

December  
2020

# AB 540 & STEM Student Profiles

## RB #217

### **College of the Canyons**

Santa Clarita Community College District  
26455 Rockwell Canyon Road  
Santa Clarita, CA 91355

Institutional Research, Planning, and  
Institutional Effectiveness

Vida M. Manzo, Ph.D.

Daylene M. Meuschke, Ed.D.



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## ***Introduction & Background***

At the request of the MESA (Mathematics, Engineering, Science & Achievement) Program Director and a Biology Club Student President, the Office of Institutional Research Planning and Institutional Effectiveness was contacted regarding students who are enrolled in STEM majors and who may be AB 540 and/or undocumented students. The Director and Student Club President are coordinating a “STEM Without Borders” program to try to meet the needs of underserved California Community College students such as those who are undocumented and/or have a status of AB-540<sup>1</sup> and pursuing

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<sup>1</sup> **AB- 540** was signed to law in October of 2001. This allows eligible undocumented, legal permanent resident and US. Citizen students to pay in-state tuition at public colleges and universities. Eligible students can pay resident fees and apply for state-based financial aid, this allows them to participate in EOP&S and receive the admissions application fee waiver at the CSU and UC level. Eligibility is decided based on time/coursework requirements consisting of attendance for 3 full-time years of the equivalent at a CA high school, adult school or community college AND completion of either high school diploma or equivalent, Associates Degree from CA Community College or fulfillment of minimum transfer requirements from a CCC to a UC/CSU.

STEM. According to the California Community College Chancellor's office it is estimated that up to 70,000 undocumented students are enrolled at the Community Colleges many of whom are protected by DACA<sup>2</sup> (Deferred Action for Childhood Arrivals) policy and/or benefiting from in-state tuition fees due to Assembly Bill 540. While many of these students have lived in California most of their life and attended elementary, middle, and high school all within the United States these students have experienced hardship obtaining equitable educational resources/opportunities. California Community Colleges, including COC, are proud to offer numerous services and protections to undocumented students including honoring of AB540. California Community Colleges Chancellor's office and College of the Canyons is committed to standing with DACA and other undocumented immigrants (CCCCO Undocumented Students Support Services).

The following research questions specifically guided these analyses:

- How many of COC's AB- 540 students are STEM Majors?
- What are key demographics for this population including first-generation status?
- How many first-generation students are STEM majors?

## **Method**

320 data files for the fall 2018, 2019, and 2020 terms were queried for active enrollment. In-Service Agreement students (ISAs), students with a registration other than 'Add/New Add' were excluded, and "Drops" were excluded from analyses.

The "Active student Info (Residency, Visa, Citizenship)" Informer Report was used to obtain AB 540 and residency status. Specifically, students with a Residency Status = "E" are designated AB 540. Within this designation students may have various immigration statuses ranging from; "other, permanent resident, refugee/asylee, Student Visa, Temporary Resident or U.S. Citizen". This does not capture all DACA recipients as some may not be eligible for AB 540 or may not wish to reveal their undocumented status for various reasons (i.e., fear, shame etc.) Thus, these results may be an underestimation of the true number of undocumented/DACA at College of the Canyons.

Also, the "Parent Education with Savelist" Informer Report was used to ascertain first-generation college student status.

First-Generation (FGEN) is defined as students who were the first in their family to attend college/university. This is specifically measured as students whose parents and/or guardians have a highest education level of 'high school'. If one parent and/or guardian has "some college" experience, the student is not counted as a first-generation college student.<sup>3</sup>

## **Results**

### **AB 540 Students**

Across the three fall terms 2018, 2019, and 2020 there were a total of 597 (unduplicated) students with an AB 540 status. Table 1 below, illustrates the number of AB 540 students per fall term. They have consistently comprised 2% of the headcount in the last three fall terms.

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<sup>2</sup> **DACA** is an administrative relief from deportation. It enables certain eligible persons who came to the U.S. as children (under the age of 16) and meet key guidelines and requirements to request consideration for deferred action (from deportation). It allows non-U.S. citizens who qualify to remain in the country for two years, and thereby have the ability for work/education visas subject to renewal every 2 years.

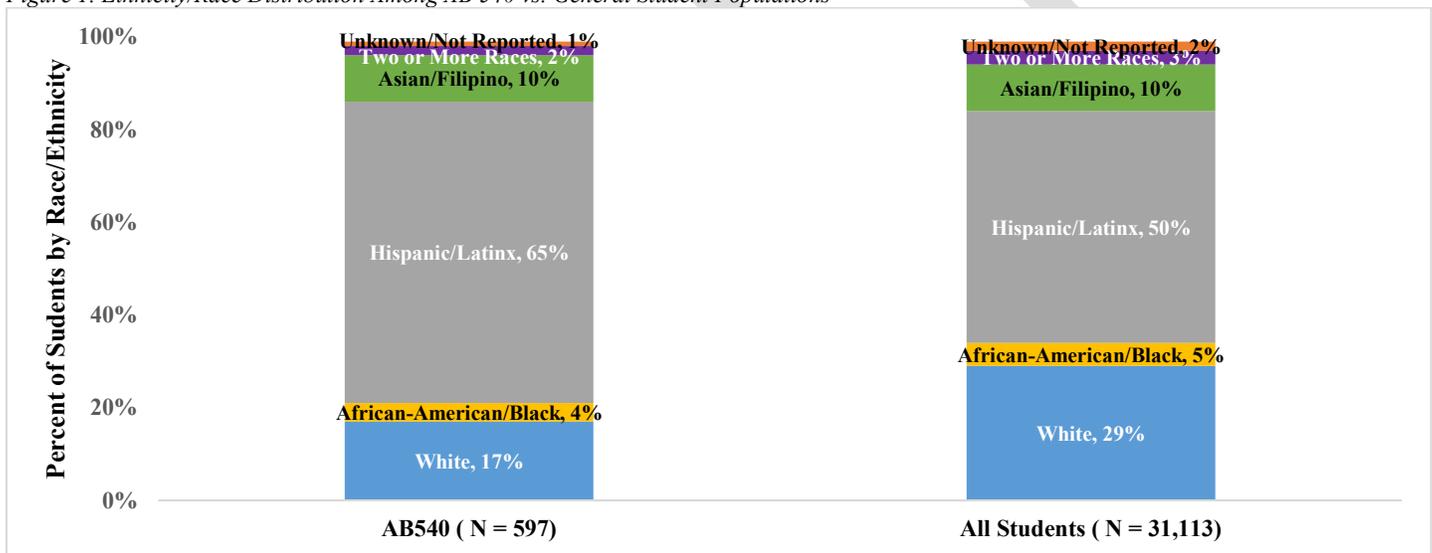
<sup>3</sup> This definition of first-generation follows that of the California Community College Chancellors' Office Definition for Student Centered Funding Formula.

Table 1. Percent of Students Who Are AB540

Term	AB540	Total Headcount
Fall2018	365	16,108
	2%	
Fall2019	302	15,439
	2%	
Fall2020	281	15,263
	2%	
Total	597	31,113
	2%	

For fall 2018-20 in aggregate, the gender distribution among our AB 540 population was 54% female and 45% male. This distribution was similar to the overall gender distribution for all enrolled students across the same three terms (54% female vs. 45% male). The Figure below illustrates where ethnicities within the AB 540 population differed from the overall student population. Specifically of note, proportions for the Hispanic/Latinx students was greater among the AB540 population (65%) as compared to 50% of the overall student population (See Figure 1). Thus, Hispanic/Latinx were over-represented among the AB540 population.

Figure 1. Ethnicity/Race Distribution Among AB 540 vs. General Student Populations



Of the AB 540 students, 40% are US Citizens, 46% claim some sort of US immigration status such as US permanent resident, temporary resident or the others mentioned within the methods section. The remaining claim various immigration status from the below specified regions (Table 2). Specific countries have been aggregated into regions to protect identities of small sample sizes. The foreign region with the largest number of students with an AB 540 status is Central America, followed by South America, then Asia (See Table 2).

Table 2. Region of Origin Description Among AB 540 Students

Citizen/Immigration Description <sup>4</sup>	N	%
US/Other	278	46%
US Citizen	240	40%
Central America	51	9%
South America	13	2%
Asian	11	1.80%
Unknown	4	0.70%

A quarter of the AB 540 students were STEM<sup>5</sup> majors (150 students) and similarly a quarter of all students across the last three fall terms (7,837 students) were STEM majors (see Table 3). There were more first-generation college students within the AB 540 population (45%) as compared to among the overall student population (30%).

Table 3. Distribution of STEM and First-Generation College Students Within AB 540 vs. General Student Population

	AB540 Students (N = 597)	All Students (N = 31,113)
	STEM	STEM
N	150	7873
%	25%	25%
	FGEN	FGEN
N	267	9329
%	45%	30%

Across the last three terms only 8% of the AB 540 (13 of 150 students) with declared STEM majors were also MESA students within any of the fall 2018, 2019, or 2020 terms. Disaggregated by each of the fall terms 2018-20 the proportion of AB 540 students who were STEM majors reflected that of the overall (24%-26% per term).

Table 4. STEM Majors Disaggregated by Term

AB 540 Students	STEM	
<b>Fall2018</b>	n	91
N = 365	%	25%
<b>Fall2019</b>	n	71
N = 302	%	24%
<b>Fall2020</b>	n	72
N = 281	%	26%

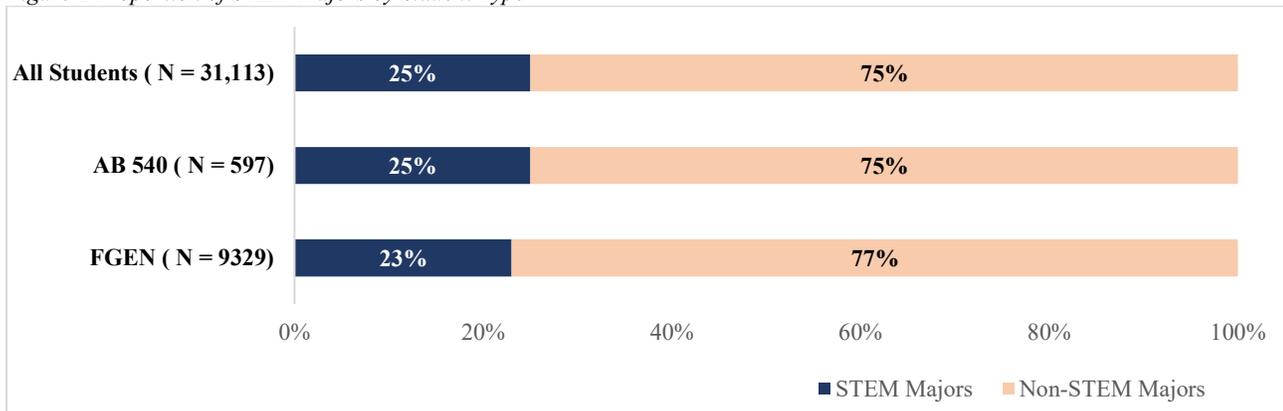
### First-Generation Students

These analyses document that 23% of first-generation students (2,106) were declared STEM majors. This proportion is comparable to the rate of students pursuing these majors among the AB 540 students as well as among the overall students for the three fall terms (see Figure 2 below).

<sup>4</sup> The US Citizen is separated from US/Other: all other Immigration Status. Central America includes Mexico. South America includes Guatemala, El Salvador, Argentina, Brazil, and Colombia. Asia includes Japan, South Korea, Sri Lanka, Thailand, Tonga.

<sup>5</sup> A student was categorized as a STEM major if their declared major on file was a program title containing the following: Biological & Physical Sciences, Biological Science, Biology, Computer Applications, Computer Networking, Computer Science, Engineering, Mathematics, Physics, Geography, Geology and all corresponding programs "For Transfer"

Figure 2 Proportion of STEM Majors by Student Type



### Summary of Findings

- AB 540 students comprise around 2% of the student headcount in each of the last three fall terms.
- Among these AB 540 students there is an over-representation of Hispanic/Latinx students and first-generation to college.
- The AB540 students pursue STEM majors at a rate comparable (25%) to that of the general student population.
- Of the 150 AB 540 students who were declared STEM majors across the last three fall terms only 13 were also MESA students.

### Recommendations

Upon review of the results regarding the profile of AB 540 and STEM, the following recommendations should be taken into consideration:

- The results provide information as to the region of origin of some of these AB 540 students, particularly with larger rates of Hispanic/Latinx and first-generation background factors, this information can be used to tailor the outreach and building of relationships with these students.
- Only 8% of the AB540 and STEM students are part of MESA, thus outreach on the part of MESA could target these groups.

### References

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For questions, or more detailed information on this research brief, contact Vida Manzo, Ph.D., Senior Research Analyst, [vida.manzo@canyons.edu](mailto:vida.manzo@canyons.edu) or Daylene Meuschke, Ed.D., Associate V.P. Institutional Research, Planning and Institutional Effectiveness at [daylene.meuschke@canyons.edu](mailto:daylene.meuschke@canyons.edu).