Two or more races	7497	8027	8409	8409	8057	8167	1683	2015	2336	2621	2931	3125	22.4	25.1	27.8	31.2	36.4	38.3
Unknown	3788	3415	4047	3125	4488	3727	1060	941	1099	978	1299	1317	28.0	27.6	27.2	31.3	28.9	35.3
White	48679	46961	45904	41963	37685	36290	12399	12984	13747	14261	14784	15115	25.5	27.6	29.9	34.0	39.2	41.7
Total	**562446**	**577061**	**581224**	**561370**	**541804**	**499664**	**158518**	**177941**	**190984**	**204087**	**219103**	**221218**	**28.2**	**30.8**	**32.9**	**36.4**	**40.4**	**44.3**

NOTE: Years indicate years since first enrollment in the community college system. Course transfer status indicates whether a course is transferable to UC and/or the CSU systems on the basis of articulation agreements. Transfer-level English courses are introductory college composition courses that fulfill English composition general education requirements for transfer to a four-year institution. Transfer-level math courses include college algebra, trigonometry, pre-calculus, finite math, applied calculus, statistics, liberal arts math, math for teachers and other quantitative reasoning courses that meet transfer requirements to UC or CSU systems. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. Furthermore, for our one year outcomes we exclude students who transferred out of the community college system within one year. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in transferable courses.

TABLE C23
Cumulative progress towards transfer up until the second fall among fall-enrolled continuing transfer-intending cohorts

	Fall Transfer-Intending Student Counts (exc. transfer within 2 year)					Students Completing 60 TL Units + TL Math and English in Two Years (as of Second Fall)					Share of Total				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
1 Year Student	**142004**	**142135**	**140947**	**134293**	**131561**	**25947**	**27378**	**28206**	**28313**	**29710**	**18.3**	**19.3**	**20.0**	**21.1**	**22.6**
Asian	20401	21039	20382	19565	18627	6371	6770	6659	6473	6745	31.2	32.2	32.7	33.1	36.2
Black	8517	7804	7895	7692	7314	771	796	875	933	1042	9.1	10.2	11.1	12.1	14.2
Latino	70053	70562	70357	68054	68023	10146	10786	11567	11851	12666	14.5	15.3	16.4	17.4	18.6
Native American	491	541	519	416	386	60	60	57	56	50	12.2	11.1	11.0	13.5	13.0
Pacific Islander	702	642	635	547	621	83	83	86	89	103	11.8	12.9	13.5	16.3	16.6
Two or more races	5997	6097	6203	5820	5706	1054	1112	1232	1288	1264	17.6	18.2	19.9	22.1	22.2
Unknown	3550	3389	4137	3288	4712	1154	1118	1064	948	1301	32.5	33.0	25.7	28.8	27.6
White	32293	32061	30819	28911	26172	6308	6653	6666	6675	6539	19.5	20.8	21.6	23.1	25.0
2 Year Student	**92650**	**94793**	**94544**	**90018**	**87533**	**22996**	**25247**	**25928**	**26370**	**25912**	**24.8**	**26.6**	**27.4**	**29.3**	**29.6**
Asian	13013	13658	14036	13298	12287	5123	5566	5621	5604	5170	39.4	40.8	40.0	42.1	42.1
Black	5495	5464	5058	4916	4857	783	865	845	921	970	14.2	15.8	16.7	18.7	20.0
Latino	46872	48082	47850	46388	46377	10140	11032	11508	12036	12099	21.6	22.9	24.1	25.9	26.1
Native American	313	279	362	267	249	44	58	67	63	64	14.1	20.8	18.5	23.6	25.7
Pacific Islander	426	392	391	392	361	85	86	93	102	81	20.0	21.9	23.8	26.0	22.4
Two or more races	3949	4101	4045	3834	3622	846	1026	1051	1111	1101	21.4	25.0	26.0	29.0	30.4
Unknown	1945	2204	2609	2241	2444	795	1024	977	798	865	40.9	46.5	37.4	35.6	35.4
White	20637	20613	20193	18682	17336	5180	5590	5766	5735	5562	25.1	27.1	28.6	30.7	32.1
3 Year Student	**59810**	**63024**	**63956**	**59945**	**58589**	**16248**	**18432**	**19769**	**19629**	**20215**	**27.2**	**29.2**	**30.9**	**32.7**	**34.5**
Asian	7658	8042	8386	8293	7763	2953	3402	3699	3686	3634	38.6	42.3	44.1	44.4	46.8
Black	3862	3643	3706	3277	3116	618	702	745	724	782	16.0	19.3	20.1	22.1	25.1
Latino	30955	33805	33747	31915	32269	7949	9021	9580	9588	10170	25.7	26.7	28.4	30.0	31.5
Native American	211	199	226	189	169	39	38	48	61	51	18.5	19.1	21.2	32.3	30.2
Pacific Islander	249	275	290	245	263	59	70	77	80	87	23.7	25.5	26.6	32.7	33.1
Two or more races	2627	2722	2783	2598	2435	661	703	819	791	850	25.2	25.8	29.4	30.4	34.9
Unknown	1079	972	1454	1160	1379	354	393	539	475	466	32.8	40.4	37.1	40.9	33.8
White	13169	13366	13364	12268	11195	3615	4103	4262	4224	4175	27.5	30.7	31.9	34.4	37.3
4 Year Student	**40621**	**42165**	**43532**	**41488**	**40316**	**10878**	**12421**	**14032**	**14468**	**14445**	**26.8**	**29.5**	**32.2**	**34.9**	**35.8**
Asian	4987	5023	5140	5170	5004	1853	1994	2226	2367	2273	37.2	39.7	43.3	45.8	45.4
Black	2757	2654	2639	2394	2201	391	500	582	564	546	14.2	18.8	22.1	23.6	24.8
Latino	21052	22829	23802	22930	22654	5505	6459	7337	7638	7702	26.1	28.3	30.8	33.3	34.0
Native American	144	139	174	126	114	35	23	37	30	37	24.3	16.5	21.3	23.8	32.5
Pacific Islander	189	187	195	158	153	39	43	52	55	53	20.6	23.0	26.7	34.8	34.6
Two or more races	1786	1837	1899	1828	1729	440	504	563	600	573	24.6	27.4	29.6	32.8	33.1
Unknown	618	576	759	610	783	183	181	228	214	273	29.6	31.4	30.0	35.1	34.9
White	9088	8920	8924	8272	7678	2432	2717	3007	3000	2988	26.8	30.5	33.7	36.3	38.9

	Fall Transfer-Intending Student Counts (exc. transfer within 2 year)					Students Completing 60 TL Units + TL Math and English in Two Years (as of Second Fall)					Share of Total				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
5+ Year Student	**169397**	**171739**	**173707**	**167200**	**163364**	**34278**	**38446**	**43703**	**47866**	**51780**	**20.2**	**22.4**	**25.2**	**28.6**	**31.7**
Asian	17884	17834	17755	17193	16702	5013	5475	5992	6413	6777	28.0	30.7	33.7	37.3	40.6
Black	17196	16402	16064	15535	14238	1918	2148	2469	2761	2934	11.2	13.1	15.4	17.8	20.6
Latino	77344	81993	84546	84368	84867	15868	18587	21764	24796	27599	20.5	22.7	25.7	29.4	32.5
Native American	1173	1133	1139	829	795	194	169	182	190	186	16.5	14.9	16.0	22.9	23.4
Pacific Islander	908	874	860	748	751	170	169	185	195	206	18.7	19.3	21.5	26.1	27.4
Two or more races	6924	7335	7716	7652	7406	1253	1500	1791	1988	2189	18.1	20.4	23.2	26.0	29.6
Unknown	3465	3156	3768	2886	4225	812	721	879	790	1030	23.4	22.8	23.3	27.4	24.4
White	44503	43012	41859	37989	34380	9050	9677	10441	10733	10859	20.3	22.5	24.9	28.3	31.6
Total	**504482**	**513856**	**516686**	**492944**	**481363**	**110347**	**121924**	**131638**	**136646**	**142062**	**21.9**	**23.7**	**25.5**	**27.7**	**29.5**

SOURCE: Authors' calculations using MIS data.

NOTE: Years indicate years since first enrollment in the community college system. Course transfer status indicates whether a course is transferable to UC and/or the CSU systems on the basis of articulation agreements. Transfer-level English courses are introductory college composition courses that fulfill English composition general education requirements for transfer to a four-year institution. Transfer-level math courses include college algebra, trigonometry, pre-calculus, finite math, applied calculus, statistics, liberal arts math, math for teachers and other quantitative reasoning courses that meet transfer requirements to UC or CSU systems. For two year, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our two year outcomes we exclude students who transferred within two years. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in transferable courses.

Appendix D. Regression Analysis: Modeling COVID impacts

In our regression analyses, we attempt to compare students that experienced the COVID-19 pandemic in fall 2020 and 2021 to otherwise similar students in prior terms who did not. We do this by controlling for a variety of student demographics and characteristics, including their time enrolled in community college, their race and ethnicity, and their pre-fall academic outcomes. All students included in our subsample of fall-enrolled transfer-intending students attempted at least one credit course from 2015 to 2021.[1]

Appendix tables D1 through D12 show regression and linear probability models predicting the following fall, one year, and two year outcomes: (A) whether a student would enroll in the fall term of interest, (B) whether a student would enroll and successfully complete at least one course with a C or better in the fall term of interest, (C) how many cumulative transfer units a student would attempt up until the fall term of interest, (D) how many cumulative transfer units a student would earn up until the fall term of interest, and (E) a student's cumulative GPA up until the fall term of intern.

All final models contain campus fixed effects and student demographic characteristics including race/ethnicity, years since first enrollment, age, gender, parent education, citizenship status, disability status and foster status. In addition, we have rich academic data for continuing students, so many of our analyses focus on them. When estimating for continuing students, we include prior college academic characteristics including cumulative units attempted and earned before the fall, cumulative GPA, and success in transfer-level English and math courses.

For example, for our one year outcomes (fall-to-next fall), we estimate the difference in outcomes associated with being enrolled during fall of 2019 and 2020 as:

$$Y_i = \beta_0 + \beta_1 COVID\_Enrolled_i + \sum \gamma X_i + CollegeFE + e_i$$

Where Y is the next-fall outcome of interest for student i, β_0 is the intercept, COVID_Enrolled represents whether student i was enrolled in the fall 2019 or 2020 term, and β_1 is the estimate of the difference in one-year outcome Y associated with enrollment during COVID. The covariates are represented by X for student i, and their estimates are γ. CollegeFE are college fixed effects that control for unobserved college differences, and e is the error term for student i clustered at the college level.

We also investigate differences in the association of being enrolled during COVID among different student groups by including models that use interactions between certain covariates (race/ethnicity and time since first enrollment) and COVID_Enrolled. In those models:

$$Y_i = \beta_0 + \beta_1 COVID\_Enrolled_i + \beta_2 Black + \beta_3 COVID * Black_i + \beta_3 COVID * Asian_i + \beta_3 COVID * Asian_i + + \cdots + \sum \gamma X_i + CollegeFE + e_i$$

The β_1 represents the main effect for being enrolled during COVID, the β_2 represents the main effect of being Black and β_3 is the interaction term, representing the additional difference in the outcome Y for Black students during COVID. We use white students as the regression reference group for the interactions. We use students who have been in college for one year when estimating differences by length of time enrolled.

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[1] We consider a student to be transfer-intending if they stated a goal to transfer to a four-year institution, with or without an associate's degree, in the fall of interest. We base our identification on the Student Educational Goal variable provided by MIS' Student Basis Data Record file. For first-time students, the informed goal is declared in the term of enrollment after students have reviewed assessment results, gone through orientation, or received other services that help them understand what it would take to achieve the goal. In our analysis, a student—whether first-time or continuing—enrolled in fall 2019 is considered transfer-intending if they had stated a transfer goal in the fall 2019 term specifically. Though it is likely that some students changed their academic goals in subsequent terms, or had stated a different goal in terms prior, for the purposes of the analyses in this report, we only utilize student's stated intentions in the fall of interest for each enrollee group.

Fall outcomes for first-time transfer-intending students

	(1) Persist & Complete Course	(2) Persist & Complete Course	(3) TL Units Attempt	(4) TL Units Attempt	(5) TL Units Earned	(6) TL Units Earned	(7) GPA	(8) GPA
COVID Enrollment	-0.0709***	-0.0633***	1.885***	1.727***	1.048***	0.892***	0.0283***	-0.00422
	(0.000946)	(0.000992)	(0.0109)	(0.0108)	(0.0121)	(0.0122)	(0.00323)	(0.00329)
Gender - Male		-0.0366***		-0.112***		-0.442***		-0.223***
		(0.000814)		(0.00889)		(0.00999)		(0.00268)
Gender - Unknown		-0.0315***		-0.363***		-0.559***		-0.175***
		(0.00376)		(0.0411)		(0.0461)		(0.0124)
Gender - Nonbinary		-0.0214		-0.119		-0.568**		-0.0911
		(0.0145)		(0.158)		(0.178)		(0.0489)
Education - No HS		-0.0459***		-1.385***		-1.124***		-0.0237*
		(0.00345)		(0.0377)		(0.0424)		(0.0116)
Education - Adult		-0.0933***		-1.724***		-1.904***		-0.215***
		(0.00710)		(0.0776)		(0.0871)		(0.0243)
Education - GED		-0.0377***		-0.938***		-0.896***		0.00502
		(0.00280)		(0.0306)		(0.0344)		(0.00944)
Education - Professional Cert		-0.00704		-0.664***		-0.431***		0.138***
		(0.00414)		(0.0452)		(0.0508)		(0.0137)
Education - Foreign		0.0649***		-0.230***		0.390***		0.383***
		(0.00250)		(0.0273)		(0.0307)		(0.00832)
Education - AA		0.0594***		-0.392***		0.204**		0.431***
		(0.00575)		(0.0628)		(0.0705)		(0.0193)
Education - BA		0.0807***		-1.184***		-0.366***		0.567***
		(0.00473)		(0.0517)		(0.0580)		(0.0159)
Education - Unknown		0.0105***		-0.613***		-0.356***		0.143***
		(0.00229)		(0.0250)		(0.0281)		(0.00761)
Race - Unknown		0.0464***		1.443***		1.558***		0.297***
		(0.00238)		(0.0261)		(0.0293)		(0.00790)
Race - White		0.0543***		0.811***		1.223***		0.362***
		(0.00114)		(0.0125)		(0.0140)		(0.00376)
Race - Two + Races		0.0250***		0.758***		0.842***		0.198***
		(0.00200)		(0.0219)		(0.0246)		(0.00660)
Race - Pacific Islander		-0.0140*		0.269***		-0.0229		-0.0339
		(0.00589)		(0.0644)		(0.0723)		(0.0196)
Race - Native American		-0.0373***		-0.114		-0.360***		-0.0679**
		(0.00676)		(0.0739)		(0.0830)		(0.0225)
Race - Black		-0.0665***		0.0239		-0.527***		-0.246***
		(0.00186)		(0.0203)		(0.0228)		(0.00622)
Race - Asian		0.0950***		1.435***		2.027***		0.492***
		(0.00140)		(0.0153)		(0.0172)		(0.00458)
Not First Gen		0.0627***		0.877***		1.241***		0.265***
		(0.00109)		(0.0120)		(0.0134)		(0.00359)
Unknown First Gen		-0.000730		-0.153***		-0.0904***		-0.00364
		(0.00104)		(0.0114)		(0.0128)		(0.00345)
Non-Citizen		0.0228***		-0.178***		0.135***		0.138***
		(0.00142)		(0.0156)		(0.0175)		(0.00470)
Pell Recipient		0.0329***		0.150***		0.156***		0.00384
		(0.000922)		(0.0101)		(0.0113)		(0.00305)
SpecialProgram		0.115***		1.285***		1.835***		0.355***
		(0.00397)		(0.0434)		(0.0487)		(0.0128)
Foster		-0.175***		-1.038***		-2.014***		-0.524***
		(0.00352)		(0.0385)		(0.0432)		(0.0120)
Eops		0.0860***		1.194***		1.298***		0.153***

	(1) Persist & Complete Course	(2) Persist & Complete Course	(3) TL Units Attempt	(4) TL Units Attempt	(5) TL Units Earned	(6) TL Units Earned	(7) GPA	(8) GPA
		(0.00181)		(0.0198)		(0.0222)		(0.00588)
LEP		0.00633*		-4.391***		-3.657***		-0.0923***
		(0.00268)		(0.0293)		(0.0329)		(0.00918)
Disability		0.0108***		-1.612***		-1.286***		-0.0649***
		(0.00199)		(0.0218)		(0.0245)		(0.00658)
NonTraditional Age		-0.0488***		-2.107***		-1.629***		0.289***
		(0.00170)		(0.0185)		(0.0208)		(0.00576)
Prior Dual Enrollment		0.0461***		0.727***		0.968***		0.215***
		(0.00144)		(0.0157)		(0.0176)		(0.00469)
Constant	0.816***	0.753***	8.345***	7.975***	6.190***	5.504***	2.363***	2.192***
	(0.000471)	(0.00255)	(0.00543)	(0.0278)	(0.00603)	(0.0312)	(0.00159)	(0.00841)
N	958196	958196	958196	958196	958196	958196	888674	888674
r2	0.00583	0.0445	0.0302	0.164	0.00775	0.124	0.0000867	0.0909

SOURCE: Authors' calculations using MIS data.

NOTE: All regressions include campus fixed effects. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. Restricted to first-time transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Standard errors in parentheses. * p<0.05; ** p<0.01, *** p<0.001

TABLE D2
One year (next fall) outcomes for first-time transfer-intending students

	(1) Enroll	(2) Persist & Complete Course	(3) TL Units Attempted	(4) TL Units Earned	(5) Cumulative GPA
COVID Enrollment	-0.0542***	-0.0672***	2.390***	1.886***	0.0510***
	(0.00111)	(0.00116)	(0.0340)	(0.0359)	(0.00278)
Gender - Male	-0.0513***	-0.0561***	-1.662***	-2.118***	-0.223***
	(0.00103)	(0.00108)	(0.0316)	(0.0333)	(0.00257)
Gender - Unknown	-0.0938***	-0.0864***	-1.762***	-2.007***	-0.157***
	(0.00473)	(0.00496)	(0.145)	(0.153)	(0.0118)
Gender - Nonbinary	-0.161***	-0.130***	-3.277***	-3.456***	0.0156
	(0.0306)	(0.0321)	(0.938)	(0.989)	(0.0773)
Education - No HS	-0.0722***	-0.0711***	-3.310***	-2.834***	-0.0730***
	(0.00427)	(0.00448)	(0.131)	(0.138)	(0.0109)
Education - Adult	-0.130***	-0.136***	-6.375***	-6.041***	-0.233***
	(0.00883)	(0.00926)	(0.271)	(0.286)	(0.0228)
Education - GED	-0.0840***	-0.0825***	-3.231***	-2.950***	-0.0450***
	(0.00349)	(0.00366)	(0.107)	(0.113)	(0.00888)
Education - Professional Cert	-0.0278***	-0.0202***	-0.820***	-0.493**	0.102***
	(0.00509)	(0.00534)	(0.156)	(0.165)	(0.0128)
Education - Foreign	-0.0244***	0.00713*	0.0249	1.443***	0.354***
	(0.00313)	(0.00329)	(0.0962)	(0.101)	(0.00789)
Education - AA	-0.109***	-0.0819***	-3.096***	-1.739***	0.369***
	(0.00739)	(0.00776)	(0.227)	(0.239)	(0.0188)
Education - BA	-0.144***	-0.117***	-5.834***	-3.982***	0.512***
	(0.00601)	(0.00630)	(0.184)	(0.194)	(0.0153)
Education - Unknown	-0.0735***	-0.0547***	-2.257***	-1.432***	0.139***
	(0.00293)	(0.00307)	(0.0898)	(0.0947)	(0.00738)
Race - Unknown	-0.0611***	-0.00956**	4.247***	4.900***	0.357***
	(0.00311)	(0.00327)	(0.0956)	(0.101)	(0.00783)
Race - White	0.0278***	0.0653***	3.230***	4.126***	0.387***
	(0.00145)	(0.00152)	(0.0446)	(0.0470)	(0.00363)
Race - Two + Races	-0.00659**	0.0146***	2.463***	2.504***	0.191***
	(0.00255)	(0.00268)	(0.0783)	(0.0825)	(0.00638)

	(1) Enroll	(2) Persist & Complete Course	(3) TL Units Attempted	(4) TL Units Earned	(5) Cumulative GPA
Race - Pacific Islander	-0.0730***	-0.0575***	-0.185	-0.853***	-0.0707***
	(0.00742)	(0.00779)	(0.228)	(0.240)	(0.0187)
Race - Native American	-0.143***	-0.110***	-1.224***	-1.482***	-0.104***
	(0.00840)	(0.00881)	(0.258)	(0.272)	(0.0212)
Race - Black	-0.0901***	-0.0864***	-1.450***	-2.237***	-0.254***
	(0.00234)	(0.00245)	(0.0717)	(0.0756)	(0.00592)
Race - Asian	0.103***	0.148***	7.296***	8.104***	0.519***
	(0.00177)	(0.00186)	(0.0543)	(0.0572)	(0.00440)
Not First Gen	0.0731***	0.0849***	3.776***	4.064***	0.245***
	(0.00140)	(0.00146)	(0.0428)	(0.0451)	(0.00348)
Unknown First Gen	-0.0146***	-0.0127***	-0.220***	-0.141***	-0.0143***
	(0.00131)	(0.00138)	(0.0402)	(0.0424)	(0.00329)
Non-Citizen	-0.00593***	0.00747***	0.108*	0.746***	0.144***
	(0.00178)	(0.00187)	(0.0548)	(0.0577)	(0.00447)
Pell Recipient	0.0941***	0.0728***	2.311***	1.402***	-0.0309***
	(0.00118)	(0.00124)	(0.0362)	(0.0382)	(0.00297)
SpecialProgram	0.113***	0.0993***	6.163***	6.079***	0.259***
	(0.00504)	(0.00529)	(0.155)	(0.163)	(0.0124)
Foster	-0.164***	-0.193***	-6.026***	-7.146***	-0.532***
	(0.00440)	(0.00461)	(0.135)	(0.142)	(0.0113)
Eops	0.0877***	0.0863***	4.656***	4.245***	0.129***
	(0.00226)	(0.00237)	(0.0692)	(0.0730)	(0.00559)
LEP	0.0603***	0.0547***	-8.710***	-7.360***	-0.0656***
	(0.00328)	(0.00344)	(0.101)	(0.106)	(0.00836)
Disability	0.0327***	0.0196***	-4.525***	-3.643***	-0.0750***
	(0.00250)	(0.00263)	(0.0768)	(0.0810)	(0.00625)
NonTraditional Age	-0.138***	-0.105***	-7.160***	-5.228***	0.340***
	(0.00218)	(0.00229)	(0.0669)	(0.0706)	(0.00558)
Prior Dual Enrollment	0.0432***	0.0540***	2.389***	2.641***	0.206***
	(0.00185)	(0.00194)	(0.0569)	(0.0599)	(0.00460)
Constant	0.640***	0.509***	21.62***	15.68***	2.140***
	(0.00324)	(0.00340)	(0.0994)	(0.105)	(0.00813)
N	826101	826101	826101	826101	789307
r2	0.0612	0.0604	0.172	0.146	0.116

SOURCE: Authors' calculations using MIS data.

NOTE: All regressions include campus fixed effects. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. Furthermore, for our one year outcomes we exclude students who transferred within one year. Restricted to first-time transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Standard errors in parentheses. * p<0.05; ** p<0.01, *** p<0.001

TABLE D3
Two year (second fall) outcomes for first-time transfer-intending students

	(1) Enroll	(2) Persist & Complete Course	(3) TL Units Attempted	(4) TL Units Earned	(5) Cumulative GPA
COVID Enrollment	-0.0703***	-0.0763***	1.336***	1.133***	0.0289***
	(0.00123)	(0.00120)	(0.0570)	(0.0565)	(0.00278)
Gender - Male	-0.0520***	-0.0469***	-2.927***	-3.244***	-0.215***
	(0.00120)	(0.00118)	(0.0558)	(0.0554)	(0.00272)
Gender - Unknown	-0.119***	-0.0948***	-2.587***	-2.836***	-0.160***
	(0.00547)	(0.00537)	(0.254)	(0.252)	(0.0124)
Gender - Nonbinary	-0.166*	-0.133	-2.908	-0.896	0.335*
	(0.0751)	(0.0736)	(3.485)	(3.455)	(0.171)
Education - No HS	-0.0593***	-0.0564***	-4.127***	-3.453***	-0.0837***
	(0.00485)	(0.00476)	(0.225)	(0.223)	(0.0112)
Education - Adult	-0.0916***	-0.0937***	-9.141***	-8.390***	-0.233***

	(1) Enroll	(2) Persist & Complete Course	(3) TL Units Attempted	(4) TL Units Earned	(5) Cumulative GPA
Education - GED	-0.0684***	-0.0629***	-4.754***	-4.130***	-0.0456***
	(0.00397)	(0.00389)	(0.184)	(0.183)	(0.00914)
Education - Professional Cert	-0.0199***	-0.0173**	-0.991***	-0.543*	0.0931***
	(0.00578)	(0.00566)	(0.268)	(0.266)	(0.0131)
Education - Foreign	-0.0441***	-0.0226***	0.206	2.234***	0.348***
	(0.00358)	(0.00351)	(0.166)	(0.165)	(0.00817)
Education - AA	-0.121***	-0.101***	-6.280***	-4.079***	0.361***
	(0.00859)	(0.00842)	(0.398)	(0.395)	(0.0198)
Education - BA	-0.144***	-0.119***	-10.01***	-7.036***	0.516***
	(0.00696)	(0.00682)	(0.323)	(0.320)	(0.0161)
Education - Unknown	-0.0585***	-0.0469***	-2.780***	-1.550***	0.140***
	(0.00347)	(0.00340)	(0.161)	(0.159)	(0.00789)
Race - Unknown	-0.111***	-0.0705***	5.895***	6.639***	0.348***
	(0.00368)	(0.00361)	(0.171)	(0.169)	(0.00839)
Race - White	0.00833***	0.0346***	4.497***	5.542***	0.373***
	(0.00171)	(0.00168)	(0.0795)	(0.0788)	(0.00387)
Race - Two + Races	-0.0287***	-0.00979***	3.407***	3.354***	0.179***
	(0.00302)	(0.00296)	(0.140)	(0.139)	(0.00683)
Race - Pacific Islander	-0.0981***	-0.0822***	-1.158**	-2.115***	-0.0933***
	(0.00867)	(0.00850)	(0.402)	(0.399)	(0.0197)
Race - Native American	-0.185***	-0.146***	-2.593***	-2.642***	-0.123***
	(0.00958)	(0.00939)	(0.445)	(0.441)	(0.0219)
Race - Black	-0.0966***	-0.0915***	-2.893***	-3.667***	-0.263***
	(0.00270)	(0.00265)	(0.125)	(0.124)	(0.00619)
Race - Asian	0.0751***	0.102***	11.92***	12.43***	0.508***
	(0.00208)	(0.00204)	(0.0966)	(0.0958)	(0.00469)
Not First Gen	0.0551***	0.0571***	5.722***	5.672***	0.221***
	(0.00165)	(0.00162)	(0.0766)	(0.0760)	(0.00373)
Unknown First Gen	-0.0177***	-0.0137***	-0.352***	-0.170*	-0.0135***
	(0.00153)	(0.00149)	(0.0708)	(0.0702)	(0.00346)
Non-Citizen	-0.0250***	-0.0138***	0.326***	1.302***	0.152***
	(0.00206)	(0.00202)	(0.0954)	(0.0946)	(0.00467)
Pell Recipient	0.0949***	0.0770***	4.499***	2.915***	-0.0285***
	(0.00140)	(0.00137)	(0.0648)	(0.0643)	(0.00318)
SpecialProgram	0.105***	0.0916***	10.000***	9.089***	0.211***
	(0.00598)	(0.00586)	(0.277)	(0.275)	(0.0133)
Foster	-0.147***	-0.155***	-9.909***	-10.70***	-0.522***
	(0.00502)	(0.00492)	(0.233)	(0.231)	(0.0116)
Eops	0.0718***	0.0646***	7.077***	5.969***	0.0823***
	(0.00258)	(0.00252)	(0.120)	(0.118)	(0.00578)
LEP	0.0790***	0.0794***	-8.252***	-6.687***	-0.0361***
	(0.00366)	(0.00358)	(0.170)	(0.168)	(0.00840)
Disability	0.0423***	0.0377***	-5.644***	-4.320***	-0.0677***
	(0.00286)	(0.00280)	(0.133)	(0.132)	(0.00646)
NonTraditional Age	-0.106***	-0.0805***	-10.99***	-7.995***	0.331***
	(0.00252)	(0.00247)	(0.117)	(0.116)	(0.00582)
Prior Dual Enrollment	0.0407***	0.0364***	3.476***	3.405***	0.186***
	(0.00227)	(0.00222)	(0.105)	(0.104)	(0.00509)
Constant	0.459***	0.363***	31.02***	22.55***	2.142***
	(0.00380)	(0.00373)	(0.176)	(0.175)	(0.00864)
N	674909	674909	674909	674909	648980
r2	0.0498	0.0453	0.153	0.134	0.119

SOURCE: Authors' calculations using MIS data.

NOTE: All regressions include campus fixed effects. For two year outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our two year outcomes we exclude students who transferred within two years. Restricted to first-time transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Standard errors in parentheses. * p<0.05; ** p<0.01, *** p<0.001

Fall outcomes for continuing transfer-intending students

	(1) Persist & Complete Course	(2) Persist & Complete Course	(3) Persist & Complete Course	(4) TL Units Attempt	(5) TL Units Attempt	(6) TL Units Attempt
COVID Enrollment	-0.0271***	-0.0339***	-0.0398***	0.232***	-0.140***	-0.212***
	(0.000444)	(0.000435)	(0.000429)	(0.00494)	(0.00485)	(0.00486)
Enrolled 2 years	0.00454***	-0.0338***	-0.0124***	-0.111***	-0.846***	-0.752***
	(0.000568)	(0.000569)	(0.000565)	(0.00631)	(0.00634)	(0.00640)
Enrolled 3 years	-0.0179***	-0.0591***	-0.0280***	-1.026***	-1.928***	-1.791***
	(0.000646)	(0.000661)	(0.000660)	(0.00718)	(0.00737)	(0.00747)
Enrolled 4 years	-0.0431***	-0.0751***	-0.0401***	-1.766***	-2.701***	-2.556***
	(0.000750)	(0.000771)	(0.000770)	(0.00834)	(0.00859)	(0.00872)
Enrolled 5+ years	-0.0617***	-0.0699***	-0.0332***	-2.054***	-3.043***	-2.927***
	(0.000619)	(0.000677)	(0.000688)	(0.00688)	(0.00755)	(0.00778)
Gender - Male	-0.00972***	-0.00716***	0.00153***	0.126***	0.110***	0.170***
	(0.000389)	(0.000376)	(0.000373)	(0.00432)	(0.00419)	(0.00422)
Gender - Unknown	-0.00782***	-0.00459*	-0.00275	-0.190***	-0.151***	-0.149***
	(0.00200)	(0.00193)	(0.00192)	(0.0223)	(0.0215)	(0.0217)
Gender - Nonbinary	-0.0337***	-0.00916	-0.0115	0.0378	0.214*	0.187
	(0.00966)	(0.00932)	(0.00929)	(0.107)	(0.104)	(0.105)
Education - No HS	-0.0310***	-0.0231***	-0.0214***	-0.377***	-0.218***	-0.196***
	(0.00176)	(0.00170)	(0.00170)	(0.0196)	(0.0190)	(0.0192)
Education - Adult	-0.0454***	-0.0289***	-0.0239***	-0.859***	-0.582***	-0.523***
Education - GED	-0.0272***	-0.0231***	-0.0276***	-0.226***	-0.0634***	-0.107***
	(0.00101)	(0.000977)	(0.000975)	(0.0113)	(0.0109)	(0.0110)
Education - Professional Cert	-0.00834***	-0.00488**	-0.0113***	-0.00226	0.0358*	-0.00165
	(0.00158)	(0.00153)	(0.00151)	(0.0176)	(0.0170)	(0.0171)
Education - Foreign	0.0487***	0.0302***	0.0114***	0.473***	0.442***	0.355***
	(0.00113)	(0.00109)	(0.00108)	(0.0125)	(0.0121)	(0.0122)
Education - AA	0.0599***	-0.00235*	-0.0152***	-0.372***	-0.816***	-0.903***
	(0.00104)	(0.00102)	(0.00102)	(0.0116)	(0.0114)	(0.0115)
Education - BA	0.0657***	0.0252***	-0.0148***	-1.029***	-0.933***	-1.186***
	(0.00146)	(0.00142)	(0.00142)	(0.0162)	(0.0158)	(0.0161)
Education - Unknown	0.0159***	0.0106***	0.000716	-0.00773	0.0198	-0.0105
	(0.00129)	(0.00125)	(0.00124)	(0.0143)	(0.0139)	(0.0140)
Race - Unknown	0.0382***	0.0278***	0.0174***	1.035***	0.878***	0.788***
	(0.00131)	(0.00127)	(0.00126)	(0.0146)	(0.0141)	(0.0142)
Race - White	0.0536***	0.0342***	0.0127***	0.557***	0.431***	0.281***
	(0.000534)	(0.000516)	(0.000514)	(0.00593)	(0.00575)	(0.00582)
Race - Two + Races	0.0195***	0.0156***	0.00606***	0.630***	0.593***	0.509***
	(0.000956)	(0.000923)	(0.000916)	(0.0106)	(0.0103)	(0.0104)
Race - Pacific Islander	-0.0114***	-0.0000824	-0.00314	0.428***	0.526***	0.501***
	(0.00285)	(0.00275)	(0.00273)	(0.0317)	(0.0306)	(0.0309)
Race - Native American	-0.0122***	-0.00843**	-0.0102***	0.182***	0.265***	0.242***
	(0.00311)	(0.00301)	(0.00300)	(0.0346)	(0.0335)	(0.0340)
Race - Black	-0.0464***	-0.0240***	-0.0121***	0.149***	0.403***	0.462***
	(0.000831)	(0.000803)	(0.000804)	(0.00924)	(0.00895)	(0.00910)
Race - Asian	0.0662***	0.0462***	0.0291***	1.133***	0.816***	0.681***
	(0.000644)	(0.000625)	(0.000619)	(0.00716)	(0.00697)	(0.00701)
Not First Gen	0.0250***	0.0191***	0.0118***	0.492***	0.385***	0.327***
	(0.000524)	(0.000506)	(0.000502)	(0.00582)	(0.00564)	(0.00568)
Unknown First Gen	0.00661***	-0.00158***	-0.000868	-0.0664***	-0.151***	-0.140***
	(0.000471)	(0.000455)	(0.000451)	(0.00524)	(0.00507)	(0.00510)
Non-Citizen	0.0142***	0.00544***	0.000916	0.0355***	-0.0607***	-0.0771***
	(0.000680)	(0.000657)	(0.000649)	(0.00756)	(0.00732)	(0.00734)

	(1) Persist & Complete Course	(2) Persist & Complete Course	(3) Persist & Complete Course	(4) TL Units Attempt	(5) TL Units Attempt	(6) TL Units Attempt
Pell Recipient	-0.00688***	-0.00613***	-0.00140**	0.273***	0.174***	0.201***
	(0.000473)	(0.000458)	(0.000456)	(0.00526)	(0.00510)	(0.00516)
SpecialProgram	0.0617***	0.0327***	0.0211***	1.696***	1.246***	1.202***
	(0.00178)	(0.00172)	(0.00170)	(0.0198)	(0.0192)	(0.0192)
Foster	-0.102***	-0.0695***	-0.0504***	-0.607***	-0.302***	-0.191***
	(0.00168)	(0.00163)	(0.00162)	(0.0187)	(0.0181)	(0.0184)
Eops	0.0803***	0.0599***	0.0452***	1.798***	1.630***	1.528***
	(0.000770)	(0.000744)	(0.000735)	(0.00855)	(0.00829)	(0.00833)
LEP	0.0143***	0.0205***	0.0198***	-1.294***	-1.057***	-0.898***
	(0.00107)	(0.00103)	(0.00102)	(0.0119)	(0.0115)	(0.0116)
Disability	0.0331***	0.0322***	0.0306***	-0.581***	-0.536***	-0.525***
	(0.000881)	(0.000850)	(0.000840)	(0.00979)	(0.00947)	(0.00951)
NonTraditional Age	0.00641***	0.0237***	-0.00874***	-1.105***	-0.833***	-1.055***
	(0.000562)	(0.000545)	(0.000546)	(0.00624)	(0.00608)	(0.00618)
Prior Dual Enrollment	0.0136***	0.00222**	-0.00474***	0.484***	0.277***	0.220***
	(0.000741)	(0.000716)	(0.000702)	(0.00823)	(0.00798)	(0.00795)
Pre-Fall Transfer Units Attempted		-0.00556***	-0.00322***		0.00385***	0.0213***
		(0.0000132)	(0.0000143)		(0.000147)	(0.000161)
Pre-Fall Transfer Units Earned		0.00841***	0.00490***		0.0187***	-0.00593***
		(0.0000192)	(0.0000208)		(0.000214)	(0.000235)
Pre-Fall Transfer English Success		0.0504***	0.0315***		0.886***	0.763***
		(0.000465)	(0.000458)		(0.00518)	(0.00518)
Pre-Fall Transfer Math Success		0.0549***	0.0250***		1.678***	1.455***
		(0.000625)	(0.000614)		(0.00696)	(0.00696)
Pre-Fall 30 Transfer Units		-0.0200***	-0.0123***		-0.225***	-0.168***
		(0.000824)	(0.000805)		(0.00919)	(0.00912)
Pre-Fall 60 Transfer Units		-0.0705***	-0.0407***		-1.773***	-1.576***
		(0.000864)	(0.000846)		(0.00963)	(0.00958)
Pre-Fall GPA			0.0968***			0.678***
			(0.000249)			(0.00282)
Constant	0.784***	0.756***	0.522***	8.760***	8.155***	6.519***
	(0.00132)	(0.00129)	(0.00142)	(0.0147)	(0.0143)	(0.0161)
N	4112877	4112877	3980057	4112877	4112877	3980057
r2	0.0275	0.0947	0.129	0.143	0.199	0.210

TABLE D4 (CONTINUED)
Fall outcomes for continuing transfer-intending students

	(10) TL Units Earned	(11) TL Units Earned	(12) TL Units Earned	(14) GPA	(15) GPA	(16) GPA
COVID Enrollment	0.229***	-0.102***	-0.203***	0.143***	0.103***	0.0629***
	(0.00541)	(0.00517)	(0.00511)	(0.00145)	(0.00139)	(0.00131)
Enrolled 2 years	-0.0793***	-0.953***	-0.708***	0.0586***	-0.0760***	0.0512***
	(0.00692)	(0.00677)	(0.00673)	(0.00181)	(0.00179)	(0.00169)
Enrolled 3 years	-1.029***	-2.012***	-1.654***	0.0152***	-0.117***	0.0670***
	(0.00786)	(0.00786)	(0.00785)	(0.00207)	(0.00210)	(0.00199)
Enrolled 4 years	-1.744***	-2.634***	-2.238***	-0.0177***	-0.105***	0.101***
	(0.00914)	(0.00917)	(0.00916)	(0.00243)	(0.00246)	(0.00234)
Enrolled 5+ years	-1.996***	-2.662***	-2.269***	-0.0131***	-0.00161	0.215***
	(0.00753)	(0.00805)	(0.00818)	(0.00201)	(0.00217)	(0.00210)
Gender - Male	-0.0665***	-0.0573***	0.0582***	-0.0968***	-0.0911***	-0.0415***
	(0.00474)	(0.00447)	(0.00444)	(0.00126)	(0.00120)	(0.00113)
Gender - Unknown	-0.254***	-0.199***	-0.182***	-0.0404***	-0.0311***	-0.0178**
	(0.0244)	(0.0230)	(0.0229)	(0.00649)	(0.00615)	(0.00581)
Gender - Nonbinary	-0.405***	-0.0381	-0.0923	-0.0689*	0.0264	0.0149
	(0.118)	(0.111)	(0.111)	(0.0320)	(0.0303)	(0.0287)
Education - No HS	-0.440***	-0.256***	-0.243***	-0.0542***	-0.0294***	-0.0334***
	(0.0215)	(0.0202)	(0.0202)	(0.00578)	(0.00548)	(0.00519)
Education - Adult	-0.906***	-0.554***	-0.492***	-0.100***	-0.0449***	-0.0362***
Education - GED	-0.333***	-0.184***	-0.261***	-0.0206***	-0.00798*	-0.0410***
	(0.0123)	(0.0116)	(0.0116)	(0.00333)	(0.00316)	(0.00300)
Education - Professional Cert	-0.0541**	0.00415	-0.0842***	0.0449***	0.0550***	0.0129**
	(0.0192)	(0.0181)	(0.0180)	(0.00515)	(0.00488)	(0.00461)
Education - Foreign	0.894***	0.680***	0.457***	0.262***	0.187***	0.0810***
	(0.0137)	(0.0129)	(0.0128)	(0.00361)	(0.00343)	(0.00322)
Education - AA	0.314***	-0.578***	-0.744***	0.378***	0.145***	0.0806***
	(0.0127)	(0.0122)	(0.0121)	(0.00342)	(0.00330)	(0.00311)
Education - BA	-0.285***	-0.615***	-1.133***	0.520***	0.369***	0.154***
	(0.0178)	(0.0168)	(0.0169)	(0.00481)	(0.00458)	(0.00436)
Education - Unknown	0.126***	0.0901***	-0.0164	0.113***	0.0909***	0.0324***
	(0.0157)	(0.0148)	(0.0147)	(0.00418)	(0.00397)	(0.00374)
Race - Unknown	1.154***	0.943***	0.792***	0.190***	0.150***	0.0871***
	(0.0160)	(0.0151)	(0.0150)	(0.00424)	(0.00402)	(0.00379)
Race - White	0.934***	0.653***	0.364***	0.329***	0.257***	0.137***
	(0.00650)	(0.00614)	(0.00612)	(0.00173)	(0.00164)	(0.00155)
Race - Two + Races	0.614***	0.549***	0.407***	0.135***	0.118***	0.0589***
	(0.0116)	(0.0110)	(0.0109)	(0.00310)	(0.00294)	(0.00277)
Race - Pacific Islander	0.0550	0.233***	0.178***	-0.0797***	-0.0386***	-0.0626***
	(0.0347)	(0.0327)	(0.0325)	(0.00931)	(0.00883)	(0.00834)
Race - Native American	0.0177	0.117**	0.0753*	-0.00503	0.00990	-0.0123
	(0.0379)	(0.0357)	(0.0357)	(0.0102)	(0.00967)	(0.00918)
Race - Black	-0.336***	0.0610***	0.199***	-0.253***	-0.168***	-0.110***
	(0.0101)	(0.00955)	(0.00957)	(0.00273)	(0.00260)	(0.00247)
Race - Asian	1.467***	1.040***	0.798***	0.332***	0.249***	0.153***
	(0.00785)	(0.00744)	(0.00737)	(0.00207)	(0.00198)	(0.00186)
Not First Gen	0.604***	0.473***	0.373***	0.113***	0.0926***	0.0535***
	(0.00638)	(0.00602)	(0.00597)	(0.00169)	(0.00161)	(0.00152)
Unknown First Gen	0.0316***	-0.0996***	-0.0824***	0.0163***	-0.0102***	-0.00412**
	(0.00573)	(0.00541)	(0.00537)	(0.00153)	(0.00145)	(0.00137)
Non-Citizen	0.244***	0.0827***	0.0305***	0.0897***	0.0525***	0.0277***
	(0.00829)	(0.00781)	(0.00772)	(0.00220)	(0.00209)	(0.00196)
Pell Recipient	0.0240***	-0.0255***	0.0374***	-0.0809***	-0.0724***	-0.0436***
	(0.00576)	(0.00544)	(0.00542)	(0.00153)	(0.00146)	(0.00138)
SpecialProgram	1.644***	1.039***	0.914***	0.132***	0.0172**	-0.0415***

	(10) TL Units Earned	(11) TL Units Earned	(12) TL Units Earned	(14) GPA	(15) GPA	(16) GPA
	(0.0217)	(0.0204)	(0.0202)	(0.00567)	(0.00539)	(0.00506)
Foster	-1.285***	-0.754***	-0.531***	-0.341***	-0.223***	-0.135***
	(0.0205)	(0.0193)	(0.0193)	(0.00556)	(0.00528)	(0.00501)
Eops	1.836***	1.505***	1.319***	0.147***	0.0724***	0.0000930
	(0.00937)	(0.00885)	(0.00875)	(0.00245)	(0.00232)	(0.00218)
LEP	-0.954***	-0.729***	-0.611***	-0.00888*	0.0134***	0.0122***
	(0.0130)	(0.0123)	(0.0122)	(0.00346)	(0.00329)	(0.00309)
Disability	-0.303***	-0.270***	-0.275***	0.0234***	0.0294***	0.0244***
	(0.0107)	(0.0101)	(0.01000)	(0.00284)	(0.00270)	(0.00253)
NonTraditional Age	-0.691***	-0.327***	-0.765***	0.246***	0.313***	0.125***
	(0.00684)	(0.00649)	(0.00650)	(0.00183)	(0.00175)	(0.00167)
Prior Dual Enrollment	0.490***	0.241***	0.139***	0.0817***	0.0401***	0.00325
	(0.00902)	(0.00851)	(0.00836)	(0.00238)	(0.00226)	(0.00211)
Pre-Fall Transfer Units Attempted		-0.0535***	-0.0209***		-0.0216***	-0.00753***
		(0.000157)	(0.000170)		(0.0000438)	(0.0000452)
Pre-Fall Transfer Units Earned		0.0936***	0.0459***		0.0302***	0.00976***
		(0.000228)	(0.000247)		(0.0000628)	(0.0000648)
Pre-Fall Transfer English Success		1.069***	0.822***		0.151***	0.0576***
		(0.00553)	(0.00545)		(0.00148)	(0.00138)
Pre-Fall Transfer Math Success		1.794***	1.378***		0.300***	0.140***
		(0.00743)	(0.00731)		(0.00197)	(0.00184)
Pre-Fall 30 Transfer Units		-0.117***	-0.0110		-0.0123***	0.0187***
		(0.00980)	(0.00958)		(0.00258)	(0.00240)
Pre-Fall 60 Transfer Units		-2.029***	-1.636***		-0.231***	-0.0761***
		(0.0103)	(0.0101)		(0.00273)	(0.00254)
Pre-Fall GPA			1.320***			0.559***
			(0.00297)			(0.000766)
Constant	6.473***	5.834***	2.629***	2.408***	2.328***	0.924***
	(0.0161)	(0.0153)	(0.0169)	(0.00430)	(0.00412)	(0.00434)
N	4112877	4112877	3980057	3755998	3755998	3646286
r2	0.113	0.213	0.250	0.0660	0.160	0.269

SOURCE: Authors' calculations using MIS data.

NOTE: All regressions include campus fixed effects. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Standard errors in parentheses. * p<0.05; ** p<0.01, *** p<0.001

One year (next fall) outcomes for continuing transfer-intending students

	(1) Enroll	(2) Enroll	(3) Enroll	(4) Persist & Complete Course	(5) Persist & Complete Course	(6) Persist & Complete Course	(7) TL Units Attempt	(8) TL Units Attempt
COVID Enrollment	-0.0371***	-0.0468***	-0.0488***	-0.0478***	-0.0557***	-0.0581***	-0.323***	-1.049***
	(0.000608)	(0.000610)	(0.000616)	(0.000621)	(0.000620)	(0.000624)	(0.0165)	(0.0163)
Enrolled 2 years	-0.0430***	-0.0636***	-0.0455***	-0.0517***	-0.0718***	-0.0484***	-2.343***	-3.715***
	(0.000820)	(0.000839)	(0.000853)	(0.000837)	(0.000852)	(0.000864)	(0.0223)	(0.0224)
Enrolled 3 years	-0.0871***	-0.106***	-0.0816***	-0.105***	-0.119***	-0.0877***	-5.408***	-6.984***
	(0.000954)	(0.000995)	(0.00101)	(0.000974)	(0.00101)	(0.00103)	(0.0259)	(0.0266)
Enrolled 4 years	-0.115***	-0.128***	-0.102***	-0.136***	-0.139***	-0.105***	-7.309***	-8.844***
	(0.00111)	(0.00116)	(0.00119)	(0.00113)	(0.00118)	(0.00120)	(0.0302)	(0.0311)
Enrolled 5+ years	-0.129***	-0.135***	-0.109***	-0.150***	-0.136***	-0.102***	-7.741***	-9.240***
	(0.000892)	(0.000994)	(0.00103)	(0.000911)	(0.00101)	(0.00105)	(0.0242)	(0.0266)
Gender - Male	-0.0293***	-0.0265***	-0.0208***	-0.0265***	-0.0237***	-0.0160***	-0.250***	-0.310***
	(0.000567)	(0.000564)	(0.000573)	(0.000579)	(0.000573)	(0.000581)	(0.0154)	(0.0151)
Gender - Unknown	-0.0757***	-0.0735***	-0.0735***	-0.0604***	-0.0587***	-0.0581***	-0.651***	-0.605***
	(0.00293)	(0.00291)	(0.00297)	(0.00300)	(0.00296)	(0.00300)	(0.0797)	(0.0778)
Gender - Nonbinary	-0.161***	-0.154***	-0.157***	-0.148***	-0.134***	-0.141***	-0.277	-0.0814
	(0.0216)	(0.0214)	(0.0219)	(0.0220)	(0.0218)	(0.0222)	(0.586)	(0.572)
Education - No HS	-0.0449***	-0.0375***	-0.0347***	-0.0495***	-0.0417***	-0.0396***	-1.449***	-1.055***
	(0.00248)	(0.00247)	(0.00252)	(0.00254)	(0.00251)	(0.00256)	(0.0675)	(0.0659)
Education - Adult	-0.0365***	-0.0236***	-0.0184***	-0.0459***	-0.0308***	-0.0248***	-2.454	-1.764***
Education - GED	-0.0223***	-0.0186***	-0.0199***	-0.0270***	-0.0242***	-0.0276***	-0.684***	-0.347***
	(0.00144)	(0.00144)	(0.00147)	(0.00148)	(0.00146)	(0.00149)	(0.0393)	(0.0383)
Education - Professional Cert	-0.00796***	-0.00604**	-0.00925***	-0.0103***	-0.00782***	-0.0123***	0.102	0.180**
	(0.00226)	(0.00225)	(0.00229)	(0.00231)	(0.00228)	(0.00232)	(0.0615)	(0.0600)
Education - Foreign	-0.0118***	-0.00990***	-0.0236***	0.0182***	0.0128***	-0.00570***	1.404***	1.397***
	(0.00165)	(0.00164)	(0.00167)	(0.00169)	(0.00167)	(0.00169)	(0.0449)	(0.0439)
Education - AA	-0.0821***	-0.0794***	-0.0898***	-0.0460***	-0.0595***	-0.0735***	-2.832***	-3.338***
	(0.00169)	(0.00171)	(0.00174)	(0.00173)	(0.00174)	(0.00177)	(0.0460)	(0.0457)
Education - BA	-0.0889***	-0.0800***	-0.106***	-0.0447***	-0.0552***	-0.0923***	-4.041***	-3.723***
	(0.00210)	(0.00209)	(0.00215)	(0.00214)	(0.00213)	(0.00218)	(0.0570)	(0.0559)
Education - Unknown	-0.0259***	-0.0239***	-0.0307***	-0.0148***	-0.0158***	-0.0253***	-0.329***	-0.261***
	(0.00188)	(0.00186)	(0.00190)	(0.00192)	(0.00189)	(0.00192)	(0.0510)	(0.0498)
Race - Unknown	-0.0888***	-0.0908***	-0.0984***	-0.0522***	-0.0556***	-0.0660***	2.443***	2.167***
	(0.00194)	(0.00193)	(0.00196)	(0.00198)	(0.00196)	(0.00199)	(0.0528)	(0.0515)
Race - White	-0.00916***	-0.0151***	-0.0306***	0.0235***	0.0122***	-0.00857***	1.401***	1.109***
	(0.000786)	(0.000782)	(0.000798)	(0.000803)	(0.000795)	(0.000808)	(0.0214)	(0.0209)
Race - Two + Races	-0.0361***	-0.0362***	-0.0433***	-0.0146***	-0.0155***	-0.0250***	1.370***	1.303***
	(0.00140)	(0.00139)	(0.00142)	(0.00143)	(0.00142)	(0.00144)	(0.0381)	(0.0372)

	(1) Enroll	(2) Enroll	(3) Enroll	(4) Persist & Complete Course	(5) Persist & Complete Course	(6) Persist & Complete Course	(7) TL Units Attempt	(8) TL Units Attempt
Race - Pacific Islander	-0.0743***	-0.0672***	-0.0700***	-0.0623***	-0.0524***	-0.0559***	0.587***	0.861***
	(0.00413)	(0.00410)	(0.00417)	(0.00421)	(0.00416)	(0.00423)	(0.112)	(0.109)
Race - Native American	-0.0990***	-0.0959***	-0.0933***	-0.0761***	-0.0722***	-0.0722***	0.0770	0.280*
	(0.00444)	(0.00441)	(0.00452)	(0.00454)	(0.00448)	(0.00458)	(0.121)	(0.118)
Race - Black	-0.0725***	-0.0610***	-0.0525***	-0.0717***	-0.0553***	-0.0452***	-0.509***	0.121***
	(0.00119)	(0.00118)	(0.00121)	(0.00121)	(0.00120)	(0.00123)	(0.0322)	(0.0315)
Race - Asian	0.0144***	0.00832***	-0.00460***	0.0489***	0.0388***	0.0220***	3.948***	3.202***
	(0.000952)	(0.000951)	(0.000964)	(0.000973)	(0.000966)	(0.000977)	(0.0259)	(0.0254)
Not First Gen	0.0203***	0.0176***	0.0121***	0.0261***	0.0233***	0.0163***	1.704***	1.494***
	(0.000774)	(0.000769)	(0.000782)	(0.000791)	(0.000782)	(0.000792)	(0.0210)	(0.0205)
Unknown First Gen	0.00355***	0.000248	0.000906	0.00506***	0.000427	0.00107	-0.125***	-0.327***
	(0.000685)	(0.000682)	(0.000692)	(0.000700)	(0.000692)	(0.000701)	(0.0186)	(0.0182)
Non-Citizen	-0.0149***	-0.0171***	-0.0210***	-0.00450***	-0.00957***	-0.0146***	0.123***	-0.138***
	(0.000993)	(0.000987)	(0.000998)	(0.00101)	(0.00100)	(0.00101)	(0.0270)	(0.0264)
Pell Recipient	0.0506***	0.0498***	0.0505***	0.0332***	0.0352***	0.0380***	1.762***	1.659***
	(0.000704)	(0.000700)	(0.000714)	(0.000719)	(0.000711)	(0.000723)	(0.0191)	(0.0187)
SpecialProgram	0.0941***	0.0826***	0.0747***	0.0889***	0.0711***	0.0604***	6.550***	5.389***
	(0.00271)	(0.00269)	(0.00272)	(0.00276)	(0.00273)	(0.00275)	(0.0735)	(0.0719)
Foster	-0.0802***	-0.0663***	-0.0533***	-0.108***	-0.0864***	-0.0699***	-2.725***	-2.003***
	(0.00242)	(0.00240)	(0.00246)	(0.00247)	(0.00244)	(0.00249)	(0.0657)	(0.0641)
Eops	0.114***	0.104***	0.0949***	0.113***	0.0980***	0.0847***	6.419***	6.032***
	(0.00115)	(0.00115)	(0.00116)	(0.00118)	(0.00116)	(0.00118)	(0.0313)	(0.0306)
LEP	0.0349***	0.0473***	0.0471***	0.0445***	0.0552***	0.0550***	-2.396***	-1.762***
	(0.00153)	(0.00153)	(0.00155)	(0.00157)	(0.00155)	(0.00157)	(0.0417)	(0.0407)
Disability	0.0808***	0.0826***	0.0822***	0.0734***	0.0751***	0.0748***	-0.717***	-0.528***
	(0.00129)	(0.00129)	(0.00130)	(0.00132)	(0.00131)	(0.00132)	(0.0352)	(0.0343)
NonTraditional Age	-0.0313***	-0.0241***	-0.0452***	-0.0144***	-0.00497***	-0.0349***	-3.000***	-2.416***
	(0.000824)	(0.000822)	(0.000844)	(0.000842)	(0.000836)	(0.000855)	(0.0224)	(0.0220)
Prior Dual Enrollment	0.0216***	0.0187***	0.0146***	0.0212***	0.0179***	0.0117***	1.780***	1.416***
	(0.00113)	(0.00113)	(0.00113)	(0.00116)	(0.00114)	(0.00114)	(0.0308)	(0.0301)
Pre-Fall Transfer Units Attempted		-0.00113***	0.000430***		-0.00349***	-0.00133***		-0.00187***
		(0.0000205)	(0.0000225)		(0.0000208)	(0.0000228)		(0.000548)
Pre-Fall Transfer Units Earned		0.00189***	-0.000518***		0.00478***	0.00147***		0.0383***
		(0.0000305)	(0.0000333)		(0.0000310)	(0.0000338)		(0.000815)
Pre-Fall Transfer English Success		0.100***	0.0871***		0.104***	0.0858***		3.440***
		(0.000679)	(0.000682)		(0.000690)	(0.000691)		(0.0181)
Pre-Fall Transfer Math Success		0.0619***	0.0430***		0.0796***	0.0533***		5.475***
		(0.000944)	(0.000946)		(0.000959)	(0.000959)		(0.0252)
Pre-Fall 30 Transfer Units		-0.0749***	-0.0680***		-0.0775***	-0.0684***		-2.311***
		(0.00135)	(0.00134)		(0.00137)	(0.00136)		(0.0360)
Pre-Fall 60 Transfer Units		-0.119***	-0.0962***		-0.117***	-0.0871***		-5.617***

	(1)	(2)	(3)	(4) Persist & Complete Course	(5) Persist & Complete Course	(6) Persist & Complete Course	(7) TL Units Attempt	(8) TL Units Attempt
	Enroll	Enroll	Enroll					
			(0.00159)	(0.00158)		(0.00161)	(0.00160)	(0.0424)
Pre-Fall GPA			0.0633***			0.0874***		
			(0.000367)			(0.000372)		
Constant	0.659***	0.616***	0.466***	0.534***	0.491***	0.283***	24.02***	22.30***
	(0.00191)	(0.00191)	(0.00213)	(0.00195)	(0.00194)	(0.00216)	(0.0518)	(0.0509)
N	3003388	3003388	2883021	3003388	3003388	2883021	3003388	3003388
r2	0.0385	0.0524	0.0605	0.0385	0.0623	0.0793	0.175	0.214

TABLE D5 (CONTINUED)

One year (next fall) outcomes for continuing transfer-intending students

	(9) TL Units Attempt	(10) TL Units Earn	(11) TL Units Earn	(12) TL Units Earn	(13) GPA	(14) GPA	(15) GPA
COVID Enrollment	-1.186***	0.0832***	-0.455***	-0.582***	0.112***	0.0926***	0.0824***
	(0.0163)	(0.0163)	(0.0158)	(0.0156)	(0.00145)	(0.00139)	(0.00130)
Enrolled 2 years	-3.056***	-2.530***	-3.753***	-2.850***	-0.0226***	-0.0984***	0.0337***
	(0.0225)	(0.0219)	(0.0217)	(0.0216)	(0.00193)	(0.00189)	(0.00178)
Enrolled 3 years	-6.142***	-5.496***	-6.651***	-5.470***	-0.0755***	-0.136***	0.0418***
	(0.0268)	(0.0255)	(0.0258)	(0.0257)	(0.00225)	(0.00225)	(0.00213)
Enrolled 4 years	-7.992***	-7.100***	-7.928***	-6.702***	-0.0888***	-0.111***	0.0781***
	(0.0313)	(0.0297)	(0.0302)	(0.0300)	(0.00263)	(0.00265)	(0.00251)
Enrolled 5+ years	-8.491***	-7.380***	-7.602***	-6.420***	-0.0771***	-0.0112***	0.185***
	(0.0273)	(0.0238)	(0.0258)	(0.0261)	(0.00212)	(0.00227)	(0.00219)
Gender - Male	-0.0440**	-0.520***	-0.545***	-0.199***	-0.0975***	-0.0991***	-0.0528***
	(0.0151)	(0.0152)	(0.0146)	(0.0145)	(0.00135)	(0.00128)	(0.00121)
Gender - Unknown	-0.573***	-0.734***	-0.707***	-0.653***	-0.0417***	-0.0433***	-0.0323***
	(0.0782)	(0.0784)	(0.0755)	(0.0750)	(0.00696)	(0.00662)	(0.00624)
Gender - Nonbinary	-0.233	-0.632	-0.0804	-0.354	-0.0446	0.0290	-0.0278
	(0.577)	(0.577)	(0.555)	(0.553)	(0.0513)	(0.0488)	(0.0461)
Education - No HS	-0.939***	-1.401***	-1.021***	-0.935***	-0.0681***	-0.0459***	-0.0454***
	(0.0666)	(0.0664)	(0.0640)	(0.0638)	(0.00595)	(0.00566)	(0.00536)
Education - Adult	-1.510***	-2.304***	-1.563***	-1.318***	-0.0965***	-0.0457***	-0.0352**
Education - GED	-0.482***	-0.785***	-0.546***	-0.733***	-0.0301***	-0.0225***	-0.0501***
	(0.0387)	(0.0386)	(0.0372)	(0.0371)	(0.00347)	(0.00330)	(0.00312)
Education - Professional Cert	0.0301	0.0110	0.114*	-0.103	0.0456***	0.0542***	0.0186***
	(0.0603)	(0.0605)	(0.0583)	(0.0578)	(0.00540)	(0.00513)	(0.00483)
Education - Foreign	0.869***	2.462***	2.112***	1.379***	0.275***	0.215***	0.109***
	(0.0440)	(0.0442)	(0.0426)	(0.0422)	(0.00390)	(0.00371)	(0.00349)
Education - AA	-3.794***	-1.204***	-2.389***	-2.971***	0.366***	0.177***	0.104***
	(0.0460)	(0.0453)	(0.0444)	(0.0441)	(0.00410)	(0.00396)	(0.00374)
Education - BA	-4.898***	-1.863***	-2.524***	-4.086***	0.605***	0.447***	0.233***
	(0.0568)	(0.0560)	(0.0543)	(0.0545)	(0.00506)	(0.00484)	(0.00461)
Education - Unknown	-0.470***	0.110*	0.0302	-0.300***	0.120***	0.0989***	0.0397***
	(0.0501)	(0.0502)	(0.0483)	(0.0480)	(0.00446)	(0.00424)	(0.00399)
Race - Unknown	1.800***	2.644***	2.341***	1.898***	0.185***	0.160***	0.102***

	(9) TL Units Attempt	(10) TL Units Earn	(11) TL Units Earn	(12) TL Units Earn	(13) GPA	(14) GPA	(15) GPA
	(0.0517)	(0.0519)	(0.0500)	(0.0496)	(0.00460)	(0.00438)	(0.00412)
Race - White	0.419***	2.207***	1.666***	0.792***	0.330***	0.270***	0.156***
	(0.0210)	(0.0210)	(0.0203)	(0.0202)	(0.00187)	(0.00178)	(0.00168)
Race - Two + Races	0.975***	1.278***	1.184***	0.789***	0.118***	0.107***	0.0552***
	(0.0374)	(0.0375)	(0.0361)	(0.0358)	(0.00333)	(0.00317)	(0.00299)
Race - Pacific Islander	0.740***	-0.287**	0.122	-0.0445	-0.0887***	-0.0510***	-0.0754***
	(0.110)	(0.110)	(0.106)	(0.105)	(0.00987)	(0.00938)	(0.00885)
Race - Native American	0.226	-0.160	0.0516	-0.0100	-0.0227*	-0.00748	-0.0231*
	(0.119)	(0.119)	(0.114)	(0.114)	(0.0107)	(0.0101)	(0.00962)
Race - Black	0.473***	-1.366***	-0.549***	-0.0965**	-0.268***	-0.196***	-0.138***
	(0.0319)	(0.0317)	(0.0306)	(0.0306)	(0.00285)	(0.00271)	(0.00257)
Race - Asian	2.597***	4.385***	3.571***	2.833***	0.345***	0.280***	0.191***
	(0.0254)	(0.0255)	(0.0247)	(0.0244)	(0.00225)	(0.00215)	(0.00202)
Not First Gen	1.236***	1.718***	1.526***	1.222***	0.104***	0.0927***	0.0583***
	(0.0206)	(0.0207)	(0.0199)	(0.0198)	(0.00184)	(0.00175)	(0.00164)
Unknown First Gen	-0.289***	0.0702***	-0.182***	-0.136***	0.0175***	-0.00784***	-0.00204
	(0.0182)	(0.0183)	(0.0177)	(0.0175)	(0.00163)	(0.00155)	(0.00146)
Non-Citizen	-0.270***	0.670***	0.312***	0.124***	0.0999***	0.0664***	0.0402***
	(0.0263)	(0.0265)	(0.0256)	(0.0252)	(0.00235)	(0.00224)	(0.00210)
Pell Recipient	1.712***	0.774***	0.828***	0.951***	-0.0931***	-0.0768***	-0.0533***
	(0.0188)	(0.0188)	(0.0182)	(0.0180)	(0.00167)	(0.00159)	(0.00150)
SpecialProgram	5.087***	5.616***	4.319***	3.895***	0.140***	0.0348***	-0.0216***
	(0.0717)	(0.0723)	(0.0698)	(0.0687)	(0.00633)	(0.00603)	(0.00565)
Foster	-1.445***	-3.791***	-2.765***	-2.072***	-0.354***	-0.257***	-0.170***
	(0.0648)	(0.0646)	(0.0623)	(0.0621)	(0.00581)	(0.00553)	(0.00524)
Eops	5.602***	5.468***	4.822***	4.258***	0.104***	0.0444***	-0.0282***
	(0.0306)	(0.0308)	(0.0297)	(0.0293)	(0.00270)	(0.00257)	(0.00241)
LEP	-1.342***	-1.435***	-0.932***	-0.614***	0.0296***	0.0470***	0.0369***
	(0.0408)	(0.0410)	(0.0396)	(0.0391)	(0.00364)	(0.00346)	(0.00325)
Disability	-0.509***	-0.192***	-0.0462	-0.0550	0.0412***	0.0468***	0.0412***
	(0.0343)	(0.0346)	(0.0333)	(0.0329)	(0.00306)	(0.00291)	(0.00273)
NonTraditional Age	-3.428***	-1.729***	-1.115***	-2.438***	0.267***	0.313***	0.132***
	(0.0223)	(0.0220)	(0.0213)	(0.0213)	(0.00197)	(0.00188)	(0.00179)
Prior Dual Enrollment	1.191***	1.499***	1.168***	0.877***	0.0690***	0.0441***	0.00655**
	(0.0298)	(0.0303)	(0.0292)	(0.0285)	(0.00267)	(0.00254)	(0.00236)
Pre-Fall Transfer Units Attempted	0.0752***		-0.129***	-0.0314***		-0.0207***	-0.00786***
	(0.000593)		(0.000532)	(0.000569)		(0.0000474)	(0.0000482)
Pre-Fall Transfer Units Earned	-0.0737***		0.192***	0.0471***		0.0285***	0.00940***
	(0.000879)		(0.000792)	(0.000843)		(0.0000701)	(0.0000710)
Pre-Fall Transfer English Success	2.890***		3.544***	2.812***		0.184***	0.0916***
	(0.0180)		(0.0176)	(0.0172)		(0.00154)	(0.00143)
Pre-Fall Transfer Math Success	4.556***		5.375***	4.197***		0.310***	0.164***
	(0.0250)		(0.0245)	(0.0239)		(0.00213)	(0.00198)
Pre-Fall 30 Transfer Units	-2.015***		-2.225***	-1.838***		-0.0916***	-0.0501***
	(0.0354)		(0.0350)	(0.0340)		(0.00303)	(0.00280)
Pre-Fall 60 Transfer Units	-4.677***		-5.404***	-4.166***		-0.223***	-0.0671***
	(0.0417)		(0.0411)	(0.0400)		(0.00359)	(0.00333)
Pre-Fall GPA	2.967***			3.848***			0.512***
	(0.00969)			(0.00929)			(0.000781)
Constant	15.25***	18.08***	16.48***	7.294***	2.329***	2.249***	0.994***
	(0.0563)	(0.0509)	(0.0495)	(0.0540)	(0.00453)	(0.00435)	(0.00452)

	(9) TL Units Attempt	(10) TL Units Earn	(11) TL Units Earn	(12) TL Units Earn	(13) GPA	(14) GPA	(15) GPA
N	2883021	3003388	3003388	2883021	2837775	2837775	2732384
r2	0.239	0.146	0.208	0.253	0.0794	0.168	0.283

SOURCE: Authors' calculations using MIS data.

NOTE: All regressions include campus fixed effects. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. Furthermore, for our one year outcomes we exclude students who transferred within one year. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Standard errors in parentheses. * p<0.05; ** p<0.01, *** p<0.001

TABLE D6

Two year (second fall) outcomes for continuing transfer-intending students

	(1) Enroll	(2) Enroll	(3) Enroll	(4) Persist & Complete Course	(5) Persist & Complete Course	(6) Persist & Complete Course	(7) TL Units Attempt	(8) TL Units Attempt
COVID Enrollment	-0.0419***	-0.0453***	-0.0461***	-0.0442***	-0.0461***	-0.0466***	1.067***	-1.656***
	(0.000658)	(0.000660)	(0.000673)	(0.000625)	(0.000626)	(0.000638)	(0.0267)	(0.0264)
Enrolled 2 years	-0.0398***	-0.0446***	-0.0329***	-0.0440***	-0.0470***	-0.0329***	3.998***	-5.476***
	(0.000944)	(0.000967)	(0.000990)	(0.000896)	(0.000918)	(0.000938)	(0.0383)	(0.0387)
Enrolled 3 years	-0.0704***	-0.0723***	-0.0572***	-0.0757***	-0.0730***	-0.0547***	8.101***	-9.823***
	(0.00109)	(0.00114)	(0.00117)	(0.00104)	(0.00109)	(0.00111)	(0.0443)	(0.0458)
Enrolled 4 years	-0.0900***	-0.0888***	-0.0724***	-0.0968***	-0.0881***	-0.0689***	10.61***	-12.28***
	(0.00127)	(0.00133)	(0.00137)	(0.00120)	(0.00126)	(0.00130)	(0.0514)	(0.0533)
Enrolled 5+ years	-0.0996***	-0.0970***	-0.0802***	-0.105***	-0.0880***	-0.0681***	11.10***	-12.75***
	(0.00101)	(0.00113)	(0.00118)	(0.000962)	(0.00107)	(0.00112)	(0.0411)	(0.0452)
Gender - Male	-0.0338***	-0.0314***	-0.0279***	-0.0263***	-0.0240***	-0.0195***	0.801***	-0.866***
	(0.000647)	(0.000647)	(0.000663)	(0.000614)	(0.000614)	(0.000628)	(0.0262)	(0.0259)
Gender - Unknown	-0.0932***	-0.0917***	-0.0920***	-0.0699***	-0.0690***	-0.0689***	0.808***	-0.741***
	(0.00340)	(0.00340)	(0.00349)	(0.00323)	(0.00322)	(0.00330)	(0.138)	(0.136)
Gender - Nonbinary	-0.193***	-0.194***	-0.190***	-0.151***	-0.147***	-0.146***	-2.131	-2.672
	(0.0418)	(0.0417)	(0.0425)	(0.0397)	(0.0396)	(0.0403)	(1.695)	(1.669)
Education - No HS	-0.0357***	-0.0329***	-0.0303***	-0.0379***	-0.0353***	-0.0335***	2.187***	-1.771***
	(0.00275)	(0.00275)	(0.00284)	(0.00262)	(0.00261)	(0.00269)	(0.112)	(0.110)
Education - Adult	-0.0103	-0.00596	-0.00292	-0.0163**	-0.0111*	-0.00760	3.208***	-2.418***
Education - GED	-0.0156***	-0.0150***	-0.0153***	-0.0177***	-0.0180***	-0.0191***	0.845***	-0.478***
	(0.00162)	(0.00161)	(0.00166)	(0.00153)	(0.00153)	(0.00158)	(0.0655)	(0.0646)
Education - Professional Cert	-0.000245	0.00000689	-0.000363	0.0000263	0.000776	0.000154	0.283**	0.374***
	(0.00254)	(0.00254)	(0.00260)	(0.00242)	(0.00241)	(0.00247)	(0.103)	(0.102)
Education - Foreign	-0.0336***	-0.0282***	-0.0365***	-0.0109***	-0.0108***	-0.0211***	1.547***	1.598***
	(0.00188)	(0.00188)	(0.00192)	(0.00178)	(0.00178)	(0.00182)	(0.0762)	(0.0752)
Education - AA	-0.0788***	-0.0604***	-0.0657***	-0.0481***	-0.0411***	-0.0486***	4.473***	-4.601***
	(0.00193)	(0.00196)	(0.00201)	(0.00183)	(0.00186)	(0.00191)	(0.0782)	(0.0784)
Education - BA	-0.0719***	-0.0547***	-0.0694***	-0.0367***	-0.0341***	-0.0542***	5.695***	-5.055***
	(0.00235)	(0.00236)	(0.00245)	(0.00223)	(0.00224)	(0.00232)	(0.0952)	(0.0943)
Education - Unknown	-0.0302***	-0.0277***	-0.0316***	-0.0199***	-0.0196***	-0.0245***	0.616***	-0.567***

	(1)	(2)	(3)	(4) Persist & Complete Course	(5) Persist & Complete Course	(6) Persist & Complete Course	(7) TL Units Attempt	(8) TL Units Attempt
	Enroll	Enroll	Enroll					
	(0.00212)	(0.00212)	(0.00217)	(0.00201)	(0.00201)	(0.00206)	(0.0860)	(0.0847)
Race - Unknown	-0.136***	-0.134***	-0.139***	-0.0975***	-0.0965***	-0.103***	2.587***	2.266***
	(0.00224)	(0.00224)	(0.00230)	(0.00213)	(0.00213)	(0.00218)	(0.0910)	(0.0896)
Race - White	-0.0344***	-0.0343***	-0.0442***	-0.00760***	-0.0107***	-0.0229***	1.282***	1.020***
	(0.000901)	(0.000900)	(0.000926)	(0.000855)	(0.000855)	(0.000878)	(0.0365)	(0.0360)
Race - Two + Races	-0.0557***	-0.0548***	-0.0591***	-0.0338***	-0.0334***	-0.0387***	1.449***	1.392***
	(0.00161)	(0.00161)	(0.00165)	(0.00153)	(0.00153)	(0.00157)	(0.0654)	(0.0644)
Race - Pacific Islander	-0.0916***	-0.0892***	-0.0898***	-0.0740***	-0.0701***	-0.0715***	-0.0646	0.213
	(0.00470)	(0.00469)	(0.00482)	(0.00446)	(0.00445)	(0.00457)	(0.191)	(0.188)
Race - Native American	-0.116***	-0.115***	-0.112***	-0.0875***	-0.0858***	-0.0841***	-0.269	-0.0407
	(0.00494)	(0.00493)	(0.00510)	(0.00469)	(0.00468)	(0.00483)	(0.200)	(0.197)
Race - Black	-0.0709***	-0.0682***	-0.0637***	-0.0635***	-0.0584***	-0.0530***	-1.316***	-0.646***
	(0.00133)	(0.00133)	(0.00138)	(0.00126)	(0.00126)	(0.00130)	(0.0539)	(0.0532)
Race - Asian	-0.0123***	-0.0102***	-0.0180***	0.0131***	0.0133***	0.00377***	5.207***	4.420***
	(0.00110)	(0.00111)	(0.00113)	(0.00105)	(0.00105)	(0.00107)	(0.0447)	(0.0442)
Not First Gen	0.0139***	0.0137***	0.0106***	0.0158***	0.0158***	0.0121***	2.380***	2.171***
	(0.000899)	(0.000898)	(0.000921)	(0.000854)	(0.000852)	(0.000873)	(0.0365)	(0.0359)
Unknown First Gen	-0.00220**	-0.00195*	-0.00184*	-0.000822	-0.00128	-0.00117	-0.174***	-0.394***
	(0.000781)	(0.000781)	(0.000800)	(0.000742)	(0.000742)	(0.000758)	(0.0317)	(0.0313)
Non-Citizen	-0.0343***	-0.0333***	-0.0363***	-0.0235***	-0.0246***	-0.0282***	0.0530	-0.289***
	(0.00113)	(0.00112)	(0.00115)	(0.00107)	(0.00107)	(0.00109)	(0.0457)	(0.0450)
Pell Recipient	0.0621***	0.0616***	0.0619***	0.0443***	0.0459***	0.0474***	3.434***	3.351***
	(0.000810)	(0.000810)	(0.000834)	(0.000770)	(0.000769)	(0.000790)	(0.0329)	(0.0324)
SpecialProgram	0.0630***	0.0636***	0.0574***	0.0500***	0.0472***	0.0399***	10.20***	8.868***
	(0.00325)	(0.00325)	(0.00331)	(0.00309)	(0.00308)	(0.00314)	(0.132)	(0.130)
Foster	-0.0588***	-0.0566***	-0.0478***	-0.0690***	-0.0632***	-0.0527***	-3.976***	-3.264***
	(0.00273)	(0.00272)	(0.00281)	(0.00259)	(0.00258)	(0.00267)	(0.111)	(0.109)
Eops	0.0656***	0.0628***	0.0559***	0.0546***	0.0486***	0.0396***	9.052***	8.726***
	(0.00134)	(0.00134)	(0.00136)	(0.00127)	(0.00127)	(0.00129)	(0.0542)	(0.0534)
LEP	0.0475***	0.0545***	0.0528***	0.0551***	0.0599***	0.0581***	-1.971***	-1.209***
	(0.00171)	(0.00171)	(0.00175)	(0.00162)	(0.00162)	(0.00165)	(0.0693)	(0.0684)
Disability	0.0844***	0.0859***	0.0867***	0.0740***	0.0753***	0.0763***	-0.121*	0.152**
	(0.00146)	(0.00146)	(0.00148)	(0.00138)	(0.00138)	(0.00141)	(0.0591)	(0.0583)
NonTraditional Age	-0.0241***	-0.0233***	-0.0360***	-0.00994***	-0.00828***	-0.0255***	-4.093***	-3.523***
	(0.000932)	(0.000934)	(0.000967)	(0.000885)	(0.000887)	(0.000917)	(0.0378)	(0.0374)
Prior Dual Enrollment	0.0220***	0.0234***	0.0218***	0.0169***	0.0183***	0.0159***	2.628***	2.288***
	(0.00136)	(0.00136)	(0.00137)	(0.00129)	(0.00129)	(0.00130)	(0.0551)	(0.0543)
Pre-Fall Transfer Units Attempted		0.000353***	0.00122***		-0.00130***	-0.000126***		0.0224***
		(0.0000240)	(0.0000263)		(0.0000228)	(0.0000250)		(0.000960)
Pre-Fall Transfer Units Earned		-0.000773***	-0.00218***		0.00125***	-0.000590***		-0.00532***
		(0.0000356)	(0.0000389)		(0.0000338)	(0.0000369)		(0.00142)
Pre-Fall Transfer English Success		0.0656***	0.0577***		0.0604***	0.0506***		4.633***
		(0.000785)	(0.000792)		(0.000745)	(0.000750)		(0.0314)

	(1)	(2)	(3)	(4) Persist & Complete Course	(5) Persist & Complete Course	(6) Persist & Complete Course	(7) TL Units Attempt	(8) TL Units Attempt
	Enroll	Enroll	Enroll	Course	Course	Course	Attempt	Attempt
Pre-Fall Transfer Math Success		0.0170***	0.00615***		0.0256***	0.0113***		7.523***
		(0.00113)	(0.00114)		(0.00107)	(0.00108)		(0.0453)
Pre-Fall 30 Transfer Units		-0.0522***	-0.0474***		-0.0483***	-0.0426***		-4.031***
		(0.00169)	(0.00169)		(0.00161)	(0.00161)		(0.0677)
Pre-Fall 60 Transfer Units		-0.0468***	-0.0324***		-0.0407***	-0.0230***		-7.003***
		(0.00198)	(0.00199)		(0.00188)	(0.00189)		(0.0794)
Pre-Fall GPA			0.0360***			0.0478***		
			(0.000417)			(0.000396)		
Constant	0.450***	0.429***	0.347***	0.351***	0.333***	0.222***	32.91***	31.08***
	(0.00218)	(0.00219)	(0.00245)	(0.00207)	(0.00207)	(0.00232)	(0.0883)	(0.0875)
N	2319377	2319377	2213990	2319377	2319377	2213990	2319377	2319377
r2	0.0308	0.0346	0.0371	0.0250	0.0301	0.0360	0.155	0.181

TABLE D6 (CONTINUED)

Two year (second fall) outcomes for continuing transfer-intending students

	(9) TL Units Attempt	(10) TL Units Earn	(11) TL Units Earn	(12) TL Units Earn	(13) GPA	(14) GPA	(15) GPA
COVID Enrollment	-1.681***	-0.378***	-0.781***	-0.764***	0.0777***	0.0649***	0.0729***
	(0.0265)	(0.0245)	(0.0241)	(0.0239)	(0.00151)	(0.00145)	(0.00137)
Enrolled 2 years	-4.535***	-4.032***	-5.224***	-4.055***	-0.0162***	-0.0823***	0.0359***
	(0.0389)	(0.0352)	(0.0353)	(0.0351)	(0.00214)	(0.00211)	(0.00199)
Enrolled 3 years	-8.690***	-7.740***	-8.830***	-7.379***	-0.0475***	-0.107***	0.0471***
	(0.0462)	(0.0408)	(0.0418)	(0.0416)	(0.00249)	(0.00250)	(0.00237)
Enrolled 4 years	-11.15***	-9.766***	-10.47***	-8.992***	-0.0535***	-0.0842***	0.0781***
	(0.0539)	(0.0473)	(0.0486)	(0.0486)	(0.00290)	(0.00292)	(0.00278)
Enrolled 5+ years	-11.77***	-10.10***	-10.08***	-8.674***	-0.0397***	0.00614*	0.175***
	(0.0465)	(0.0378)	(0.0412)	(0.0420)	(0.00232)	(0.00249)	(0.00241)
Gender - Male	-0.489***	-1.056***	-1.072***	-0.621***	-0.110***	-0.111***	-0.0676***
	(0.0261)	(0.0241)	(0.0236)	(0.0235)	(0.00148)	(0.00142)	(0.00134)
Gender - Unknown	-0.670***	-0.931***	-0.901***	-0.800***	-0.0448***	-0.0455***	-0.0360***
	(0.137)	(0.127)	(0.124)	(0.124)	(0.00779)	(0.00744)	(0.00706)
Gender - Nonbinary	-2.948	-1.854	-1.806	-2.101	0.146	0.189*	0.117
	(1.672)	(1.559)	(1.523)	(1.507)	(0.0951)	(0.0909)	(0.0858)
Education - No HS	-1.555***	-1.993***	-1.618***	-1.449***	-0.0784***	-0.0594***	-0.0547***
	(0.112)	(0.103)	(0.100)	(0.101)	(0.00637)	(0.00609)	(0.00580)
Education - Adult	-2.050***	-2.873***	-2.047***	-1.690***	-0.0950***	-0.0462***	-0.0323**
Education - GED	-0.608***	-0.951***	-0.724***	-0.904***	-0.0408***	-0.0334***	-0.0545***
	(0.0655)	(0.0603)	(0.0589)	(0.0590)	(0.00374)	(0.00357)	(0.00340)
Education - Professional Cert	0.271**	0.0914	0.229*	0.0703	0.0280***	0.0400***	0.0152**
	(0.102)	(0.0950)	(0.0927)	(0.0924)	(0.00585)	(0.00559)	(0.00530)
Education - Foreign	0.807***	3.105***	2.711***	1.723***	0.273***	0.218***	0.118***
	(0.0756)	(0.0701)	(0.0686)	(0.0681)	(0.00429)	(0.00410)	(0.00388)
Education - AA	-5.240***	-2.130***	-3.115***	-3.885***	0.369***	0.196***	0.121***
	(0.0792)	(0.0720)	(0.0716)	(0.0714)	(0.00450)	(0.00438)	(0.00415)
Education - BA	-6.662***	-2.503***	-3.184***	-5.179***	0.626***	0.473***	0.265***
	(0.0962)	(0.0875)	(0.0860)	(0.0867)	(0.00546)	(0.00526)	(0.00503)
Education - Unknown	-0.870***	0.136	-0.0103	-0.440***	0.124***	0.100***	0.0441***
	(0.0855)	(0.0791)	(0.0772)	(0.0771)	(0.00486)	(0.00465)	(0.00440)
Race - Unknown	1.730***	3.022***	2.678***	2.084***	0.195***	0.168***	0.113***
	(0.0904)	(0.0837)	(0.0818)	(0.0815)	(0.00513)	(0.00491)	(0.00465)
Race - White	0.0413	2.354***	1.798***	0.652***	0.314***	0.261***	0.154***
	(0.0364)	(0.0336)	(0.0329)	(0.0328)	(0.00206)	(0.00198)	(0.00188)

	(9) TL Units Attempt	(10) TL Units Earn	(11) TL Units Earn	(12) TL Units Earn	(13) GPA	(14) GPA	(15) GPA
Race - Two + Races	0.954***	1.340***	1.258***	0.765***	0.101***	0.0930***	0.0467***
	(0.0650)	(0.0602)	(0.0588)	(0.0586)	(0.00369)	(0.00353)	(0.00335)
Race - Pacific Islander	0.0571	-0.972***	-0.537**	-0.746***	-0.0933***	-0.0595***	-0.0855***
	(0.190)	(0.175)	(0.171)	(0.171)	(0.0108)	(0.0104)	(0.00983)
Race - Native American	-0.112	-0.470*	-0.236	-0.305	-0.0270*	-0.0140	-0.0289**
	(0.201)	(0.184)	(0.180)	(0.181)	(0.0114)	(0.0109)	(0.0104)
Race - Black	-0.106*	-2.244***	-1.376***	-0.749***	-0.275***	-0.211***	-0.154***
	(0.0542)	(0.0496)	(0.0485)	(0.0488)	(0.00307)	(0.00294)	(0.00281)
Race - Asian	3.561***	5.545***	4.736***	3.774***	0.325***	0.271***	0.191***
	(0.0445)	(0.0411)	(0.0404)	(0.0401)	(0.00251)	(0.00241)	(0.00228)
Not First Gen	1.838***	2.176***	2.025***	1.660***	0.0895***	0.0832***	0.0549***
	(0.0362)	(0.0336)	(0.0328)	(0.0326)	(0.00206)	(0.00197)	(0.00186)
Unknown First Gen	-0.341***	0.0635*	-0.206***	-0.145***	0.0176***	-0.00787***	-0.00174
	(0.0315)	(0.0291)	(0.0285)	(0.0284)	(0.00179)	(0.00172)	(0.00162)
Non-Citizen	-0.537***	0.956***	0.483***	0.176***	0.115***	0.0782***	0.0491***
	(0.0451)	(0.0420)	(0.0411)	(0.0406)	(0.00257)	(0.00246)	(0.00232)
Pell Recipient	3.392***	1.803***	1.937***	2.058***	-0.0977***	-0.0801***	-0.0592***
	(0.0328)	(0.0302)	(0.0296)	(0.0296)	(0.00186)	(0.00178)	(0.00169)
SpecialProgram	8.431***	8.225***	6.794***	6.235***	0.129***	0.0309***	-0.0229***
	(0.130)	(0.121)	(0.119)	(0.117)	(0.00734)	(0.00703)	(0.00663)
Foster	-2.472***	-5.049***	-4.026***	-3.122***	-0.336***	-0.254***	-0.172***
	(0.111)	(0.102)	(0.0994)	(0.0998)	(0.00631)	(0.00603)	(0.00576)
Eops	8.096***	7.154***	6.501***	5.724***	0.0650***	0.0143***	-0.0577***
	(0.0537)	(0.0499)	(0.0488)	(0.0484)	(0.00302)	(0.00289)	(0.00274)
LEP	-0.697***	-0.650***	-0.103	0.270***	0.0426***	0.0566***	0.0433***
	(0.0686)	(0.0637)	(0.0624)	(0.0619)	(0.00391)	(0.00374)	(0.00353)
Disability	0.204***	0.410***	0.625***	0.645***	0.0354***	0.0419***	0.0367***
	(0.0584)	(0.0544)	(0.0532)	(0.0526)	(0.00332)	(0.00318)	(0.00300)
NonTraditional Age	-4.935***	-2.191***	-1.623***	-3.333***	0.276***	0.313***	0.140***
	(0.0380)	(0.0348)	(0.0341)	(0.0343)	(0.00214)	(0.00206)	(0.00197)
Prior Dual Enrollment	2.025***	1.986***	1.722***	1.401***	0.0591***	0.0401***	0.00696*
	(0.0539)	(0.0507)	(0.0495)	(0.0486)	(0.00309)	(0.00295)	(0.00276)
Pre-Fall Transfer Units Attempted	0.129***		-0.147***	-0.0216***		-0.0194***	-0.00746***
	(0.00104)		(0.000876)	(0.000934)		(0.0000531)	(0.0000540)
Pre-Fall Transfer Units Earned	-0.161***		0.199***	0.0127***		0.0268***	0.00887***
	(0.00153)		(0.00130)	(0.00138)		(0.0000785)	(0.0000796)
Pre-Fall Transfer English Success	3.878***		4.470***	3.543***		0.173***	0.0848***
	(0.0311)		(0.0287)	(0.0281)		(0.00171)	(0.00160)
Pre-Fall Transfer Math Success	6.258***		7.146***	5.639***		0.314***	0.173***
	(0.0449)		(0.0414)	(0.0405)		(0.00246)	(0.00230)
Pre-Fall 30 Transfer Units	-3.572***		-3.783***	-3.224***		-0.115***	-0.0666***
	(0.0666)		(0.0618)	(0.0601)		(0.00367)	(0.00340)
Pre-Fall 60 Transfer Units	-5.648***		-6.368***	-4.720***		-0.208***	-0.0540***
	(0.0783)		(0.0724)	(0.0705)		(0.00434)	(0.00403)
Pre-Fall GPA	4.079***			4.907***			0.476***
	(0.0164)			(0.0148)			(0.000852)
Constant	21.55***	24.15***	22.60***	11.09***	2.280***	2.221***	1.080***
	(0.0964)	(0.0812)	(0.0798)	(0.0869)	(0.00500)	(0.00481)	(0.00500)
N	2213990	2319377	2319377	2213990	2205267	2205267	2111872
r2	0.201	0.131	0.171	0.210	0.0837	0.163	0.273

SOURCE: Authors' calculations using MIS data.

NOTE: All regressions include campus fixed effects. For two year outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our two year outcomes we exclude students who transferred within two years. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Standard errors in parentheses. * p<0.05; ** p<0.01, *** p<0.001

TABLE D7
Fall outcomes for continuing transfer-intending students – race interactions

	(1) Persist & Complete Course	(2) Persist & Complete Course	(3) Persist & Complete Course	(4) TL Units Attempt	(5) TL Units Attempt	(6) TL Units Attempt
COVID Enrollment (main)	-0.0164***	-0.0185***	-0.0311***	0.156***	0.127***	-0.267***
	(0.000944)	(0.000943)	(0.000900)	(0.0107)	(0.0105)	(0.0102)
Asian (main)	0.0136***	0.00973***	0.0155***	0.614***	0.612***	0.443***
	(0.000756)	(0.000798)	(0.000765)	(0.00858)	(0.00887)	(0.00866)
Black (main)	-0.110***	-0.0985***	-0.0245***	-0.604***	-0.447***	0.157***
	(0.000977)	(0.00101)	(0.000983)	(0.0111)	(0.0112)	(0.0111)
Latino (main)	-0.0597***	-0.0491***	-0.00864***	-0.678***	-0.613***	-0.319***
	(0.000554)	(0.000598)	(0.000576)	(0.00629)	(0.00664)	(0.00652)
Native American (main)	-0.0658***	-0.0619***	-0.0196***	-0.495***	-0.411***	-0.0642
	(0.00351)	(0.00351)	(0.00339)	(0.0399)	(0.0390)	(0.0384)
Pacific Islander (main)	-0.0751***	-0.0629***	-0.0147***	-0.182***	-0.153***	0.208***
	(0.00333)	(0.00332)	(0.00319)	(0.0378)	(0.0369)	(0.0361)
Two + Races (main)	-0.0412***	-0.0334***	-0.00610***	0.188***	0.0836***	0.243***
	(0.00114)	(0.00114)	(0.00110)	(0.0130)	(0.0127)	(0.0124)
Unknown Race (main)	-0.00802***	-0.0125***	0.00800***	0.315***	0.537***	0.561***
	(0.00157)	(0.00159)	(0.00153)	(0.0178)	(0.0177)	(0.0173)
COVID x Asian	0.0102***	0.0111***	0.00269	-0.107***	-0.130***	-0.162***
	(0.00152)	(0.00152)	(0.00144)	(0.0173)	(0.0169)	(0.0163)
COVID x Black	-0.00557**	-0.00651**	-0.00148	0.178***	0.171***	0.0998***
	(0.00202)	(0.00201)	(0.00193)	(0.0229)	(0.0223)	(0.0218)
COVID x Latino	-0.0189***	-0.0181***	-0.0167***	0.206***	0.231***	0.152***
	(0.00113)	(0.00112)	(0.00107)	(0.0128)	(0.0125)	(0.0121)
COVID x Native American	-0.0215**	-0.0179*	-0.0148*	0.126	0.167	0.112
	(0.00773)	(0.00769)	(0.00735)	(0.0877)	(0.0854)	(0.0832)
COVID x Pacific Islander	-0.00940	-0.00887	-0.00543	0.0830	0.104	0.0507
	(0.00658)	(0.00654)	(0.00624)	(0.0747)	(0.0727)	(0.0707)
COVID x Two + Races	-0.00213	-0.00318	-0.00313	-0.0305	-0.0290	-0.0527*
	(0.00225)	(0.00224)	(0.00214)	(0.0256)	(0.0249)	(0.0242)
COVID x Unknown Race	-0.0146***	-0.0115***	-0.0129***	-0.0722*	-0.162***	-0.157***
	(0.00289)	(0.00287)	(0.00274)	(0.0328)	(0.0319)	(0.0310)
Enrolled 2 years	0.00547***	0.00458***	-0.0124***	-0.110***	-0.111***	-0.752***
	(0.000570)	(0.000568)	(0.000565)	(0.00648)	(0.00631)	(0.00640)
Enrolled 3 years	-0.0188***	-0.0179***	-0.0280***	-1.124***	-1.027***	-1.791***
	(0.000647)	(0.000646)	(0.000659)	(0.00735)	(0.00718)	(0.00747)
Enrolled 4 years	-0.0466***	-0.0430***	-0.0401***	-1.987***	-1.767***	-2.556***
	(0.000750)	(0.000750)	(0.000770)	(0.00852)	(0.00834)	(0.00871)
Enrolled 5+ years	-0.0618***	-0.0616***	-0.0331***	-3.057***	-2.056***	-2.928***
	(0.000502)	(0.000619)	(0.000687)	(0.00570)	(0.00688)	(0.00778)
Gender - Male		-0.00974***	0.00151***		0.126***	0.170***
		(0.000389)	(0.000373)		(0.00432)	(0.00422)
Gender - Unknown		-0.00782***	-0.00276		-0.188***	-0.148***
		(0.00200)	(0.00192)		(0.0223)	(0.0217)
Gender - Nonbinary		-0.0344***	-0.0123		0.0472	0.191
		(0.00966)	(0.00929)		(0.107)	(0.105)
Educ- No HS		-0.0310***	-0.0215***		-0.379***	-0.199***
		(0.00176)	(0.00170)		(0.0196)	(0.0192)
Educ- Adult		-0.0454***	-0.0239***		-0.860***	-0.523***
		(0.00357)	(0.00343)		(0.0396)	(0.0388)
Educ - GED		-0.0273***	-0.0277***		-0.225***	-0.106***

	(1)	(2)	(3)	(4)	(5)	(6)
		(0.00101)	(0.000975)		(0.0113)	(0.0110)
Educ- Professional Cert		-0.00841***	-0.0114***		-0.00124	-0.000883
		(0.00158)	(0.00151)		(0.0176)	(0.0171)
Educ-Foreign		0.0491***	0.0116***		0.468***	0.350***
		(0.00113)	(0.00108)		(0.0125)	(0.0122)
Educ -AA		0.0599***	-0.0152***		-0.372***	-0.904***
		(0.00104)	(0.00102)		(0.0116)	(0.0115)
Educ - BA		0.0655***	-0.0149***		-1.026***	-1.184***
		(0.00146)	(0.00142)		(0.0162)	(0.0161)
Ed - Unknown		0.0158***	0.000672		-0.00781	-0.0106
		(0.00129)	(0.00124)		(0.0143)	(0.0140)
Not First Gen		0.0247***	0.0115***		0.497***	0.330***
		(0.000524)	(0.000502)		(0.00583)	(0.00568)
Unknown First Gen		0.00664***	-0.000865		-0.0673***	-0.141***
		(0.000471)	(0.000451)		(0.00524)	(0.00510)
Non-citizen		0.0141***	0.000803		0.0357***	-0.0769***
		(0.000681)	(0.000649)		(0.00756)	(0.00735)
Pell Recipient		-0.00697***	-0.00146**		0.275***	0.202***
		(0.000473)	(0.000456)		(0.00526)	(0.00516)
SpecialProgram		0.0617***	0.0210***		1.694***	1.201***
		(0.00178)	(0.00170)		(0.0198)	(0.0192)
Foster		-0.102***	-0.0503***		-0.608***	-0.192***
		(0.00168)	(0.00162)		(0.0187)	(0.0184)
Eops		0.0803***	0.0452***		1.799***	1.529***
		(0.000770)	(0.000735)		(0.00855)	(0.00833)
LEP		0.0144***	0.0198***		-1.296***	-0.901***
		(0.00107)	(0.00102)		(0.0119)	(0.0116)
Disability		0.0331***	0.0307***		-0.581***	-0.525***
		(0.000881)	(0.000840)		(0.00979)	(0.00951)
NonTraditional_Age		0.00647***	-0.00867***		-1.106***	-1.056***
		(0.000562)	(0.000546)		(0.00624)	(0.00618)
Prior_dual_enroll		0.0136***	-0.00470***		0.484***	0.220***
		(0.000741)	(0.000702)		(0.00823)	(0.00795)
Pre-Fall Transfer Units Attempted			-0.00322***			0.0212***
			(0.0000143)			(0.000161)
Pre-Fall Transfer Units Earned			0.00490***			-0.00585***
			(0.0000208)			(0.000235)
Pre-Fall Transfer English Success			0.0316***			0.762***
			(0.000458)			(0.00518)
Pre-Fall Transfer Math Success			0.0252***			1.453***
			(0.000614)			(0.00696)
Pre-Fall 30 Transfer Units			-0.0123***			-0.166***
			(0.000805)			(0.00911)
Pre-Fall 60 Transfer Units			-0.0407***			-1.576***
			(0.000846)			(0.00958)
Pre-Fall GPA			0.0968***			0.678***
			(0.000249)			(0.00282)
Constant	0.883***	0.835***	0.533***	10.19***	9.340***	6.811***
	(0.000558)	(0.00137)	(0.00149)	(0.00634)	(0.0153)	(0.0168)
N	4112877	4112877	3980057	4112877	4112877	3980057
r2	0.0169	0.0276	0.129	0.0963	0.143	0.211

Fall outcomes for continuing transfer-intending students – race interactions

	(7) TL Units Earned	(8) TL Units Earned	(9) TL Units Earned	(10) GPA	(11) GPA	(12) GPA
COVID Enrollment (main)	0.266***	0.215***	-0.193***	0.155***	0.130***	0.0544***
	(0.0116)	(0.0115)	(0.0107)	(0.00308)	(0.00305)	(0.00272)
Asian (main)	0.566***	0.506***	0.428***	0.00787**	-0.0238***	-0.000885
	(0.00931)	(0.00972)	(0.00910)	(0.00244)	(0.00256)	(0.00229)
Black (main)	-1.516***	-1.266***	-0.170***	-0.632***	-0.580***	-0.250***
	(0.0120)	(0.0123)	(0.0117)	(0.00323)	(0.00331)	(0.00300)
Latino (main)	-1.109***	-0.937***	-0.360***	-0.416***	-0.328***	-0.135***
	(0.00683)	(0.00728)	(0.00685)	(0.00180)	(0.00193)	(0.00174)
Native American (main)	-1.046***	-0.910***	-0.288***	-0.351***	-0.315***	-0.133***
	(0.0433)	(0.0427)	(0.0404)	(0.0116)	(0.0115)	(0.0104)
Pacific Islander (main)	-1.028***	-0.890***	-0.200***	-0.468***	-0.417***	-0.209***
	(0.0411)	(0.0404)	(0.0380)	(0.0109)	(0.0108)	(0.00971)
Two + Races (main)	-0.318***	-0.311***	0.0517***	-0.242***	-0.198***	-0.0813***
	(0.0141)	(0.0139)	(0.0131)	(0.00373)	(0.00369)	(0.00332)
Unknown Race (main)	0.198***	0.276***	0.485***	-0.0882***	-0.136***	-0.0445***
	(0.0194)	(0.0194)	(0.0182)	(0.00509)	(0.00513)	(0.00460)
COVID x Asian	0.115***	0.113***	0.0207	0.0975***	0.106***	0.0684***
	(0.0188)	(0.0185)	(0.0172)	(0.00495)	(0.00488)	(0.00434)
COVID x Black	-0.000957	-0.0165	0.0173	-0.00744	-0.00823	0.0153**
	(0.0249)	(0.0245)	(0.0229)	(0.00671)	(0.00662)	(0.00592)
COVID x Latino	-0.0131	0.0130	-0.0156	-0.0101**	-0.00366	-0.00453
	(0.0139)	(0.0137)	(0.0127)	(0.00370)	(0.00365)	(0.00325)
COVID x Native American	-0.0748	-0.0322	-0.00544	-0.103***	-0.0957***	-0.0780***
	(0.0953)	(0.0936)	(0.0875)	(0.0256)	(0.0253)	(0.0226)
COVID x Pacific Islander	0.0340	0.0462	0.0536	0.0296	0.0328	0.0394*
	(0.0811)	(0.0797)	(0.0743)	(0.0218)	(0.0215)	(0.0191)
COVID x Two + Races	-0.0219	-0.0315	-0.0336	0.0180*	0.0147*	0.0151*
	(0.0278)	(0.0273)	(0.0254)	(0.00740)	(0.00729)	(0.00649)
COVID x Unknown Race	-0.160***	-0.180***	-0.188***	-0.0321***	-0.00928	-0.0148
	(0.0356)	(0.0350)	(0.0326)	(0.00940)	(0.00928)	(0.00826)
Enrolled 2 years	-0.0779***	-0.0794***	-0.708***	0.0601***	0.0586***	0.0512***
	(0.00703)	(0.00692)	(0.00673)	(0.00184)	(0.00181)	(0.00169)
Enrolled 3 years	-1.117***	-1.029***	-1.655***	0.0164***	0.0153***	0.0670***
	(0.00798)	(0.00786)	(0.00785)	(0.00210)	(0.00207)	(0.00199)
Enrolled 4 years	-1.943***	-1.745***	-2.238***	-0.0152***	-0.0177***	0.101***
	(0.00925)	(0.00914)	(0.00916)	(0.00245)	(0.00243)	(0.00234)
Enrolled 5+ years	-2.704***	-1.996***	-2.269***	0.143***	-0.0129***	0.215***
	(0.00619)	(0.00753)	(0.00818)	(0.00164)	(0.00201)	(0.00210)
Gender - Male		-0.0665***	0.0582***		-0.0968***	-0.0416***
		(0.00474)	(0.00444)		(0.00126)	(0.00113)
Gender - Unknown		-0.253***	-0.181***		-0.0400***	-0.0175**
		(0.0244)	(0.0229)		(0.00649)	(0.00581)
Gender - Nonbinary		-0.403***	-0.0936		-0.0662*	0.0166
		(0.118)	(0.111)		(0.0320)	(0.0287)
Educ- No HS		-0.442***	-0.245***		-0.0543***	-0.0335***
		(0.0215)	(0.0202)		(0.00578)	(0.00519)
Educ- Adult		-0.906***	-0.492***		-0.100***	-0.0364***
		(0.0434)	(0.0408)		(0.0117)	(0.0105)
Educ - GED		-0.333***	-0.261***		-0.0207***	-0.0410***
		(0.0123)	(0.0116)		(0.00333)	(0.00300)
Educ- Professional Cert		-0.0541**	-0.0842***		0.0448***	0.0128**
		(0.0192)	(0.0180)		(0.00515)	(0.00461)
Educ-Foreign		0.894***	0.457***		0.263***	0.0820***
		(0.0137)	(0.0128)		(0.00361)	(0.00323)

	(7) TL Units Earned	(8) TL Units Earned	(9) TL Units Earned	(10) GPA	(11) GPA	(12) GPA
Educ -AA		0.314***	-0.744***		0.378***	0.0807***
		(0.0127)	(0.0121)		(0.00342)	(0.00311)
Educ - BA		-0.285***	-1.133***		0.520***	0.154***
		(0.0178)	(0.0169)		(0.00481)	(0.00436)
Ed - Unknown		0.125***	-0.0169		0.113***	0.0322***
		(0.0157)	(0.0147)		(0.00418)	(0.00374)
Not First Gen		0.604***	0.373***		0.113***	0.0532***
		(0.00638)	(0.00598)		(0.00169)	(0.00152)
Unknown First Gen		0.0316***	-0.0827***		0.0165***	-0.00403**
		(0.00574)	(0.00537)		(0.00153)	(0.00137)
Non-citizen		0.243***	0.0298***		0.0895***	0.0276***
		(0.00829)	(0.00772)		(0.00220)	(0.00196)
Pell Recipient		0.0239***	0.0376***		-0.0812***	-0.0438***
		(0.00576)	(0.00542)		(0.00153)	(0.00138)
SpecialProgram		1.645***	0.913***		0.132***	-0.0417***
		(0.0217)	(0.0202)		(0.00567)	(0.00506)
Foster		-1.285***	-0.531***		-0.341***	-0.135***
		(0.0205)	(0.0193)		(0.00556)	(0.00501)
Eops		1.836***	1.319***		0.146***	-0.0000271
		(0.00937)	(0.00876)		(0.00244)	(0.00218)
LEP		-0.953***	-0.611***		-0.00777*	0.0129***
		(0.0130)	(0.0122)		(0.00346)	(0.00309)
Disability		-0.304***	-0.275***		0.0231***	0.0243***
		(0.0107)	(0.01000)		(0.00284)	(0.00253)
NonTraditional_Age		-0.691***	-0.765***		0.246***	0.125***
		(0.00684)	(0.00650)		(0.00183)	(0.00167)
Prior_dual_enroll		0.490***	0.139***		0.0819***	0.00341
		(0.00902)	(0.00836)		(0.00238)	(0.00211)
Pre-Fall Transfer Units Attempted			-0.0209***			-0.00752***
			(0.000170)			(0.0000452)
Pre-Fall Transfer Units Earned			0.0459***			0.00975***
			(0.000247)			(0.0000648)
Pre-Fall Transfer English Success			0.822***			0.0578***
			(0.00545)			(0.00138)
Pre-Fall Transfer Math Success			1.378***			0.140***
			(0.00732)			(0.00184)
Pre-Fall 30 Transfer Units			-0.0112			0.0183***
			(0.00958)			(0.00240)
Pre-Fall 60 Transfer Units			-1.636***			-0.0763***
			(0.0101)			(0.00254)
Pre-Fall GPA			1.320***			0.559***
			(0.00297)			(0.000766)
Constant	8.263***	7.412***	2.993***	2.788***	2.742***	1.063***
	(0.00688)	(0.0167)	(0.0177)	(0.00180)	(0.00446)	(0.00455)
N	4112877	4112877	3980057	3755998	3755998	3646286
r2	0.0811	0.113	0.250	0.0376	0.0661	0.269

SOURCE: Authors' calculations using MIS data.

NOTE: All regressions include campus fixed effects. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Standard errors in parentheses. * $p<0.05$; ** $p<0.01$, *** $p<0.001$

One year (next fall) outcomes for continuing transfer-intending students – race interactions

	(1) Enroll	(2) Enroll	(3) Persist & Complete Course	(4) Persist & Complete Course	(5) TL Units Attempt	(6) TL Units Attempt
COVID Enrollment (main)	-0.0271***	-0.0367***	-0.0349***	-0.0438***	-0.375***	-1.123***
	(0.00131)	(0.00132)	(0.00134)	(0.00134)	(0.0357)	(0.0349)
Asian (main)	0.0247***	0.0276***	0.0248***	0.0308***	2.711***	2.364***
	(0.00122)	(0.00123)	(0.00125)	(0.00125)	(0.0332)	(0.0325)
Black (main)	-0.0670***	-0.0240***	-0.0975***	-0.0385***	-2.047***	-0.0316
	(0.00150)	(0.00154)	(0.00154)	(0.00156)	(0.0408)	(0.0407)
Latino (main)	0.0155***	0.0379***	-0.0155***	0.0172***	-1.465***	-0.429***
	(0.000907)	(0.000921)	(0.000926)	(0.000933)	(0.0246)	(0.0243)
Native American (main)	-0.104***	-0.0750***	-0.110***	-0.0725***	-1.468***	-0.286*
	(0.00519)	(0.00531)	(0.00530)	(0.00538)	(0.141)	(0.140)
Pacific Islander (main)	-0.0713***	-0.0458***	-0.0926***	-0.0549***	-0.902***	0.240
	(0.00499)	(0.00506)	(0.00509)	(0.00512)	(0.135)	(0.133)
Two + Races (main)	-0.0311***	-0.0164***	-0.0402***	-0.0182***	-0.0273	0.590***
	(0.00174)	(0.00177)	(0.00178)	(0.00179)	(0.0474)	(0.0466)
Unknown Race (main)	-0.0806***	-0.0697***	-0.0747***	-0.0581***	1.399***	1.615***
	(0.00250)	(0.00252)	(0.00255)	(0.00256)	(0.0679)	(0.0666)
COVID x Asian	-0.00448*	-0.00585**	0.00113	-0.00174	-0.525***	-0.600***
	(0.00212)	(0.00212)	(0.00217)	(0.00215)	(0.0576)	(0.0560)
COVID x Black	0.0119***	0.00654*	0.00718**	0.00548*	0.469***	0.285***
	(0.00269)	(0.00272)	(0.00275)	(0.00276)	(0.0731)	(0.0718)
COVID x Latino	-0.0213***	-0.0242***	-0.0269***	-0.0286***	0.210***	0.0285
	(0.00155)	(0.00156)	(0.00159)	(0.00158)	(0.0422)	(0.0412)
COVID x Native American	0.0558***	0.0466***	0.0387***	0.0339**	0.548*	0.351
	(0.0101)	(0.0102)	(0.0103)	(0.0103)	(0.275)	(0.269)
COVID x Pacific Islander	0.0192*	0.0195*	0.0210*	0.0227*	0.290	0.252
	(0.00896)	(0.00902)	(0.00915)	(0.00914)	(0.243)	(0.238)
COVID x Unknown Race	-0.000245	0.00175	-0.00612	-0.00208	-0.906***	-0.616***
	(0.00403)	(0.00406)	(0.00412)	(0.00412)	(0.109)	(0.107)
Enrolled 2 years	-0.0430***	-0.0455***	-0.0517***	-0.0483***	-2.345***	-3.058***
	(0.000820)	(0.000853)	(0.000837)	(0.000864)	(0.0223)	(0.0225)
Enrolled 3 years	-0.0871***	-0.0816***	-0.105***	-0.0877***	-5.410***	-6.143***
	(0.000954)	(0.00101)	(0.000974)	(0.00103)	(0.0259)	(0.0268)
Enrolled 4 years	-0.115***	-0.102***	-0.135***	-0.105***	-7.310***	-7.992***
	(0.00111)	(0.00119)	(0.00113)	(0.00120)	(0.0302)	(0.0313)
Enrolled 5+ years	-0.129***	-0.109***	-0.150***	-0.102***	-7.745***	-8.493***
	(0.000892)	(0.00103)	(0.000911)	(0.00105)	(0.0242)	(0.0273)
Gender - Male	-0.0293***	-0.0208***	-0.0265***	-0.0160***	-0.250***	-0.0437**
	(0.000567)	(0.000573)	(0.000579)	(0.000581)	(0.0154)	(0.0151)
Gender - Unknown	-0.0758***	-0.0737***	-0.0605***	-0.0582***	-0.651***	-0.574***
	(0.00293)	(0.00297)	(0.00300)	(0.00300)	(0.0797)	(0.0782)
Gender - nonbinary	-0.163***	-0.160***	-0.151***	-0.144***	-0.259	-0.236
	(0.0216)	(0.0219)	(0.0220)	(0.0221)	(0.586)	(0.577)
Educ- No HS	-0.0448***	-0.0345***	-0.0495***	-0.0395***	-1.455***	-0.943***
	(0.00248)	(0.00252)	(0.00254)	(0.00256)	(0.0675)	(0.0666)
Educ- Adult	-0.0364***	-0.0183***	-0.0458***	-0.0248***	-2.453***	-1.508***
	(0.00502)	(0.00509)	(0.00512)	(0.00515)	(0.136)	(0.134)
Educ - GED	-0.0225***	-0.0201***	-0.0271***	-0.0277***	-0.681***	-0.481***
	(0.00144)	(0.00147)	(0.00148)	(0.00149)	(0.0393)	(0.0387)
Educ- Professional Cert	-0.00810***	-0.00939***	-0.0105***	-0.0125***	0.104	0.0310
	(0.00226)	(0.00229)	(0.00231)	(0.00231)	(0.0615)	(0.0603)
Educ-Foreign	-0.0116***	-0.0234***	0.0184***	-0.00544**	1.392***	0.859***
	(0.00165)	(0.00167)	(0.00169)	(0.00169)	(0.0449)	(0.0440)
Educ -AA	-0.0821***	-0.0898***	-0.0460***	-0.0735***	-2.834***	-3.795***
	(0.00169)	(0.00174)	(0.00173)	(0.00177)	(0.0460)	(0.0460)

	(1) Enroll	(2) Enroll	(3) Persist & Complete Course	(4) Persist & Complete Course	(5) TL Units Attempt	(6) TL Units Attempt
Educ - BA	-0.0891***	-0.107***	-0.0450***	-0.0925***	-4.035***	-4.894***
	(0.00210)	(0.00215)	(0.00214)	(0.00218)	(0.0570)	(0.0568)
Ed - Unknown	-0.0258***	-0.0307***	-0.0148***	-0.0253***	-0.333***	-0.471***
	(0.00188)	(0.00190)	(0.00192)	(0.00192)	(0.0510)	(0.0501)
Not First Gen	0.0199***	0.0117***	0.0256***	0.0158***	1.711***	1.240***
	(0.000775)	(0.000782)	(0.000791)	(0.000792)	(0.0210)	(0.0206)
Unknown First Gen	0.00352***	0.000893	0.00506***	0.00107	-0.128***	-0.292***
	(0.000685)	(0.000692)	(0.000700)	(0.000701)	(0.0186)	(0.0182)
Non-citizen	-0.0150***	-0.0211***	-0.00460***	-0.0147***	0.120***	-0.271***
	(0.000993)	(0.000998)	(0.00101)	(0.00101)	(0.0270)	(0.0263)
Pell Recipient	0.0506***	0.0504***	0.0331***	0.0380***	1.764***	1.713***
	(0.000704)	(0.000714)	(0.000719)	(0.000723)	(0.0191)	(0.0188)
SpecialProgram	0.0934***	0.0741***	0.0883***	0.0598***	6.537***	5.077***
	(0.00271)	(0.00272)	(0.00276)	(0.00275)	(0.0735)	(0.0717)
Foster	-0.0802***	-0.0533***	-0.108***	-0.0698***	-2.727***	-1.448***
	(0.00242)	(0.00246)	(0.00247)	(0.00249)	(0.0656)	(0.0648)
Eops	0.114***	0.0948***	0.113***	0.0846***	6.422***	5.604***
	(0.00115)	(0.00116)	(0.00118)	(0.00118)	(0.0313)	(0.0306)
LEP	0.0348***	0.0470***	0.0444***	0.0549***	-2.400***	-1.348***
	(0.00153)	(0.00155)	(0.00157)	(0.00157)	(0.0417)	(0.0408)
Disability	0.0809***	0.0824***	0.0735***	0.0749***	-0.716***	-0.508***
	(0.00129)	(0.00130)	(0.00132)	(0.00132)	(0.0352)	(0.0343)
NonTraditional_Age	-0.0312***	-0.0451***	-0.0143***	-0.0348***	-2.999***	-3.427***
	(0.000824)	(0.000844)	(0.000842)	(0.000855)	(0.0224)	(0.0223)
Prior_dual_enroll	0.0218***	0.0148***	0.0214***	0.0119***	1.778***	1.190***
	(0.00113)	(0.00113)	(0.00116)	(0.00114)	(0.0308)	(0.0298)
Pre-Fall Transfer Units Attempted		0.000432***		-0.00132***		0.0752***
		(0.0000225)		(0.0000228)		(0.000593)
Pre-Fall Transfer Units Earned		-0.000522***		0.00147***		-0.0736***
		(0.0000333)		(0.0000338)		(0.000879)
Pre-Fall Transfer English Success		0.0873***		0.0860***		2.889***
		(0.000682)		(0.000691)		(0.0180)
Pre-Fall Transfer Math Success		0.0431***		0.0535***		4.552***
		(0.000946)		(0.000959)		(0.0250)
Pre-Fall 30 Transfer Units		-0.0681***		-0.0686***		-2.010***
		(0.00134)		(0.00136)		(0.0354)
Pre-Fall 60 Transfer Units		-0.0962***		-0.0871***		-4.678***
		(0.00158)		(0.00160)		(0.0417)
Pre-Fall GPA		0.0633***		0.0874***		2.967***
		(0.000367)		(0.000372)		(0.00969)
Constant	0.648***	0.432***	0.554***	0.271***	25.43***	15.64***
	(0.00199)	(0.00225)	(0.00203)	(0.00228)	(0.0541)	(0.0593)
N	3003388	2883021	3003388	2883021	3003388	2883021
r2	0.0386	0.0607	0.0387	0.0795	0.175	0.239

One year (next fall) outcomes for continuing transfer-intending students – race interactions

	(7) TL Units Earn	(8) TL Units Earn	(9) GPA	(10) GPA
COVID Enrollment (main)	0.156***	-0.469***	0.111***	0.0787***
	(0.0351)	(0.0334)	(0.00312)	(0.00278)
Asian (main)	2.154***	2.048***	-0.00907**	0.0154***
	(0.0326)	(0.0312)	(0.00288)	(0.00259)
Black (main)	-3.595***	-0.919***	-0.596***	-0.296***
	(0.0402)	(0.0390)	(0.00360)	(0.00327)
Latino (main)	-2.173***	-0.737***	-0.326***	-0.153***
	(0.0242)	(0.0233)	(0.00215)	(0.00194)
Native American (main)	-2.361***	-0.757***	-0.345***	-0.169***
	(0.139)	(0.134)	(0.0124)	(0.0113)
Pacific Islander (main)	-2.536***	-0.907***	-0.430***	-0.250***
	(0.133)	(0.128)	(0.0119)	(0.0107)
Two + Races (main)	-0.921***	0.0154	-0.214***	-0.103***
	(0.0466)	(0.0447)	(0.00413)	(0.00372)
Unknown Race (main)	0.866***	1.390***	-0.116***	-0.0380***
	(0.0668)	(0.0638)	(0.00591)	(0.00529)
COVID x Asian	0.0811	-0.0238	0.0805***	0.0653***
	(0.0567)	(0.0537)	(0.00501)	(0.00446)
COVID x Black	0.0719	0.0955	-0.00812	0.00940
	(0.0720)	(0.0688)	(0.00646)	(0.00579)
COVID x Latino	-0.115**	-0.182***	-0.0149***	-0.00980**
	(0.0416)	(0.0394)	(0.00369)	(0.00329)
COVID x Native American	-0.0166	-0.160	-0.0305	-0.0379
	(0.270)	(0.258)	(0.0242)	(0.0217)
COVID x Pacific Islander	0.130	0.214	0.0376	0.0608**
	(0.239)	(0.228)	(0.0215)	(0.0192)
COVID x Unknown Race	-1.134***	-0.765***	-0.0744***	-0.0422***
	(0.108)	(0.103)	(0.00955)	(0.00854)
Enrolled 2 years	-2.531***	-2.850***	-0.0226***	0.0338***
	(0.0219)	(0.0216)	(0.00193)	(0.00178)
Enrolled 3 years	-5.497***	-5.470***	-0.0755***	0.0418***
	(0.0255)	(0.0257)	(0.00225)	(0.00213)
Enrolled 4 years	-7.101***	-6.702***	-0.0889***	0.0781***
	(0.0297)	(0.0300)	(0.00263)	(0.00251)
Enrolled 5+ years	-7.382***	-6.420***	-0.0771***	0.185***
	(0.0239)	(0.0261)	(0.00212)	(0.00219)
Gender - Male	-0.520***	-0.199***	-0.0976***	-0.0528***
	(0.0152)	(0.0145)	(0.00135)	(0.00121)
Gender - Unknown	-0.733***	-0.653***	-0.0415***	-0.0321***
	(0.0784)	(0.0750)	(0.00696)	(0.00624)
Gender - nonbinary	-0.649	-0.377	-0.0457	-0.0281
	(0.577)	(0.553)	(0.0513)	(0.0461)
Educ- No HS	-1.409***	-0.940***	-0.0687***	-0.0458***
	(0.0664)	(0.0638)	(0.00595)	(0.00536)
Educ- Adult	-2.305***	-1.318***	-0.0969***	-0.0355**
	(0.134)	(0.129)	(0.0120)	(0.0108)
Educ - GED	-0.785***	-0.734***	-0.0304***	-0.0503***
	(0.0386)	(0.0371)	(0.00347)	(0.00312)
Educ- Professional Cert	0.0109	-0.104	0.0455***	0.0185***
	(0.0605)	(0.0578)	(0.00540)	(0.00483)
Educ-Foreign	2.458***	1.377***	0.275***	0.110***
	(0.0442)	(0.0422)	(0.00390)	(0.00349)
Educ -AA	-1.206***	-2.972***	0.366***	0.104***
	(0.0453)	(0.0441)	(0.00410)	(0.00374)
Educ - BA	-1.865***	-4.087***	0.604***	0.232***

	(7) TL Units Earn	(8) TL Units Earn	(9) GPA	(10) GPA
	(0.0560)	(0.0545)	(0.00506)	(0.00461)
Ed - Unknown	0.102*	-0.305***	0.120***	0.0391***
	(0.0502)	(0.0480)	(0.00446)	(0.00399)
Not First Gen	1.717***	1.220***	0.103***	0.0579***
	(0.0207)	(0.0198)	(0.00184)	(0.00165)
Unknown First Gen	0.0682***	-0.138***	0.0176***	-0.00202
	(0.0183)	(0.0175)	(0.00163)	(0.00146)
Non-citizen	0.664***	0.120***	0.0994***	0.0398***
	(0.0266)	(0.0252)	(0.00235)	(0.00210)
Pell Recipient	0.776***	0.952***	-0.0931***	-0.0533***
	(0.0188)	(0.0180)	(0.00167)	(0.00150)
SpecialProgram	5.612***	3.890***	0.141***	-0.0218***
	(0.0723)	(0.0687)	(0.00633)	(0.00565)
Foster	-3.788***	-2.071***	-0.353***	-0.170***
	(0.0646)	(0.0621)	(0.00581)	(0.00524)
Eops	5.469***	4.258***	0.104***	-0.0283***
	(0.0308)	(0.0293)	(0.00270)	(0.00241)
LEP	-1.436***	-0.616***	0.0300***	0.0372***
	(0.0410)	(0.0391)	(0.00364)	(0.00325)
Disability	-0.193***	-0.0545	0.0410***	0.0411***
	(0.0346)	(0.0329)	(0.00306)	(0.00272)
NonTraditional_Age	-1.728***	-2.437***	0.267***	0.132***
	(0.0220)	(0.0213)	(0.00197)	(0.00179)
Prior_dual_enroll	1.499***	0.878***	0.0692***	0.00682**
	(0.0303)	(0.0285)	(0.00267)	(0.00236)
Pre-Fall Transfer Units Attempted		-0.0313***		-0.00786***
		(0.000569)		(0.0000482)
Pre-Fall Transfer Units Earned		0.0471***		0.00939***
		(0.000843)		(0.0000710)
Pre-Fall Transfer English Success		2.813***		0.0917***
		(0.0172)		(0.00143)
Pre-Fall Transfer Math Success		4.198***		0.164***
		(0.0239)		(0.00198)
Pre-Fall 30 Transfer Units		-1.838***		-0.0505***
		(0.0340)		(0.00280)
Pre-Fall 60 Transfer Units		-4.166***		-0.0670***
		(0.0400)		(0.00333)
Pre-Fall GPA		3.848***		0.512***
		(0.00929)		(0.000781)
Constant	20.27***	8.059***	2.661***	1.153***
	(0.0532)	(0.0568)	(0.00473)	(0.00476)
N	3003388	2883021	2837775	2732384
r2	0.146	0.253	0.0796	0.284

SOURCE: Authors' calculations using MIS data.

NOTE: All regressions include campus fixed effects. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. Furthermore, for our one year outcomes we exclude students who transferred within one year. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Standard errors in parentheses. * $p<0.05$; ** $p<0.01$, *** $p<0.001$

TABLE D9
Two year (second fall) outcomes for continuing transfer-intending students – race interactions

	(1) Enroll	(2) Enroll	(3) Persist & Complete Course	(4) Persist & Complete Course	(5) TL Units Attempt	(6) TL Units Attempt
COVID Enrollment (main)	-0.0331***	-0.0313***	-0.0340***	-0.0320***	-1.071***	-1.667***
	(0.00167)	(0.00169)	(0.00157)	(0.00159)	(0.0683)	(0.0671)
Asian (main)	0.0149***	0.0208***	0.0146***	0.0218***	3.803***	3.395***
	(0.00122)	(0.00125)	(0.00115)	(0.00117)	(0.0499)	(0.0494)
Black (main)	-0.0233***	-0.0186***	-0.0444***	-0.0293***	-2.870***	-0.277***
	(0.00150)	(0.00156)	(0.00141)	(0.00147)	(0.0613)	(0.0616)
Latino (main)	0.0472***	0.0511***	0.0205***	0.0307***	-1.369***	-0.0237
	(0.000910)	(0.000936)	(0.000857)	(0.000880)	(0.0372)	(0.0370)
Native American (main)	-0.0715***	-0.0641***	-0.0703***	-0.0568***	-1.778***	-0.227
	(0.00515)	(0.00532)	(0.00485)	(0.00501)	(0.211)	(0.211)
Pacific Islander (main)	-0.0430***	-0.0386***	-0.0551***	-0.0434***	-1.379***	0.0744
	(0.00494)	(0.00507)	(0.00465)	(0.00477)	(0.202)	(0.201)
Two + Races (main)	-0.0159***	-0.0138***	-0.0210***	-0.0144***	0.0193	0.801***
	(0.00173)	(0.00177)	(0.00163)	(0.00167)	(0.0707)	(0.0702)
Unknown Race (main)	-0.0857***	-0.0789***	-0.0754***	-0.0656***	1.152***	1.520***
	(0.00248)	(0.00254)	(0.00234)	(0.00239)	(0.102)	(0.100)
COVID x Asian	-0.00511	-0.00508	-0.00528*	-0.00547*	-0.714***	-0.676***
	(0.00269)	(0.00273)	(0.00254)	(0.00257)	(0.110)	(0.108)
COVID x Black	0.0171***	0.0111**	0.0163***	0.0128***	0.447**	0.257
	(0.00340)	(0.00348)	(0.00320)	(0.00327)	(0.139)	(0.138)
COVID x Latino	-0.0234***	-0.0257***	-0.0245***	-0.0257***	-0.175*	-0.324***
	(0.00197)	(0.00200)	(0.00186)	(0.00188)	(0.0807)	(0.0791)
COVID x Native American	0.0443***	0.0366**	0.0335**	0.0260*	1.015	0.602
	(0.0128)	(0.0131)	(0.0121)	(0.0123)	(0.524)	(0.517)
COVID x Pacific Islander	0.00932	0.00453	0.0155	0.0113	0.233	0.341
	(0.0115)	(0.0117)	(0.0108)	(0.0110)	(0.469)	(0.462)
COVID x Two + Races	0.0132***	0.0123**	0.00974**	0.00902*	0.0227	-0.0750
	(0.00399)	(0.00405)	(0.00375)	(0.00381)	(0.163)	(0.160)
COVID x Unknown Race	0.00445	-0.00312	0.000175	-0.00431	-0.803***	-0.166
	(0.00506)	(0.00518)	(0.00476)	(0.00488)	(0.207)	(0.205)
Enrolled 2 years	-0.0459***	-0.0282***	-0.0478***	-0.0283***	-4.217***	-4.628***
	(0.000877)	(0.000923)	(0.000825)	(0.000868)	(0.0359)	(0.0365)
Enrolled 3 years	-0.0688***	-0.0414***	-0.0728***	-0.0404***	-8.601***	-8.851***
	(0.00102)	(0.00110)	(0.000961)	(0.00103)	(0.0417)	(0.0435)
Enrolled 4 years	-0.0834***	-0.0517***	-0.0895***	-0.0500***	-11.21***	-11.33***
	(0.00119)	(0.00129)	(0.00112)	(0.00121)	(0.0486)	(0.0510)
Enrolled 5+ years	-0.0913***	-0.0599***	-0.0963***	-0.0502***	-11.68***	-11.93***
	(0.000958)	(0.00112)	(0.000902)	(0.00106)	(0.0392)	(0.0444)
Gender - Male	-0.0276***	-0.0223***	-0.0214***	-0.0152***	-0.746***	-0.385***
	(0.000607)	(0.000622)	(0.000572)	(0.000585)	(0.0248)	(0.0246)
Gender - Unknown	-0.0834***	-0.0820***	-0.0624***	-0.0612***	-0.852***	-0.683***
	(0.00320)	(0.00327)	(0.00301)	(0.00308)	(0.131)	(0.129)
Gender - Nonbinary	-0.167***	-0.162***	-0.130***	-0.122**	-1.628	-2.400
	(0.0392)	(0.0400)	(0.0370)	(0.0376)	(1.605)	(1.583)
Educ- No HS	-0.0251***	-0.0230***	-0.0290***	-0.0272***	-2.161***	-1.499***
	(0.00262)	(0.00270)	(0.00247)	(0.00254)	(0.107)	(0.107)
Educ- Adult	-0.000998	0.0000559	-0.00839	-0.00487	-3.048***	-1.860***
	(0.00536)	(0.00551)	(0.00505)	(0.00518)	(0.219)	(0.218)
Educ - GED	-0.00911***	-0.0105***	-0.0121***	-0.0149***	-0.884***	-0.660***
	(0.00154)	(0.00158)	(0.00145)	(0.00149)	(0.0629)	(0.0626)
Educ- Professional Cert	0.00151	0.00121	0.00125	0.000971	0.281**	0.218*
	(0.00238)	(0.00244)	(0.00224)	(0.00229)	(0.0975)	(0.0964)
Educ-Foreign	-0.0291***	-0.0283***	-0.00822***	-0.0149***	1.595***	0.854***
	(0.00176)	(0.00180)	(0.00166)	(0.00170)	(0.0722)	(0.0713)

	(1) Enroll	(2) Enroll	(3) Persist & Complete Course	(4) Persist & Complete Course	(5) TL Units Attempt	(6) TL Units Attempt
Educ -AA	-0.0743***	-0.0479***	-0.0449***	-0.0339***	-4.670***	-5.307***
	(0.00182)	(0.00190)	(0.00172)	(0.00179)	(0.0746)	(0.0753)
Educ - BA	-0.0524***	-0.0421***	-0.0212***	-0.0309***	-6.186***	-7.060***
	(0.00229)	(0.00238)	(0.00215)	(0.00224)	(0.0935)	(0.0942)
Ed - Unknown	-0.0231***	-0.0227***	-0.0145***	-0.0173***	-0.798***	-1.011***
	(0.00201)	(0.00206)	(0.00189)	(0.00194)	(0.0823)	(0.0815)
Not First Gen	0.00401***	0.00272**	0.00725***	0.00511***	2.380***	1.781***
	(0.000841)	(0.000860)	(0.000791)	(0.000809)	(0.0344)	(0.0340)
Unknown First Gen	-0.00156*	0.00142	0.000111	0.00186**	-0.221***	-0.344***
	(0.000736)	(0.000753)	(0.000693)	(0.000708)	(0.0301)	(0.0298)
Non-citizen	-0.0246***	-0.0232***	-0.0160***	-0.0174***	-0.104*	-0.617***
	(0.00106)	(0.00108)	(0.000999)	(0.00101)	(0.0434)	(0.0427)
Pell Recipient	0.0572***	0.0567***	0.0409***	0.0435***	3.437***	3.423***
	(0.000759)	(0.000779)	(0.000714)	(0.000733)	(0.0310)	(0.0308)
SpecialProgram	0.0305***	0.0389***	0.0243***	0.0256***	9.846***	8.109***
	(0.00294)	(0.00299)	(0.00277)	(0.00281)	(0.120)	(0.118)
Foster	-0.0410***	-0.0389***	-0.0538***	-0.0449***	-4.069***	-2.489***
	(0.00260)	(0.00269)	(0.00245)	(0.00253)	(0.107)	(0.106)
Eops	0.0386***	0.0337***	0.0327***	0.0219***	9.225***	8.133***
	(0.00123)	(0.00126)	(0.00116)	(0.00118)	(0.0504)	(0.0497)
LEP	0.0549***	0.0550***	0.0602***	0.0591***	-1.863***	-0.568***
	(0.00162)	(0.00166)	(0.00153)	(0.00156)	(0.0663)	(0.0655)
Disability	0.0832***	0.0837***	0.0726***	0.0734***	-0.152**	0.202***
	(0.00137)	(0.00140)	(0.00129)	(0.00132)	(0.0562)	(0.0553)
NonTraditional_Age	-0.00937***	-0.0214***	0.00115	-0.0139***	-4.245***	-5.062***
	(0.000885)	(0.000917)	(0.000833)	(0.000863)	(0.0362)	(0.0363)
Prior_dual_enroll	0.0104***	0.0150***	0.00746***	0.0102***	2.511***	1.910***
	(0.00125)	(0.00126)	(0.00117)	(0.00118)	(0.0510)	(0.0498)
Pre-Fall Transfer Units Attempted		0.00138***		0.0000609**		0.132***
		(0.0000251)		(0.0000236)		(0.000992)
Pre-Fall Transfer Units Earned		-0.00266***		-0.00103***		-0.171***
		(0.0000368)		(0.0000347)		(0.00146)
Pre-Fall Transfer English Success		0.0315***		0.0289***		4.118***
		(0.000743)		(0.000699)		(0.0294)
Pre-Fall Transfer Math Success		-0.0133***		-0.00586***		6.113***
		(0.00105)		(0.000989)		(0.0416)
Pre-Fall 30 Transfer Units		-0.0514***		-0.0461***		-3.931***
		(0.00151)		(0.00142)		(0.0597)
Pre-Fall 60 Transfer Units		-0.00308		0.00159		-5.109***
		(0.00177)		(0.00167)		(0.0701)
Pre-Fall GPA		0.0233***		0.0366***		4.250***
		(0.000398)		(0.000375)		(0.0158)
Constant	0.365***	0.297***	0.299***	0.193***	35.12***	21.46***
	(0.00211)	(0.00242)	(0.00199)	(0.00227)	(0.0864)	(0.0957)
N	2563830	2455031	2563830	2455031	2563830	2455031
r2	0.0234	0.0285	0.0191	0.0256	0.168	0.215

TABLE D9 (CONTINUED)

Two year (second fall) outcomes for continuing transfer-intending students – race interactions

	(7) TL Units Earn	(8) TL Units Earn	(9) GPA	(10) GPA
COVID Enrollment (main)	-0.231***	-0.716***	0.0997***	0.0831***
	(0.0640)	(0.0613)	(0.00382)	(0.00339)
Asian (main)	3.060***	2.943***	0.00582*	0.0249***
	(0.0467)	(0.0452)	(0.00278)	(0.00249)
Black (main)	-4.960***	-1.526***	-0.602***	-0.307***
	(0.0573)	(0.0563)	(0.00345)	(0.00314)
Latino (main)	-2.489***	-0.634***	-0.319***	-0.151***
	(0.0348)	(0.0339)	(0.00208)	(0.00187)
Native American (main)	-3.072***	-0.979***	-0.354***	-0.180***
	(0.197)	(0.193)	(0.0119)	(0.0107)
Pacific Islander (main)	-3.509***	-1.421***	-0.430***	-0.254***
	(0.189)	(0.183)	(0.0114)	(0.0102)
Two + Races (main)	-1.183***	0.00522	-0.213***	-0.105***
	(0.0662)	(0.0642)	(0.00395)	(0.00355)
Unknown Race (main)	0.508***	1.244***	-0.116***	-0.0427***
	(0.0950)	(0.0918)	(0.00566)	(0.00507)
COVID x Asian	-0.0708	-0.0561	0.0528***	0.0482***
	(0.103)	(0.0987)	(0.00613)	(0.00544)
COVID x Black	0.0621	0.115	-0.0126	0.00421
	(0.130)	(0.126)	(0.00785)	(0.00702)
COVID x Latino	-0.366***	-0.392***	-0.0143**	-0.00615
	(0.0755)	(0.0723)	(0.00451)	(0.00400)
COVID x Native American	0.319	-0.0880	0.0178	-0.0109
	(0.490)	(0.473)	(0.0295)	(0.0264)
COVID x Pacific Islander	0.219	0.409	0.0515	0.0743**
	(0.439)	(0.422)	(0.0263)	(0.0235)
COVID x Two + Races	0.0469	0.0123	0.00364	0.00361
	(0.153)	(0.147)	(0.00911)	(0.00811)
COVID x Unknown Race	-1.260***	-0.430*	-0.101***	-0.0375***
	(0.194)	(0.188)	(0.0116)	(0.0104)
Enrolled 2 years	-4.204***	-4.239***	-0.00891***	0.0301***
	(0.0336)	(0.0334)	(0.00199)	(0.00184)
Enrolled 3 years	-8.331***	-7.772***	-0.0564***	0.0336***
	(0.0391)	(0.0398)	(0.00232)	(0.00220)
Enrolled 4 years	-10.53***	-9.453***	-0.0721***	0.0612***
	(0.0455)	(0.0466)	(0.00271)	(0.00258)
Enrolled 5+ years	-10.84***	-9.093***	-0.0581***	0.159***
	(0.0366)	(0.0406)	(0.00219)	(0.00226)
Gender - Male	-1.054***	-0.565***	-0.111***	-0.0672***
	(0.0232)	(0.0225)	(0.00139)	(0.00124)
Gender - Unknown	-1.032***	-0.857***	-0.0498***	-0.0375***
	(0.122)	(0.118)	(0.00730)	(0.00654)
Gender - Nonbinary	-1.607	-1.828	0.118	0.109
	(1.502)	(1.447)	(0.0892)	(0.0798)
Educ- No HS	-2.087***	-1.467***	-0.0856***	-0.0569***
	(0.100)	(0.0977)	(0.00605)	(0.00544)
Educ- Adult	-2.843***	-1.556***	-0.107***	-0.0372***
	(0.205)	(0.199)	(0.0124)	(0.0111)
Educ - GED	-1.058***	-0.998***	-0.0434***	-0.0551***
	(0.0588)	(0.0572)	(0.00355)	(0.00319)
Educ- Professional Cert	0.0813	-0.00737	0.0314***	0.0130**
	(0.0912)	(0.0881)	(0.00546)	(0.00489)
Educ-Foreign	3.070***	1.669***	0.263***	0.108***
	(0.0675)	(0.0652)	(0.00402)	(0.00359)
Educ -AA	-2.385***	-4.121***	0.352***	0.101***

	(7) TL Units Earn	(8) TL Units Earn	(9) GPA	(10) GPA
	(0.0698)	(0.0688)	(0.00424)	(0.00387)
Educ - BA	-3.216***	-5.800***	0.585***	0.238***
	(0.0875)	(0.0861)	(0.00532)	(0.00484)
Ed - Unknown	-0.155*	-0.686***	0.108***	0.0332***
	(0.0770)	(0.0745)	(0.00460)	(0.00412)
Not First Gen	2.295***	1.678***	0.100***	0.0572***
	(0.0322)	(0.0311)	(0.00192)	(0.00172)
Unknown First Gen	-0.00328	-0.202***	0.0145***	-0.00658***
	(0.0282)	(0.0272)	(0.00168)	(0.00151)
Non-citizen	0.676***	-0.0342	0.0977***	0.0377***
	(0.0406)	(0.0390)	(0.00242)	(0.00216)
Pell Recipient	1.881***	2.154***	-0.0921***	-0.0544***
	(0.0290)	(0.0282)	(0.00174)	(0.00156)
SpecialProgram	8.363***	6.228***	0.154***	-0.0172**
	(0.113)	(0.108)	(0.00663)	(0.00592)
Foster	-5.316***	-3.208***	-0.348***	-0.173***
	(0.0997)	(0.0972)	(0.00601)	(0.00542)
Eops	7.753***	6.145***	0.0994***	-0.0320***
	(0.0471)	(0.0454)	(0.00278)	(0.00249)
LEP	-0.735***	0.289***	0.0265***	0.0382***
	(0.0621)	(0.0599)	(0.00370)	(0.00331)
Disability	0.250***	0.540***	0.0218***	0.0283***
	(0.0526)	(0.0506)	(0.00313)	(0.00279)
NonTraditional_Age	-2.547***	-3.634***	0.244***	0.118***
	(0.0339)	(0.0332)	(0.00203)	(0.00184)
Prior_dual_enroll	2.062***	1.415***	0.0738***	0.0138***
	(0.0477)	(0.0455)	(0.00283)	(0.00250)
Pre-Fall Transfer Units Attempted		-0.0170***		-0.00708***
		(0.000907)		(0.0000508)
Pre-Fall Transfer Units Earned		0.00326*		0.00865***
		(0.00133)		(0.0000743)
Pre-Fall Transfer English Success		4.044***		0.109***
		(0.0269)		(0.00148)
Pre-Fall Transfer Math Success		5.773***		0.186***
		(0.0380)		(0.00209)
Pre-Fall 30 Transfer Units		-3.563***		-0.0643***
		(0.0546)		(0.00299)
Pre-Fall 60 Transfer Units		-4.570***		-0.0770***
		(0.0641)		(0.00354)
Pre-Fall GPA		5.210***		0.490***
		(0.0144)		(0.000804)
Constant	28.04***	11.70***	2.693***	1.244***
	(0.0809)	(0.0875)	(0.00484)	(0.00486)
N	2563830	2455031	2448365	2351652
r2	0.147	0.232	0.0808	0.285

SOURCE: Authors' calculations using MIS data.

NOTE: All regressions include campus fixed effects. For two year outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our two year outcomes we exclude students who transferred within two years. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Standard errors in parentheses. * p<0.05; ** p<0.01, *** p<0.001

Fall outcomes for continuing transfer-intending students – years enrolled interaction

	(1) Persist & Complete Course	(2) Persist & Complete Course	(3) Persist & Complete Course	(4) TL Units Attempt	(5) TL Units Attempt	(6) TL Units Attempt
COVID Enrollment (main)	-0.0253***	-0.0270***	-0.0528***	1.021***	0.953***	0.369***
	(0.000875)	(0.000871)	(0.000840)	(0.00992)	(0.00967)	(0.00950)
Enrolled 2 years (main)	0.00653***	0.00555***	-0.0121***	0.143***	0.140***	-0.514***
	(0.000661)	(0.000654)	(0.000645)	(0.00750)	(0.00727)	(0.00729)
Enrolled 3 years (main)	-0.0191***	-0.0161***	-0.0296***	-0.832***	-0.723***	-1.540***
	(0.000747)	(0.000741)	(0.000746)	(0.00848)	(0.00823)	(0.00844)
Enrolled 4 years (main)	-0.0494***	-0.0418***	-0.0433***	-1.759***	-1.509***	-2.364***
	(0.000868)	(0.000863)	(0.000871)	(0.00984)	(0.00958)	(0.00985)
Enrolled 5+ years (main)	-0.0688***	-0.0633***	-0.0412***	-2.895***	-1.858***	-2.794***
	(0.000581)	(0.000681)	(0.000737)	(0.00660)	(0.00757)	(0.00834)
COVID x 2 Years	-0.00482***	-0.00403**	-0.000783	-1.037***	-1.024***	-0.959***
	(0.00133)	(0.00132)	(0.00125)	(0.0151)	(0.0146)	(0.0142)
COVID x 3 Years	-0.00805***	-0.00753***	0.00727***	-1.314***	-1.245***	-1.029***
	(0.00151)	(0.00150)	(0.00142)	(0.0172)	(0.0167)	(0.0161)
COVID x 4 Years	-0.00459**	-0.00504**	0.0142***	-1.135***	-1.055***	-0.794***
	(0.00175)	(0.00173)	(0.00164)	(0.0198)	(0.0192)	(0.0186)
COVID x 5+ Years	0.00478***	0.00612***	0.0328***	-0.898***	-0.805***	-0.562***
	(0.00116)	(0.00115)	(0.00110)	(0.0132)	(0.0128)	(0.0125)
Gender - Male		-0.00970***	0.00157***		0.128***	0.171***
		(0.000389)	(0.000373)		(0.00432)	(0.00422)
Gender- Unknown		-0.00786***	-0.00304		-0.181***	-0.143***
		(0.00200)	(0.00192)		(0.0222)	(0.0217)
Gender - Nobinary		-0.0340***	-0.0117		0.000546	0.152
		(0.00966)	(0.00929)		(0.107)	(0.105)
Ed - No HS		-0.0309***	-0.0215***		-0.370***	-0.191***
		(0.00176)	(0.00170)		(0.0196)	(0.0192)
Ed - Adult		-0.0453***	-0.0239***		-0.848***	-0.514***
		(0.00357)	(0.00343)		(0.0396)	(0.0388)
Ed - GED		-0.0272***	-0.0276***		-0.226***	-0.106***
		(0.00101)	(0.000975)		(0.0112)	(0.0110)
Ed - Profes. Cert		-0.00838***	-0.0115***		0.00190	0.000864
		(0.00158)	(0.00151)		(0.0176)	(0.0171)
Ed - Foreign		0.0487***	0.0110***		0.484***	0.362***
		(0.00113)	(0.00108)		(0.0125)	(0.0122)
Ed - AA		0.0598***	-0.0152***		-0.370***	-0.905***
		(0.00104)	(0.00102)		(0.0116)	(0.0115)
Ed - BA		0.0656***	-0.0153***		-1.020***	-1.181***
		(0.00146)	(0.00142)		(0.0162)	(0.0161)
Ed - Unknown		0.0159***	0.000679		-0.0123	-0.0146
		(0.00129)	(0.00124)		(0.0143)	(0.0140)
Race Unknown		0.0384***	0.0182***		1.022***	0.782***
		(0.00131)	(0.00126)		(0.0146)	(0.0142)
Race - White		0.0536***	0.0128***		0.557***	0.283***
		(0.000534)	(0.000514)		(0.00593)	(0.00582)
Race - Two + Races		0.0195***	0.00602***		0.630***	0.510***
		(0.000956)	(0.000916)		(0.0106)	(0.0104)
Race - Pacific Islander		-0.0113***	-0.00294		0.425***	0.498***
		(0.00285)	(0.00273)		(0.0317)	(0.0309)

	(1) Persist & Complete Course	(2) Persist & Complete Course	(3) Persist & Complete Course	(4) TL Units Attempt	(5) TL Units Attempt	(6) TL Units Attempt
Race - Native American		-0.0121***	-0.00985**		0.183***	0.244***
		(0.00311)	(0.00300)		(0.0346)	(0.0340)
Race - Black		-0.0464***	-0.0118***		0.149***	0.462***
Race - Asian		0.0663***	0.0292***		1.131***	0.680***
Not First Gen		0.0250***	0.0120***		0.489***	0.326***
		(0.000524)	(0.000502)		(0.00582)	(0.00568)
Unknown First Gen		0.00667***	-0.000589		-0.0700***	-0.142***
		(0.000471)	(0.000451)		(0.00523)	(0.00510)
Non-Citizen		0.0141***	0.000609		0.0421***	-0.0731***
		(0.000681)	(0.000649)		(0.00756)	(0.00734)
Pell Recipient		-0.00686***	-0.00148**		0.285***	0.210***
		(0.000473)	(0.000456)		(0.00526)	(0.00516)
SpecialProgram		0.0617***	0.0212***		1.699***	1.204***
		(0.00178)	(0.00169)		(0.0198)	(0.0192)
Foster		-0.102***	-0.0507***		-0.604***	-0.190***
		(0.00168)	(0.00162)		(0.0187)	(0.0184)
Eops		0.0803***	0.0451***		1.801***	1.530***
		(0.000770)	(0.000735)		(0.00855)	(0.00832)
LEP		0.0143***	0.0198***		-1.290***	-0.896***
		(0.00107)	(0.00102)		(0.0119)	(0.0116)
Disability		0.0332***	0.0308***		-0.580***	-0.523***
		(0.000881)	(0.000840)		(0.00978)	(0.00950)
NonTraditional_Age		0.00638***	-0.00888***		-1.105***	-1.056***
		(0.000562)	(0.000546)		(0.00624)	(0.00618)
Prior Dual Enrollment		0.0137***	-0.00420***		0.477***	0.216***
		(0.000741)	(0.000702)		(0.00823)	(0.00794)
Pre-Fall TL Units Attempt			-0.00323***			0.0215***
			(0.0000143)			(0.000161)
Pre-Fall TL Units Earned			0.00491***			-0.00617***
			(0.0000208)			(0.000235)
Pre-Fall TL English Success			0.0318***			0.751***
			(0.000458)			(0.00518)
Pre-Fall TL Math Success			0.0255***			1.440***
			(0.000615)			(0.00695)
Pre-Fall Transfer Progress 30 Units			-0.0124***			-0.140***
			(0.000806)			(0.00911)
Pre-Fall Transfer Progress 60 Units			-0.0418***			-1.566***
			(0.000847)			(0.00958)
Pre-Fall GPA			0.0970***			0.678***
			(0.000249)			(0.00282)
Constant	0.848***	0.783***	0.525***	9.749***	8.575***	6.373***
	(0.000432)	(0.00133)	(0.00143)	(0.00491)	(0.0148)	(0.0162)
N	4112877	4112877	3980057	4112877	4112877	3980057
r2	0.00740	0.0275	0.129	0.0887	0.145	0.212

Fall outcomes for continuing transfer-intending students – years enrolled interaction

	(7) TL Units Earned	(8) TL Units Earned	(9) TL Units Earned	(10) GPA	(11) GPA	(12) GPA
COVID Enrollment (main)	0.940***	0.858***	0.203***	0.204***	0.181***	0.0467***
	(0.0108)	(0.0106)	(0.00999)	(0.00286)	(0.00279)	(0.00251)
Enrolled 2 years (main)	0.142***	0.137***	-0.505***	0.0663***	0.0633***	0.0543***
	(0.00818)	(0.00796)	(0.00767)	(0.00215)	(0.00208)	(0.00192)
Enrolled 3 years (main)	-0.878***	-0.763***	-1.459***	0.0169***	0.0272***	0.0654***
	(0.00926)	(0.00902)	(0.00887)	(0.00244)	(0.00237)	(0.00224)
Enrolled 4 years (main)	-1.776***	-1.517***	-2.099***	-0.0246***	-0.00419	0.0964***
	(0.0107)	(0.0105)	(0.0104)	(0.00286)	(0.00278)	(0.00264)
Enrolled 5+ years (main)	-2.611***	-1.825***	-2.206***	0.132***	0.00425	0.203***
	(0.00720)	(0.00829)	(0.00877)	(0.00192)	(0.00221)	(0.00224)
COVID x 2 Years	-0.910***	-0.880***	-0.816***	-0.0306***	-0.0198***	-0.0125***
	(0.0165)	(0.0160)	(0.0149)	(0.00435)	(0.00422)	(0.00375)
COVID x 3 Years	-1.162***	-1.094***	-0.802***	-0.0582***	-0.0499***	0.00719
	(0.0188)	(0.0183)	(0.0170)	(0.00500)	(0.00485)	(0.00430)
COVID x 4 Years	-0.999***	-0.934***	-0.566***	-0.0575***	-0.0565***	0.0219***
	(0.0217)	(0.0211)	(0.0195)	(0.00582)	(0.00564)	(0.00500)
COVID x 5+ Years	-0.790***	-0.702***	-0.270***	-0.0783***	-0.0709***	0.0498***
	(0.0144)	(0.0140)	(0.0131)	(0.00386)	(0.00374)	(0.00336)
Gender - Male		-0.0646***	0.0597***		-0.0968***	-0.0414***
		(0.00473)	(0.00444)		(0.00126)	(0.00113)
Gender- Unknown		-0.247***	-0.179***		-0.0397***	-0.0182**
		(0.0244)	(0.0228)		(0.00649)	(0.00581)
Gender - Nobinary		-0.438***	-0.123		-0.0696*	0.0143
		(0.118)	(0.111)		(0.0320)	(0.0287)
Ed - No HS		-0.434***	-0.239***		-0.0539***	-0.0335***
		(0.0214)	(0.0202)		(0.00578)	(0.00519)
Ed - Adult		-0.895***	-0.484***		-0.0997***	-0.0362***
		(0.0434)	(0.0408)		(0.0117)	(0.0105)
Ed - GED		-0.332***	-0.259***		-0.0207***	-0.0408***
		(0.0123)	(0.0116)		(0.00333)	(0.00300)
Ed - Profes. Cert		-0.0505**	-0.0835***		0.0453***	0.0125**
		(0.0192)	(0.0180)		(0.00515)	(0.00461)
Ed - Foreign		0.903***	0.461***		0.263***	0.0804***
		(0.0137)	(0.0128)		(0.00361)	(0.00322)
Ed - AA		0.315***	-0.745***		0.378***	0.0805***
		(0.0127)	(0.0121)		(0.00342)	(0.00311)
Ed - BA		-0.277***	-1.133***		0.521***	0.153***
		(0.0178)	(0.0169)		(0.00481)	(0.00436)
Ed - Unknown		0.122***	-0.0201		0.113***	0.0323***
		(0.0157)	(0.0147)		(0.00418)	(0.00374)
Race Unknown		1.143***	0.791***		0.188***	0.0884***
		(0.0160)	(0.0150)		(0.00424)	(0.00379)
Race - White		0.934***	0.366***		0.329***	0.137***
		(0.00649)	(0.00612)		(0.00173)	(0.00155)
Race - Two + Races		0.615***	0.408***		0.135***	0.0589***
		(0.0116)	(0.0109)		(0.00310)	(0.00277)

	(7) TL Units Earned	(8) TL Units Earned	(9) TL Units Earned	(10) GPA	(11) GPA	(12) GPA
Race - Pacific Islander		0.0523	0.178***		-0.0800***	-0.0623***
		(0.0347)	(0.0325)		(0.00931)	(0.00834)
Race - Native American		0.0182	0.0791*		-0.00554	-0.0117
		(0.0379)	(0.0357)		(0.0102)	(0.00918)
Race - Black		-0.337***	0.201***		-0.253***	-0.110***
Race - Asian		1.465***	0.798***		0.332***	0.153***
Not First Gen		0.601***	0.374***		0.112***	0.0540***
		(0.00638)	(0.00597)		(0.00169)	(0.00152)
Unknown First Gen		0.0284***	-0.0822***		0.0158***	-0.00368**
		(0.00573)	(0.00537)		(0.00153)	(0.00137)
Non-Citizen		0.249***	0.0319***		0.0903***	0.0273***
		(0.00828)	(0.00772)		(0.00220)	(0.00196)
Pell Recipient		0.0340***	0.0442***		-0.0804***	-0.0437***
		(0.00576)	(0.00542)		(0.00153)	(0.00138)
SpecialProgram		1.647***	0.915***		0.132***	-0.0414***
		(0.0216)	(0.0202)		(0.00567)	(0.00506)
Foster		-1.282***	-0.533***		-0.341***	-0.136***
		(0.0205)	(0.0193)		(0.00556)	(0.00501)
Eops		1.839***	1.320***		0.147***	-0.0000812
		(0.00936)	(0.00875)		(0.00244)	(0.00218)
LEP		-0.951***	-0.610***		-0.00864*	0.0121***
		(0.0130)	(0.0122)		(0.00346)	(0.00309)
Disability		-0.302***	-0.273***		0.0232***	0.0247***
		(0.0107)	(0.00999)		(0.00284)	(0.00253)
NonTraditional_Age		-0.691***	-0.766***		0.246***	0.125***
		(0.00683)	(0.00650)		(0.00183)	(0.00167)
Prior Dual Enrollment		0.484***	0.139***		0.0807***	0.00413
		(0.00901)	(0.00836)		(0.00238)	(0.00211)
Pre-Fall TL Units Attempt			-0.0208***			-0.00754***
			(0.000170)			(0.0000452)
Pre-Fall TL Units Earned			0.0457***			0.00978***
			(0.000247)			(0.0000648)
Pre-Fall TL English Success			0.813***			0.0579***
			(0.00545)			(0.00138)
Pre-Fall TL Math Success			1.368***			0.141***
			(0.00731)			(0.00184)
Pre-Fall Transfer Progress 30 Units			0.0108			0.0187***
			(0.00959)			(0.00240)
Pre-Fall Transfer Progress 60 Units			-1.635***			-0.0780***
			(0.0101)			(0.00254)
Pre-Fall GPA			1.321***			0.559***
			(0.00297)			(0.000766)
Constant	7.555***	6.311***	2.523***	2.532***	2.399***	0.926***
	(0.00536)	(0.0162)	(0.0170)	(0.00141)	(0.00434)	(0.00437)
N	4112877	4112877	3980057	3755998	3755998	3646286
r2	0.0632	0.114	0.251	0.00520	0.0661	0.269

SOURCE: Authors' calculations using MIS data.

NOTE: All regressions include campus fixed effects. For fall outcomes, the pandemic-affected group includes fall 2020 and 2021 enrollees. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Standard errors in parentheses. * $p<0.05$; ** $p<0.01$, *** $p<0.001$

One year (next fall) outcomes for continuing transfer-intending students – years enrolled interaction

	(1)	(2)	(3)	(4)	(5)	(6)
					TL	
			Persist &	**Persist &**	**Units**	**TL Units**
	Enroll	**Enroll**	**Complete Course**	**Complete Course**	**Attempt**	**Attempt**
COVID Enrollment (main)	-0.0379***	-0.0582***	-0.0531***	-0.0756***	0.621***	-0.635***
	(0.00112)	(0.00113)	(0.00114)	(0.00115)	(0.0303)	(0.0299)
Enrolled 2 years (main)	-0.0394***	-0.0440***	-0.0486***	-0.0481***	1.710***	-2.527***
	(0.000982)	(0.00101)	(0.00100)	(0.00102)	(0.0267)	(0.0267)
Enrolled 3 years (main)	-0.0860***	-0.0838***	-0.105***	-0.0919***	4.811***	-5.707***
	(0.00114)	(0.00120)	(0.00117)	(0.00121)	(0.0310)	(0.0315)
Enrolled 4 years (main)	-0.114***	-0.105***	-0.138***	-0.113***	6.862***	-7.739***
	(0.00133)	(0.00140)	(0.00136)	(0.00142)	(0.0362)	(0.0369)
Enrolled 5+ years (main)	-0.132***	-0.117***	-0.157***	-0.116***	7.547***	-8.505***
	(0.00101)	(0.00114)	(0.00103)	(0.00115)	(0.0275)	(0.0300)
COVID x 2 Years	-0.0121***	-0.00504**	-0.0106***	-0.00112	2.085***	-1.735***
	(0.00178)	(0.00178)	(0.00182)	(0.00181)	(0.0484)	(0.0470)
COVID x 3 Years	-0.00390	0.00726***	-0.000431	0.0140***	1.962***	-1.409***
	(0.00207)	(0.00207)	(0.00211)	(0.00209)	(0.0562)	(0.0545)
COVID x 4 Years	-0.00117	0.0111***	0.00755**	0.0250***	1.453***	-0.797***
	(0.00239)	(0.00239)	(0.00245)	(0.00242)	(0.0650)	(0.0630)
COVID x 5+ Years	0.0111***	0.0270***	0.0208***	0.0436***	0.639***	0.0496
	(0.00153)	(0.00155)	(0.00157)	(0.00157)	(0.0417)	(0.0410)
Gender - Male	-0.0293***	-0.0207***	-0.0264***	-0.0159***	0.248***	-0.0408**
	(0.000567)	(0.000573)	(0.000579)	(0.000581)	(0.0154)	(0.0151)
Gender- Unknown	-0.0758***	-0.0737***	-0.0605***	-0.0583***	0.645***	-0.573***
	(0.00293)	(0.00297)	(0.00300)	(0.00300)	(0.0797)	(0.0782)
Gender - Nobinary	-0.162***	-0.159***	-0.150***	-0.143***	-0.309	-0.284
	(0.0216)	(0.0219)	(0.0220)	(0.0221)	(0.586)	(0.577)
Ed - No HS	-0.0447***	-0.0346***	-0.0494***	-0.0395***	1.427***	-0.920***
	(0.00248)	(0.00252)	(0.00254)	(0.00256)	(0.0675)	(0.0666)
Ed - Adult	-0.0364***	-0.0184***	-0.0458***	-0.0248***	2.435***	-1.494***
	(0.00502)	(0.00509)	(0.00512)	(0.00515)	(0.136)	(0.134)
Ed - GED	-0.0223***	-0.0199***	-0.0269***	-0.0274***	0.685***	-0.481***
	(0.00144)	(0.00147)	(0.00148)	(0.00149)	(0.0392)	(0.0387)
Ed - Profes. Cert	-0.00804***	-0.00943***	-0.0104***	-0.0126***	0.106	0.0298
	(0.00226)	(0.00229)	(0.00231)	(0.00231)	(0.0615)	(0.0603)
Ed - Foreign	-0.0118***	-0.0239***	0.0180***	-0.00616***	1.417***	0.873***
	(0.00165)	(0.00167)	(0.00169)	(0.00169)	(0.0449)	(0.0440)
Ed - AA	-0.0822***	-0.0898***	-0.0461***	-0.0735***	2.829***	-3.789***
	(0.00169)	(0.00174)	(0.00173)	(0.00177)	(0.0460)	(0.0460)
Ed - BA	-0.0890***	-0.107***	-0.0449***	-0.0927***	4.035***	-4.897***
	(0.00210)	(0.00215)	(0.00214)	(0.00218)	(0.0569)	(0.0568)

	(1)	(2)	(3)	(4)	(5)	(6)
			Persist &	**Persist &**	**TL Units**	**TL Units**
	Enroll	**Enroll**	**Complete Course**	**Complete Course**	**Attempt**	**Attempt**
Ed - Unknown	-0.0259***	-0.0308***	-0.0149***	-0.0255***	-0.326***	-0.470***
	(0.00188)	(0.00190)	(0.00192)	(0.00192)	(0.0510)	(0.0501)
Race Unknown	-0.0887***	-0.0980***	-0.0519***	-0.0652***	2.414***	1.787***
	(0.00194)	(0.00196)	(0.00198)	(0.00199)	(0.0527)	(0.0517)
Race - White	-0.00907***	-0.0306***	0.0236***	-0.00843***	1.405***	0.425***
	(0.000786)	(0.000798)	(0.000803)	(0.000808)	(0.0214)	(0.0210)
Race - Two + Races	-0.0362***	-0.0434***	-0.0146***	-0.0251***	1.370***	0.975***
	(0.00140)	(0.00142)	(0.00143)	(0.00144)	(0.0381)	(0.0374)
Race - Pacific Islander	-0.0742***	-0.0698***	-0.0622***	-0.0557***	0.585***	0.741***
	(0.00413)	(0.00417)	(0.00421)	(0.00423)	(0.112)	(0.110)
Race - Native American	-0.0988***	-0.0930***	-0.0758***	-0.0716***	0.0834	0.237*
	(0.00444)	(0.00452)	(0.00454)	(0.00458)	(0.121)	(0.119)
Race - Black	-0.0724***	-0.0523***	-0.0715***	-0.0449***	-0.505***	0.480***
Race - Asian	0.0144***	-0.00448***	0.0490***	0.0222***	3.944***	2.597***
Not First Gen	0.0203***	0.0123***	0.0262***	0.0166***	1.698***	1.236***
	(0.000774)	(0.000782)	(0.000791)	(0.000792)	(0.0210)	(0.0206)
Unknown First Gen	0.00370***	0.00123	0.00531***	0.00158*	-0.125***	-0.282***
	(0.000685)	(0.000692)	(0.000700)	(0.000701)	(0.0186)	(0.0182)
Non-Citizen	-0.0150***	-0.0212***	-0.00464***	-0.0149***	0.127***	-0.271***
	(0.000993)	(0.000998)	(0.00101)	(0.00101)	(0.0270)	(0.0263)
Pell Recipient	0.0506***	0.0505***	0.0331***	0.0380***	1.756***	1.707***
	(0.000704)	(0.000714)	(0.000719)	(0.000723)	(0.0191)	(0.0188)
SpecialProgram	0.0942***	0.0749***	0.0891***	0.0608***	6.550***	5.091***
	(0.00271)	(0.00272)	(0.00276)	(0.00275)	(0.0735)	(0.0717)
Foster	-0.0804***	-0.0536***	-0.108***	-0.0703***	-2.730***	-1.457***
	(0.00242)	(0.00246)	(0.00247)	(0.00249)	(0.0656)	(0.0648)
Eops	0.114***	0.0949***	0.113***	0.0846***	6.422***	5.604***
	(0.00115)	(0.00116)	(0.00118)	(0.00118)	(0.0313)	(0.0306)
LEP	0.0350***	0.0472***	0.0445***	0.0551***	-2.384***	-1.333***
	(0.00153)	(0.00155)	(0.00157)	(0.00157)	(0.0417)	(0.0408)
Disability	0.0809***	0.0824***	0.0735***	0.0750***	-0.715***	-0.505***
	(0.00129)	(0.00130)	(0.00132)	(0.00132)	(0.0351)	(0.0343)
NonTraditional_Age	-0.0313***	-0.0452***	-0.0144***	-0.0350***	-3.000***	-3.428***
	(0.000824)	(0.000844)	(0.000842)	(0.000854)	(0.0224)	(0.0222)
Prior Dual Enrollment	0.0218***	0.0150***	0.0215***	0.0124***	1.774***	1.195***
	(0.00113)	(0.00113)	(0.00116)	(0.00114)	(0.0308)	(0.0298)
Pre-Fall TL Units Attempt		0.000422***		-0.00134***		0.0751***
		(0.0000225)		(0.0000228)		(0.000593)
Pre-Fall TL Units Earned		-0.000512***		0.00148***		-0.0737***
		(0.0000333)		(0.0000338)		(0.000879)
Pre-Fall TL English Success		0.0875***		0.0864***		2.886***
		(0.000682)		(0.000691)		(0.0180)
Pre-Fall TL Math Success		0.0433***		0.0539***		4.546***
		(0.000947)		(0.000959)		(0.0250)
Pre-Fall Transfer Progress 30 Units		-0.0682***		-0.0689***		-1.977***
		(0.00134)		(0.00136)		(0.0354)

	(1) Enroll	(2) Enroll	(3) Persist & Complete Course	(4) Persist & Complete Course	(5) TL Units Attempt	(6) TL Units Attempt
Pre-Fall Transfer Progress 60 Units		-0.0972***		-0.0886***		-4.711***
		(0.00158)		(0.00160)		(0.0418)
Pre-Fall GPA		0.0634***		0.0875***		2.967***
		(0.000367)		(0.000372)		(0.00969)
Constant	0.659***	0.469***	0.535***	0.288***	23.72***	15.07***
	(0.00193)	(0.00215)	(0.00197)	(0.00218)	(0.0523)	(0.0567)
N	3003388	2883021	3003388	2883021	3003388	2883021
r2	0.0385	0.0606	0.0386	0.0796	0.176	0.239

TABLE D11 (CONTINUED)

One year (next fall) outcomes for continuing transfer-intending students – years enrolled interaction

	(7) TL Units Earn	(8) TL Units Earn	(9) GPA	(10) GPA
COVID Enrollment (main)	0.870***	-0.309***	0.128***	0.0526***
	(0.0299)	(0.0286)	(0.00263)	(0.00237)
Enrolled 2 years (main)	-2.000***	-2.444***	-0.0162***	0.0294***
	(0.0262)	(0.0255)	(0.00230)	(0.00211)
Enrolled 3 years (main)	-5.017***	-5.180***	-0.0695***	0.0323***
	(0.0305)	(0.0302)	(0.00269)	(0.00251)
Enrolled 4 years (main)	-6.747***	-6.591***	-0.0867***	0.0600***
	(0.0356)	(0.0354)	(0.00315)	(0.00295)
Enrolled 5+ years (main)	-7.208***	-6.536***	-0.0686***	0.167***
	(0.0270)	(0.0287)	(0.00240)	(0.00240)
COVID x 2 Years	-1.744***	-1.333***	-0.0210***	0.0136***
	(0.0476)	(0.0450)	(0.00420)	(0.00373)
COVID x 3 Years	-1.573***	-0.933***	-0.0197***	0.0317***
	(0.0553)	(0.0522)	(0.00489)	(0.00433)
COVID x 4 Years	-1.148***	-0.335***	-0.00706	0.0598***
	(0.0640)	(0.0604)	(0.00569)	(0.00504)
COVID x 5+ Years	-0.565***	0.381***	-0.0276***	0.0595***
	(0.0410)	(0.0392)	(0.00365)	(0.00328)
Gender - Male	-0.518***	-0.196***	-0.0975***	-0.0526***
	(0.0152)	(0.0145)	(0.00135)	(0.00121)
Gender- Unknown	-0.729***	-0.655***	-0.0415***	-0.0327***
	(0.0784)	(0.0749)	(0.00696)	(0.00624)
Gender - Nobinary	-0.658	-0.411	-0.0441	-0.0305
	(0.576)	(0.553)	(0.0513)	(0.0461)
Ed - No HS	-1.383***	-0.920***	-0.0680***	-0.0456***
	(0.0664)	(0.0638)	(0.00595)	(0.00536)
Ed - Adult	-2.289***	-1.305***	-0.0965***	-0.0354**
	(0.134)	(0.129)	(0.0120)	(0.0108)
Ed - GED	-0.785***	-0.731***	-0.0302***	-0.0500***
	(0.0386)	(0.0371)	(0.00347)	(0.00312)
Ed - Profes. Cert	0.0141	-0.106	0.0457***	0.0182***
	(0.0605)	(0.0577)	(0.00540)	(0.00483)
Ed - Foreign	2.472***	1.378***	0.275***	0.108***
	(0.0442)	(0.0421)	(0.00390)	(0.00349)
Ed - AA	-1.201***	-2.968***	0.366***	0.104***
	(0.0452)	(0.0441)	(0.00410)	(0.00374)
Ed - BA	-1.858***	-4.088***	0.605***	0.232***
	(0.0560)	(0.0545)	(0.00506)	(0.00461)
Ed - Unknown	0.112*	-0.302***	0.121***	0.0394***
	(0.0501)	(0.0480)	(0.00446)	(0.00399)

	(7) TL Units Earn	(8) TL Units Earn	(9) GPA	(10) GPA
Race Unknown	2.620***	1.894***	0.185***	0.103***
	(0.0519)	(0.0496)	(0.00460)	(0.00412)
Race - White	2.210***	0.797***	0.330***	0.156***
	(0.0210)	(0.0202)	(0.00187)	(0.00168)
Race - Two + Races	1.278***	0.788***	0.118***	0.0551***
	(0.0375)	(0.0358)	(0.00333)	(0.00299)
Race - Pacific Islander	-0.289**	-0.0414	-0.0888***	-0.0750***
	(0.110)	(0.105)	(0.00987)	(0.00885)
Race - Native American	-0.155	0.00248	-0.0229*	-0.0226*
	(0.119)	(0.114)	(0.0107)	(0.00962)
Race - Black	-1.363***	-0.0884**	-0.268***	-0.137***
Race - Asian	4.381***	2.834***	0.345***	0.191***
Not First Gen	1.713***	1.224***	0.104***	0.0588***
	(0.0207)	(0.0198)	(0.00184)	(0.00164)
Unknown First Gen	0.0696***	-0.127***	0.0173***	-0.00137
	(0.0183)	(0.0175)	(0.00163)	(0.00146)
Non-Citizen	0.673***	0.120***	0.100***	0.0397***
	(0.0265)	(0.0252)	(0.00235)	(0.00210)
Pell Recipient	0.770***	0.948***	-0.0931***	-0.0532***
	(0.0188)	(0.0180)	(0.00167)	(0.00150)
SpecialProgram	5.616***	3.901***	0.140***	-0.0212***
	(0.0723)	(0.0687)	(0.00633)	(0.00565)
Foster	-3.794***	-2.084***	-0.354***	-0.171***
	(0.0646)	(0.0621)	(0.00581)	(0.00524)
Eops	5.471***	4.259***	0.104***	-0.0283***
	(0.0308)	(0.0293)	(0.00270)	(0.00241)
LEP	-1.426***	-0.606***	0.0297***	0.0369***
	(0.0410)	(0.0391)	(0.00364)	(0.00325)
Disability	-0.191***	-0.0503	0.0411***	0.0415***
	(0.0346)	(0.0328)	(0.00306)	(0.00272)
NonTraditional_Age	-1.729***	-2.439***	0.267***	0.132***
	(0.0220)	(0.0213)	(0.00197)	(0.00179)
Prior Dual Enrollment	1.494***	0.886***	0.0687***	0.00753**
	(0.0303)	(0.0285)	(0.00267)	(0.00236)
Pre-Fall TL Units Attempt		-0.0315***		-0.00788***
		(0.000569)		(0.0000482)
Pre-Fall TL Units Earned		0.0471***		0.00941***
		(0.000842)		(0.0000710)
Pre-Fall TL English Success		2.813***		0.0924***
		(0.0172)		(0.00143)
Pre-Fall TL Math Success		4.195***		0.164***
		(0.0239)		(0.00198)
Pre-Fall Transfer Progress 30 Units		-1.813***		-0.0512***
		(0.0340)		(0.00280)
Pre-Fall Transfer Progress 60 Units		-4.204***		-0.0689***
		(0.0400)		(0.00333)
Pre-Fall GPA		3.849***		0.512***
		(0.00928)		(0.000781)
Constant	17.83***	7.194***	2.324***	1.002***
	(0.0515)	(0.0544)	(0.00458)	(0.00456)
N	3003388	2883021	2837775	2732384
r2	0.146	0.253	0.0795	0.284

SOURCE: Authors' calculations using MIS data.

NOTE: All regressions include campus fixed effects. For one year outcomes, the pandemic-affected group includes fall 2019 and 2020 enrollees. Furthermore, for our one year outcomes we exclude students who transferred within one year. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Standard errors in parentheses. * $p < 0.05$; ** $p < 0.01$, *** $p < 0.001$

TABLE D12
Two year (second fall) outcomes for continuing transfer-intending students – years enrolled interaction

	(1) Enroll	(2) Enroll	(3) Persist & Complete Course	(4) Persist & Complete Course	(5) TL Units Attempt	(6) TL Units Attempt
COVID Enrollment (main)	-0.0614***	-0.0613***	-0.0627***	-0.0630***	-0.998***	-1.971***
	(0.00140)	(0.00144)	(0.00132)	(0.00135)	(0.0574)	(0.0568)
Enrolled 2 years (main)	-0.0491***	-0.0313***	-0.0509***	-0.0315***	-3.940***	-4.410***
	(0.000973)	(0.00102)	(0.000916)	(0.000958)	(0.0398)	(0.0403)
Enrolled 3 years (main)	-0.0734***	-0.0458***	-0.0772***	-0.0449***	-8.424***	-8.745***
	(0.00113)	(0.00121)	(0.00107)	(0.00114)	(0.0463)	(0.0478)
Enrolled 4 years (main)	-0.0874***	-0.0552***	-0.0927***	-0.0533***	-11.10***	-11.31***
	(0.00132)	(0.00142)	(0.00124)	(0.00133)	(0.0540)	(0.0561)
Enrolled 5+ years (main)	-0.0972***	-0.0659***	-0.102***	-0.0566***	-11.80***	-12.14***
	(0.00103)	(0.00118)	(0.000966)	(0.00111)	(0.0420)	(0.0468)
COVID x 2 Years	0.0171***	0.0162***	0.0162***	0.0165***	-1.480***	-1.150***
	(0.00224)	(0.00227)	(0.00211)	(0.00213)	(0.0917)	(0.0897)
COVID x 3 Years	0.0239***	0.0231***	0.0230***	0.0237***	-0.942***	-0.530***
	(0.00261)	(0.00263)	(0.00246)	(0.00247)	(0.107)	(0.104)
COVID x 4 Years	0.0206***	0.0188***	0.0166***	0.0178***	-0.559***	-0.0749
	(0.00302)	(0.00304)	(0.00284)	(0.00286)	(0.123)	(0.120)
COVID x 5+ Years	0.0307***	0.0312***	0.0305***	0.0337***	0.607***	1.119***
	(0.00194)	(0.00198)	(0.00183)	(0.00187)	(0.0793)	(0.0785)
Gender - Male	-0.0276***	-0.0223***	-0.0214***	-0.0152***	-0.745***	-0.383***
	(0.000607)	(0.000622)	(0.000572)	(0.000585)	(0.0248)	(0.0246)
Gender- Unknown	-0.0835***	-0.0821***	-0.0625***	-0.0613***	-0.849***	-0.685***
	(0.00320)	(0.00327)	(0.00301)	(0.00308)	(0.131)	(0.129)
Gender - Nobinary	-0.165***	-0.159***	-0.127***	-0.119**	-1.597	-2.363
	(0.0392)	(0.0400)	(0.0370)	(0.0376)	(1.605)	(1.583)
Ed - No HS	-0.0253***	-0.0232***	-0.0291***	-0.0274***	-2.145***	-1.488***
	(0.00262)	(0.00270)	(0.00247)	(0.00254)	(0.107)	(0.107)
Ed - Adult	-0.00106	-0.0000306	-0.00843	-0.00494	-3.040***	-1.854***
	(0.00536)	(0.00551)	(0.00505)	(0.00518)	(0.219)	(0.218)
Ed - GED	-0.00897***	-0.0104***	-0.0119***	-0.0147***	-0.884***	-0.659***
	(0.00154)	(0.00158)	(0.00145)	(0.00149)	(0.0628)	(0.0625)
Ed - Profes. Cert	0.00148	0.00118	0.00123	0.000933	0.278**	0.215*
	(0.00238)	(0.00244)	(0.00224)	(0.00229)	(0.0975)	(0.0964)
Ed - Foreign	-0.0294***	-0.0286***	-0.00851***	-0.0152***	1.603***	0.853***
	(0.00176)	(0.00180)	(0.00166)	(0.00170)	(0.0722)	(0.0713)
Ed - AA	-0.0744***	-0.0479***	-0.0450***	-0.0339***	-4.672***	-5.304***
	(0.00182)	(0.00190)	(0.00172)	(0.00179)	(0.0746)	(0.0753)
Ed - BA	-0.0524***	-0.0421***	-0.0212***	-0.0309***	-6.190***	-7.063***
	(0.00229)	(0.00238)	(0.00215)	(0.00224)	(0.0935)	(0.0942)
Ed - Unknown	-0.0233***	-0.0229***	-0.0147***	-0.0174***	-0.796***	-1.014***
	(0.00201)	(0.00206)	(0.00189)	(0.00194)	(0.0822)	(0.0815)
Race Unknown	-0.127***	-0.125***	-0.0903***	-0.0914***	2.359***	1.577***
	(0.00213)	(0.00219)	(0.00201)	(0.00206)	(0.0873)	(0.0865)
Race - White	-0.0429***	-0.0463***	-0.0159***	-0.0259***	1.404***	0.0878*
	(0.000841)	(0.000864)	(0.000791)	(0.000813)	(0.0344)	(0.0342)
Race - Two + Races	-0.0561***	-0.0575***	-0.0350***	-0.0383***	1.425***	0.872***
	(0.00151)	(0.00155)	(0.00142)	(0.00145)	(0.0618)	(0.0612)
Race - Pacific Islander	-0.0839***	-0.0838***	-0.0680***	-0.0669***	0.0690	0.230
	(0.00444)	(0.00455)	(0.00418)	(0.00428)	(0.182)	(0.180)
Race - Native American	-0.107***	-0.104***	-0.0810***	-0.0784***	-0.209	-0.0368
	(0.00470)	(0.00485)	(0.00442)	(0.00456)	(0.192)	(0.192)
Race - Black	-0.0629***	-0.0626***	-0.0572***	-0.0526***	-1.384***	-0.139**
Race - Asian	-0.0288***	-0.0263***	-0.00211*	-0.00492***	5.069***	3.355***
Not First Gen	0.00440***	0.00313***	0.00764***	0.00552***	2.381***	1.786***

	(1) Enroll	(2) Enroll	(3) Persist & Complete Course	(4) Persist & Complete Course	(5) TL Units Attempt	(6) TL Units Attempt
	(0.000840)	(0.000859)	(0.000791)	(0.000809)	(0.0344)	(0.0340)
Unknown First Gen	-0.00134	0.00165*	0.000321	0.00211**	-0.212***	-0.331***
	(0.000736)	(0.000753)	(0.000693)	(0.000708)	(0.0301)	(0.0298)
Non-Citizen	-0.0247***	-0.0233***	-0.0161***	-0.0174***	-0.104*	-0.621***
	(0.00106)	(0.00108)	(0.000999)	(0.00101)	(0.0434)	(0.0427)
Pell Recipient	0.0572***	0.0567***	0.0410***	0.0435***	3.432***	3.421***
	(0.000759)	(0.000779)	(0.000714)	(0.000733)	(0.0310)	(0.0308)
SpecialProgram	0.0313***	0.0396***	0.0251***	0.0264***	9.865***	8.130***
	(0.00294)	(0.00299)	(0.00277)	(0.00281)	(0.120)	(0.118)
Foster	-0.0411***	-0.0391***	-0.0540***	-0.0451***	-4.077***	-2.500***
	(0.00260)	(0.00269)	(0.00245)	(0.00253)	(0.106)	(0.106)
Eops	0.0387***	0.0338***	0.0328***	0.0220***	9.225***	8.133***
	(0.00123)	(0.00126)	(0.00116)	(0.00118)	(0.0504)	(0.0497)
LEP	0.0550***	0.0551***	0.0603***	0.0593***	-1.854***	-0.558***
	(0.00162)	(0.00166)	(0.00153)	(0.00156)	(0.0663)	(0.0655)
Disability	0.0832***	0.0837***	0.0725***	0.0734***	-0.151**	0.203***
	(0.00137)	(0.00140)	(0.00129)	(0.00132)	(0.0562)	(0.0553)
NonTraditional_Age	-0.00939***	-0.0215***	0.00112	-0.0139***	-4.247***	-5.064***
	(0.000885)	(0.000917)	(0.000833)	(0.000863)	(0.0362)	(0.0363)
Prior Dual Enrollment	0.0106***	0.0151***	0.00756***	0.0104***	2.518***	1.921***
	(0.00125)	(0.00126)	(0.00117)	(0.00118)	(0.0510)	(0.0498)
Pre-Fall TL Units Attempt		0.00138***		0.0000539*		0.132***
		(0.0000251)		(0.0000236)		(0.000992)
Pre-Fall TL Units Earned		-0.00265***		-0.00103***		-0.171***
		(0.0000368)		(0.0000347)		(0.00146)
Pre-Fall TL English Success		0.0317***		0.0291***		4.126***
		(0.000743)		(0.000699)		(0.0294)
Pre-Fall TL Math Success		-0.0132***		-0.00572***		6.117***
		(0.00105)		(0.000989)		(0.0416)
Pre-Fall Transfer Progress 30 Units		-0.0516***		-0.0464***		-3.928***
		(0.00151)		(0.00142)		(0.0597)
Pre-Fall Transfer Progress 60 Units		-0.00350*		0.00114		-5.139***
		(0.00177)		(0.00167)		(0.0701)
Pre-Fall GPA		0.0233***		0.0366***		4.251***
		(0.000398)		(0.000375)		(0.0158)
Constant	0.412***	0.348***	0.320***	0.224***	33.70***	21.42***
	(0.00205)	(0.00232)	(0.00193)	(0.00218)	(0.0838)	(0.0917)
N	2563830	2455031	2563830	2455031	2563830	2455031
r2	0.0234	0.0284	0.0191	0.0256	0.168	0.215

TABLE D12 (CONTINUED)
Two year (second fall) outcomes for continuing transfer-intending students – years enrolled interaction

	(7) TL Units Earn	(8) TL Units Earn	(9) GPA	(10) GPA
COVID Enrollment (main)	-0.269***	-1.143***	0.0988***	0.0651***
	(0.0537)	(0.0520)	(0.00318)	(0.00285)
Enrolled 2 years (main)	-3.991***	-4.094***	-0.00824***	0.0267***
	(0.0372)	(0.0368)	(0.00220)	(0.00202)
Enrolled 3 years (main)	-8.210***	-7.737***	-0.0576***	0.0275***
	(0.0433)	(0.0437)	(0.00257)	(0.00241)
Enrolled 4 years (main)	-10.46***	-9.490***	-0.0729***	0.0535***
	(0.0505)	(0.0513)	(0.00301)	(0.00284)
Enrolled 5+ years (main)	-10.92***	-9.306***	-0.0562***	0.153***
	(0.0393)	(0.0428)	(0.00235)	(0.00238)
COVID x 2 Years	-1.136***	-0.770***	-0.00343	0.0173***
	(0.0858)	(0.0820)	(0.00509)	(0.00451)
COVID x 3 Years	-0.645***	-0.166	0.00643	0.0318***
	(0.0998)	(0.0951)	(0.00593)	(0.00524)
COVID x 4 Years	-0.406***	0.230*	0.00431	0.0406***
	(0.116)	(0.110)	(0.00689)	(0.00609)
COVID x 5+ Years	0.429***	1.155***	-0.00961*	0.0336***
	(0.0742)	(0.0718)	(0.00444)	(0.00398)
Gender - Male	-1.053***	-0.562***	-0.111***	-0.0672***
	(0.0232)	(0.0225)	(0.00139)	(0.00124)
Gender- Unknown	-1.031***	-0.861***	-0.0498***	-0.0378***
	(0.122)	(0.118)	(0.00730)	(0.00654)
Gender - Nobinary	-1.521	-1.767	0.123	0.110
	(1.502)	(1.447)	(0.0892)	(0.0798)
Ed - No HS	-2.072***	-1.458***	-0.0852***	-0.0568***
	(0.100)	(0.0977)	(0.00605)	(0.00544)
Ed - Adult	-2.836***	-1.550***	-0.107***	-0.0371***
	(0.205)	(0.199)	(0.0124)	(0.0111)
Ed - GED	-1.056***	-0.995***	-0.0432***	-0.0549***
	(0.0588)	(0.0572)	(0.00355)	(0.00319)
Ed - Profes. Cert	0.0800	-0.0114	0.0314***	0.0129**
	(0.0912)	(0.0881)	(0.00546)	(0.00489)
Ed - Foreign	3.074***	1.664***	0.263***	0.107***
	(0.0675)	(0.0652)	(0.00402)	(0.00359)
Ed - AA	-2.387***	-4.120***	0.353***	0.101***
	(0.0698)	(0.0688)	(0.00424)	(0.00387)
Ed - BA	-3.216***	-5.801***	0.586***	0.238***
	(0.0875)	(0.0861)	(0.00532)	(0.00484)
Ed - Unknown	-0.150	-0.687***	0.108***	0.0334***
	(0.0770)	(0.0745)	(0.00460)	(0.00412)
Race Unknown	2.767***	1.864***	0.183***	0.101***
	(0.0817)	(0.0791)	(0.00488)	(0.00437)
Race - White	2.558***	0.711***	0.322***	0.153***
	(0.0322)	(0.0313)	(0.00192)	(0.00173)
Race - Two + Races	1.384***	0.717***	0.110***	0.0487***
	(0.0578)	(0.0559)	(0.00345)	(0.00309)
Race - Pacific Islander	-0.908***	-0.629***	-0.0981***	-0.0869***
	(0.170)	(0.164)	(0.0102)	(0.00915)
Race - Native American	-0.462*	-0.280	-0.0287**	-0.0294**
	(0.180)	(0.175)	(0.0108)	(0.00979)
Race - Black	-2.389***	-0.790***	-0.282***	-0.154***
Race - Asian	5.602***	3.643***	0.338***	0.187***
Not First Gen	2.299***	1.686***	0.101***	0.0575***
	(0.0322)	(0.0311)	(0.00192)	(0.00172)
Unknown First Gen	0.00288	-0.190***	0.0145***	-0.00631***

	(7) TL Units Earn	(8) TL Units Earn	(9) GPA	(10) GPA
	(0.0282)	(0.0272)	(0.00168)	(0.00151)
Non-Citizen	0.679***	-0.0368	0.0982***	0.0377***
	(0.0406)	(0.0390)	(0.00242)	(0.00215)
Pell Recipient	1.877***	2.153***	-0.0921***	-0.0543***
	(0.0290)	(0.0282)	(0.00174)	(0.00156)
SpecialProgram	8.373***	6.244***	0.153***	-0.0170**
	(0.113)	(0.108)	(0.00663)	(0.00592)
Foster	-5.324***	-3.220***	-0.349***	-0.173***
	(0.0997)	(0.0971)	(0.00601)	(0.00542)
Eops	7.753***	6.145***	0.0994***	-0.0319***
	(0.0471)	(0.0454)	(0.00278)	(0.00249)
LEP	-0.728***	0.297***	0.0265***	0.0381***
	(0.0620)	(0.0599)	(0.00370)	(0.00331)
Disability	0.251***	0.542***	0.0219***	0.0284***
	(0.0526)	(0.0506)	(0.00313)	(0.00279)
NonTraditional_Age	-2.548***	-3.635***	0.244***	0.118***
	(0.0339)	(0.0332)	(0.00203)	(0.00184)
Prior Dual Enrollment	2.066***	1.425***	0.0737***	0.0141***
	(0.0477)	(0.0455)	(0.00283)	(0.00250)
Pre-Fall TL Units Attempt		-0.0173***		-0.00708***
		(0.000907)		(0.0000508)
Pre-Fall TL Units Earned		0.00339*		0.00866***
		(0.00133)		(0.0000743)
Pre-Fall TL English Success		4.053***		0.110***
		(0.0269)		(0.00148)
Pre-Fall TL Math Success		5.777***		0.186***
		(0.0380)		(0.00209)
Pre-Fall Transfer Progress 30 Units		-3.562***		-0.0646***
		(0.0546)		(0.00299)
Pre-Fall Transfer Progress 60 Units		-4.598***		-0.0775***
		(0.0641)		(0.00354)
Pre-Fall GPA		5.211***		0.490***
		(0.0144)		(0.000804)
Constant	25.48***	11.05***	2.370***	1.094***
	(0.0784)	(0.0839)	(0.00469)	(0.00466)
N	2563830	2455031	2448365	2351652
r2	0.147	0.232	0.0807	0.285

NOTE: All regressions include campus fixed effects. For two year outcomes, the pandemic-affected group includes fall 2018 and 2019 enrollees. Furthermore, for our two year outcomes we exclude students who transferred within two years. Restricted to continuing transfer-intending students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Standard errors in parentheses. * p<0.05; ** p<0.01, *** p<0.001

Appendix E. Community College Enrollment among All Students during the Pandemic

This section presents enrollment outcomes among all students of all academic goals enrolled in the community college system who attempted at least one credit course in the term of interest. We exclude special admit students and outcomes from non-credit course enrollments.

Many students dropped their initial course enrollments in spring 2020

As the pandemic caused major disruptions starting in the middle of the spring 2020 term, and the community college experience changed dramatically, many students dropped their courses, in some cases dropping all of them. To assist students amidst pandemic-related disruptions, the CCC Chancellor's Office enacted policy changes to ensure that students were not penalized academically or financially for withdrawing from classes due to COVID-19. Students were allowed to use an "excused withdrawal" at any time if they could not continue in the course because of the pandemic and were assured that using it would not affect their academic progress, academic probation, or ability to repeat a course.[2] As a result of these disruptions and policy changes, many students took an excused withdrawal in at least one enrolled course during the pandemic.

In spring 2020, about 1 in 4 enrolled students took at least one excused withdrawal (about 323,932 students in all). About 8 percent of students took an excused withdrawal on all of their original course enrollments, dropping out of the community college system entirely. These statewide rates, however, mask wide variation across colleges and student groups. At the college level, the share of students that took at least one excused withdrawal in spring 2020 ranged from almost half to less than 5 percent of students.[3] Furthermore, these declines in final enrollments were not experienced by all student groups equally. As historically underrepresented students faced disproportionately larger impacts from the pandemic during the spring, they confronted additional challenges in completing their planned coursework. Black, Latino, Native American, low-income, and first-generation students were more likely to take an excused withdrawal, and drop out of the system entirely, compared to their peers (see Table E1).

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[2] According to the Chancellor's Office memo "Colleges should not record a withdrawal (W), or grade on the transcript of a student who withdraws due to an epidemic or other extraordinary circumstances. An excused withdrawal (EW) may be recorded; but in all cases, a withdrawal due to extraordinary conditions should not affect a student's academic progress, academic probation, or ability to repeat a course."

[3] At four colleges (Canada, San Mateo, Santa Barbara City, and Skyline) no excused withdrawals were reported in the student-level data. While it is possible that these colleges did not loosen regulations on excused withdrawals, it is also likely that such outcomes were misreported. One faculty member at Skyline, through our interviews for our research on AB 705, suggested that excused withdrawals were indeed used at their college.

Spring enrollment counts and EW shares among all community college students

	Spring 2020 counts	Took at least 1 EW	Share	Took all EW's	Share
All students	**1,192,879**	**323,932**	**27.2**	**105,543**	8.8
Race					
Asian	157,277	35,191	22.4	10,360	6.6
Black	69,863	23,995	34.3	8,115	11.6
Latino	569,276	171,758	30.2	54,707	9.6
Native American	4,493	1,289	28.7	443	9.9
Pacific Islander	4,974	1,481	29.8	437	8.8
Two or more races	49,654	14,398	29.0	4,467	9.0
White	288,682	65,594	22.7	23,231	8.0
Unknown	48,660	10,226	21.0	3,783	7.8
Other Demographics					
First-time student	89,643	22,620	25.2	9,642	10.8
CPG/Pell Grant recipient	787,033	232,511	29.5	67,208	8.5
First-generation	449,758	130,152	28.9	42,123	9.4
Non-traditional age	481,931	106,699	22.1	48,774	10.1

SOURCE: Authors' calculations using MIS data.

NOTE: Restricted to students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in credit courses.

Student counts declined significantly in fall 2020 and beyond

In anticipation of a fully online term in fall 2020, the community college system was proactive in restructuring courses and course offerings, providing faculty with training on online course development, and expanding access to academic and basic needs supports (Hart et al. 2021). Yet, such actions did not prevent a large drop in initial enrollments among students. While the spring term was characterized by students dropping courses, the following fall saw students not show up at all, likely due to a combination of cancelled sections, a desire to wait for in-person classes to resume, fear of catching COVID, labor market incentives, and pandemic-related hardships.

From fall 2019 to fall 2020, the number of students enrolling in at least one credit course at the beginning of the term declined by 12 percent, a significant drop considering previous declines of 2 percent in each of the two years prior, respectively. From fall 2020 to fall 2021, there was an additional 9 percent decline in student counts. Overall, student enrollment declined by 20 percent from fall 2019 to 2021, equal to about 250,000 less students.

Across the state, cumulative declines varied greatly at the college-level. At 45 colleges, student enrollments decreased by 20 percent or more, while at seven colleges they decreased by less than 10 percent, or increased slightly. Additionally, the disparities in fall 2020 enrollment declines across student groups mirror what occurred in spring 2020 except, of course, that declines were primarily caused by drops in initial student enrollment as opposed the use of excused withdrawals during the term (see Table E2).[4]

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[4] In our data, the number of students that are CPG or PELL grant recipients did decline significantly from fall 2019 to fall 2021. It is probable that enrollment drops were significantly larger among low-income students, or those with higher financial need, and thus, CPG/PELL eligible students and recipients, than higher income students or those that are not eligible or recipients of such grants. However, these counts must be taken with caution given that financial aid status is often updated over time in the MIS data, so actual recipients may not have been reported in the term of interest. Furthermore, would-be recipients may not have applied for aid during the fall 2020 and 2021 terms for a variety of reasons, including disruptions caused by the pandemic. At the same time, financial supports for community college students were expanded during the pandemic which may have reduced the need for specific CPG/PELL grant support. This would explain why we see such a large increase in non-recipients and a significantly large decrease in recipients. Accordingly, CPG/PELL grant status counts likely do not accurately reflect the share of fall 2020 and 2021 students with higher financial need.

TABLE E2

Fall enrollment counts among all community college students

| | Fall Term Student Counts | | | | | | | Percent Change | | | | | |
	2015	2016	2017	2018	2019	2020	2021	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
All students	**1,378,035**	**1,364,016**	**1,357,428**	**1,334,502**	**1,301,421**	**1,151,392**	**1,045,004**	**-1.0**	**-0.5**	**-1.7**	**-2.5**	**-11.5**	**-9.2**
Race													
Asian	181,207	177,845	174,509	175,084	166,990	149,210	130,695	-1.9	-1.9	0.3	-4.6	-10.6	-12.4
Black	92,866	87,270	83,880	82,207	76,682	64,848	59,557	-6.0	-3.9	-2.0	-6.7	-15.4	-8.2
Latino	618,316	629,718	636,114	632,066	631,236	562,132	508,720	1.8	1.0	-0.6	-0.1	-10.9	-9.5
Native American	6,481	6,281	6,382	5,137	4,860	3,987	3,554	-3.1	1.6	-19.5	-5.4	-18.0	-10.9
Pacific Islander	6,195	5,954	5,936	5,525	5,546	5,060	4,507	-3.9	-0.3	-6.9	0.4	-8.8	-10.9
Two or more races	54,447	54,963	55,509	55,016	52,543	50,437	46,494	0.9	1.0	-0.9	-4.5	-4.0	-7.8
White	378,892	363,503	350,966	340,645	303,019	275,775	250,658	-4.1	-3.4	-2.9	-11.0	-9.0	-9.1
Unknown	39,631	38,482	44,132	38,822	60,545	39,943	40,819	-2.9	14.7	-12.0	56.0	-34.0	2.2
Other Demographics													
First-time student	258,481	254,028	262,512	253,673	252,193	202,806	201,027	-1.7	3.3	-3.4	-0.6	-19.6	-0.9
CPG/Pell Grant recipient	952,802	931,078	912,749	889,283	865,404	752,246	485,768	-2.3	-2.0	-2.6	-2.7	-13.1	-35.4
First-generation	379,020	455,779	463,589	488,245	495,794	442,127	390,048	20.3	1.7	5.3	1.5	-10.8	-11.8
Non-traditional age	524,429	522,050	520,869	522,142	505,277	449,528	418,243	-0.5	-0.2	0.2	-3.2	-11.0	-7.0

SOURCE: Authors' calculations using MIS data.

NOTE: Restricted to students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in credit courses.

Enrollment drops among transfer-intending students were mostly in line with declines among all students

In spring 2020, rates of excused withdrawal were high among students of all academic goals (see Table E3). Still, transfer-intending students were slightly more likely to take an excused withdrawal compared to students with goals to earn an associate's degree or a CTE. However, transfer-intending students were less likely to drop out of the term entirely, meaning such students were more likely to reduce their course loads but remain enrolled in at least one course by the end of the term. Such outcomes were consistent across first-time and continuing students.

TABLE E3
Spring enrollment counts and EW shares among all community college students by academic goal

	Spring 2020 counts	Took at least 1 EW	Share	Took all EW's	Share
ALL STUDENTS	**1,192,879**	**323,932**	**27.2**	**105,543**	**8.8**
Transfer	681,925	205,459	30.1	55,436	8.1
AA	132,930	34,005	25.6	11,420	8.6
Earn a CTE	39,455	8,420	21.3	4,071	10.3
Other/Unknown	338,569	76,048	22.5	34,616	10.2
FIRST-TIME STUDENTS	**89,643**	**22,620**	**25.2**	**9,642**	**10.8**
Transfer	34,644	10,672	30.8	3,504	10.1
AA	8,683	2,552	29.4	948	10.9
Earn a CTE	3,782	870	23.0	459	12.1
Other/Unknown	42,534	8,526	20.0	4,731	11.1
CONTINUING STUDENTS	**1,103,236**	**301,312**	**27.3**	**95,901**	**8.7**
Transfer	647,281	194,787	30.1	51,932	8.0
AA	124,247	31,453	25.3	10,472	8.4
Earn a CTE	35,673	7,550	21.2	3,612	10.1
Other/Unknown	296,035	67,522	22.8	29,885	10.1

SOURCE: Authors' calculations using MIS data.

NOTE: Restricted to students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in credit courses.

Community college enrollment among all students had been steadily declining before the pandemic, especially among transfer-intending students (see Table E4). From fall 2019 to fall 2020, enrollment dropped less steeply among transfer-intending students compared to students with other goals. Drops in student counts were especially large among students hoping to earn a CTE. On the other hand, enrollment declined most among transfer-intending students in the following year. Overall, the aggregate drop in student counts from fall 2019 to fall 2021 was similar for students of all academic goals – an approximate decline of about 20 percent. Such outcomes were similarly consistent across first-time and continuing students.

TABLE E4
Fall enrollment counts among all community college students by academic goal

| Academic Goal | Fall Term Student Counts | | | | | | | Percent Change | | | | | |
	2015	2016	2017	2018	2019	2020	2021	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
ALL STUDENTS	**1,378,035**	**1,364,016**	**1,357,428**	**1,334,502**	**1,301,421**	**1,151,392**	**1,045,004**	**-1.0**	**-0.5**	**-1.7**	**-2.5**	**-11.5**	**-9.2**
Transfer	747,810	770,625	779,538	759,067	745,936	674,493	593,604	3.1	1.2	-2.6	-1.7	-9.6	-12.0
AA	140,138	140,539	142,044	142,613	144,660	127,728	120,000	0.3	1.1	0.4	1.4	-11.7	-6.1
Earn a CTE	37,210	40,077	43,816	43,913	45,285	34,146	35,568	7.7	9.3	0.2	3.1	-24.6	4.2
Other/Unknown	452,877	412,775	392,030	388,909	365,540	315,025	295,832	-8.9	-5.0	-0.8	-6.0	-13.8	-6.1
FIRST-TIME STUDENTS	**258,481**	**254,028**	**262,512**	**253,673**	**252,193**	**202,806**	**201,027**	**-1.7**	**3.3**	**-3.4**	**-0.6**	**-19.6**	**-0.9**
Transfer	140,310	145,608	146,729	143,548	144,714	121,061	116,226	3.8	0.8	-2.2	0.8	-16.3	-4.0
AA	20,983	21,399	22,010	23,100	22,863	17,642	19,645	2.0	2.9	5.0	-1.0	-22.8	11.4
Earn a CTE	6,002	5,924	6,862	6,797	7,033	4,716	5,510	-1.3	15.8	-0.9	3.5	-32.9	16.8
Other/Unknown	91,186	81,097	86,911	80,228	77,583	59,387	59,646	-11.1	7.2	-7.7	-3.3	-23.5	0.4
CONTINUING STUDENTS	**1,119,554**	**1,109,988**	**1,094,916**	**1,080,829**	**1,049,228**	**948,586**	**843,977**	**-0.9**	**-1.4**	**-1.3**	**-2.9**	**-9.6**	**-11.0**
Transfer	607,500	625,017	632,809	615,519	601,222	553,432	477,378	2.9	1.2	-2.7	-2.3	-7.9	-13.7
AA	119,155	119,140	120,034	119,513	121,797	110,086	100,355	0.0	0.8	-0.4	1.9	-9.6	-8.8
Earn a CTE	31,208	34,153	36,954	37,116	38,252	29,430	30,058	9.4	8.2	0.4	3.1	-23.1	2.1
Other/Unknown	361,691	331,678	305,119	308,681	287,957	255,638	236,186	-8.3	-8.0	1.2	-6.7	-11.2	-7.6

SOURCE: Authors' calculations using MIS data.

NOTE: Restricted to students who enrolled in at least one credit course in the fall term of interest. Excludes enrollments from special-admit students. Outcomes are restricted to those in credit courses.