

Date of Hearing: June 15, 2022

ASSEMBLY COMMITTEE ON EDUCATION
Patrick O'Donnell, Chair
SB 1299 (Min) – As Amended May 16, 2022

SENATE VOTE: 36-0

SUBJECT: Pupil instruction: California State Summer School for Mathematics and Science:
funding: tuition and application fee

SUMMARY: Extends the sunset on the funding provisions for the California State Summer School for Mathematics and Science (COSMOS), operated by the University of California (UC), from January 1, 2023, to January 1, 2028, and adjusts the application and tuition fees. Specifically, **this bill:**

- 1) Extends by five years the tuition and financial aid requirements related to the COSMOS, operated by the UC, from January 1, 2023, to January 1, 2028.
- 2) Increases the application fee for the COSMOS from a maximum of \$30 to a maximum of \$40 in 2023, and authorizes the fee to be increased by 5% each year thereafter.
- 3) Updates the tuition fee for the COSMOS from a maximum of \$2,810 in 2012 to a maximum of \$4,770 in 2023, and authorizes the tuition fee to be increased by 5% each year thereafter.

EXISTING LAW:

- 1) Establishes the COSMOS, operated by the UC, to provide intensive educational enrichment for pupils who have demonstrated academic excellence in mathematics and science.
- 2) Authorizes pupils who have demonstrated academic excellence in mathematics and science and who meet one of the following criteria to be eligible for admission:
 - a) The pupil has graduated, or will graduate, from grade 8 at the end of the school year immediately preceding the summer school session for which he or she is applying;
 - b) The pupil is currently enrolled in any of grades 9 to 12, inclusive; and
 - c) The pupil graduated from high school during the school year immediately preceding the summer school session for which he or she is applying.
- 3) States the intent of the Legislature that the UC conduct an evaluation on the effectiveness of the COSMOS every two years.
- 4) States the intent of the Legislature that the Regents of the UC adopt policies that will enable pupils who are not California residents, including residents of other countries, to be admitted to the California State Summer School for Mathematics and Science, not to exceed in any year 20 pupils or 5% of the total pupil population of the summer school, whichever is less. Further states the intent of the Legislature that admission of a nonresident not result in the denial of admission to a California resident.

- 5) Establishes the following tuition and financial aid requirements, which are operative until January 1, 2023:
- a) Expresses the intent of the Legislature that at least 50%, but not more than 75%, of the actual costs of COSMOS for each fiscal year, be financed by state funds beginning in 1999–2000, with the balance of the operating costs financed with fees and private support;
 - b) Requests the Regents of the UC to set a tuition fee within a range that corresponds to actual program costs, up to \$2,810 per session beginning in 2012 and increased by up to 5% each year thereafter;
 - c) Expresses the intent of the Legislature that the UC award full or partial scholarships on the basis of need, and that pupils who are unable to pay all or part of the fee be able to petition the UC for a fee reduction or waiver;
 - d) Specifies that any public announcement regarding the summer school program should include notification that need-based scholarships are available and information regarding the procedure for applying for a scholarship award;
 - e) States that, for pupils who are not California residents, it is the intent of the Legislature that the Regents of the UC set a tuition fee that is not less than the total actual costs to the summer school of services per pupil; and
 - f) Authorizes funds raised from the private sector to be used by the summer school for general program operating costs, scholarships, program augmentation, public relations, recruitment activity, or special projects.

FISCAL EFFECT: According to the Senate Appropriations Committee, pursuant to Senate Rule 28.8, negligible state costs.

COMMENTS:

Need for the bill. The author states, “SB 1299 will provide for crucial opportunities in STEM education for California middle school and high school students by extending the sunset date for the California State Summer School in Mathematics and Science (COSMOS) program to January 1, 2028. Consistent with previously chaptered sunset extension legislation related to the COSMOS program, this bill would also update the application and tuition fees and authorize this fee to be increased by up to 5% each year.”

COSMOS program. The COSMOS was created by AB 2536 (Poochigian), Chapter 805, Statutes of 1998, to provide “a training ground for pupils who wish to study advanced mathematics or science or to pursue careers that require a high degree of mathematics or scientific training.” The UC was chosen to administer the program it launched at UC Irvine and UC Santa Cruz in 2000. UC later added two additional campuses: UC Davis in 2001 and UC San Diego in 2004.

According to the UC, the mission of COSMOS is to provide outstanding high school students in the STEM disciplines with opportunities to delve deeply into their subjects and to prepare for careers in the STEM fields. In 2002, UC convened an expert advisory board to design the COSMOS program. The board set out the following goals for the COSMOS program:

- 1) To engage talented students in high-level teaching and learning;
- 2) To establish a community of scholars that fosters analytical thinking and experimentation;
- 3) To connect students to institutions of higher learning and research facilities;
- 4) To develop models for excellence in science and mathematics education; and
- 5) To ensure that the COSMOS student body reflects California's geographic, economic, and cultural diversity.

According to the UC, the COSMOS is a four-week residential academic program for top high school students which provides an intensive academic experience for students who wish to learn advanced STEM content and prepare for future careers in these respective areas. Students attend clusters designed to introduce them to STEM subjects not traditionally offered in high school. Each campus hosts 200 or more students each summer. The four COSMOS campus chapters are coordinated and directed by a Statewide Office located at UC Davis. In the course of the four-week summer session, students take courses that typically consist of two science and/or mathematics courses, and a science communication course. The courses vary by campus.

According to the author's office, given capacity limitations for residential summer programs on the existing campuses, COSMOS is preparing for expansion to an additional UC campus, and is also planning to increase its geographic and demographic diversity.

Program costs. The average cost per student for a four-week COSMOS summer session, including room and board and the costs of instruction, is \$5,742. In 2019, eligible in-state residents paid a maximum tuition of \$3,932. According to the UC, out-of-state students may attend but pay out-of-state tuition and are not eligible for financial aid. Full and partial financial assistance is available to families earning up to \$120,000 annually. For example, a family of four with an annual income of \$43,000 could qualify for a full scholarship, while a family of four with an annual income of \$112,000 could qualify for a 20% scholarship.

Effectiveness of the program. Existing law states the intent of the Legislature that the UC conduct an evaluation on the effectiveness of the COSMOS every two years.

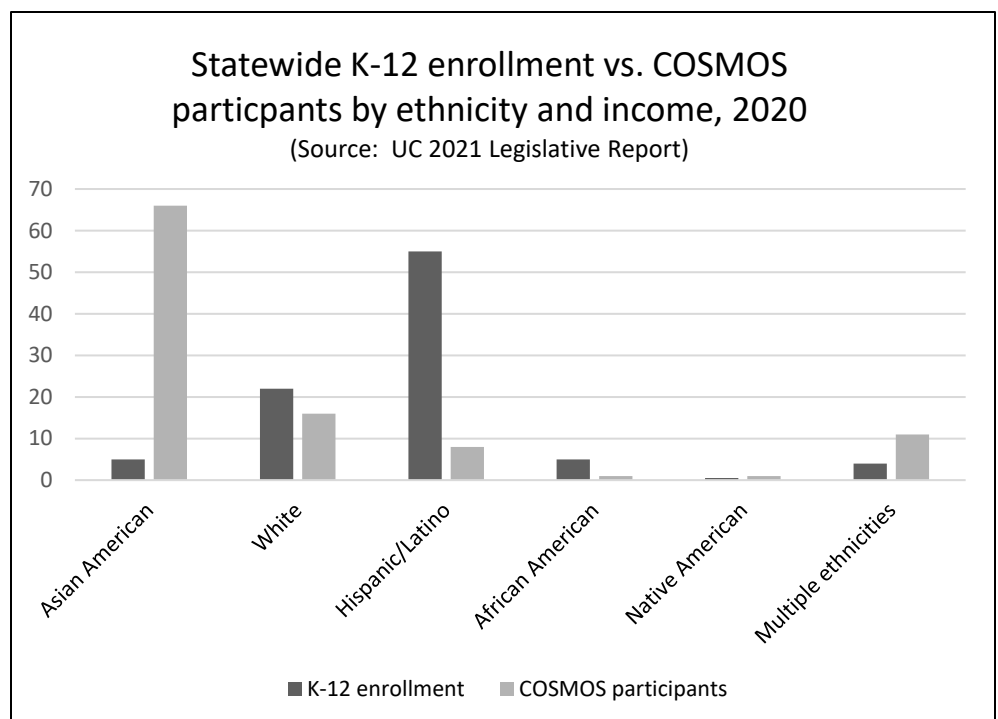
According to the UC's March 2021 evaluation, upon completion of high school, a vast majority (nearly 90%) of COSMOS alumni enroll in post-secondary education. About 55% attend a UC campus, about 30% enroll at a private or out-of-state university, 12% attend a community college, and about 3% attend a California State University campus. The March, 2021 evaluation also includes the following COSMOS data:

- 1) From 2016 through 2019, 3,128 students participated in the program. Had there been a program in 2020, an additional 911 students would have attended. Over time, enrollment has risen steadily, from 728 participants in 2016 to 911 in 2020, an increase of 25%.
- 2) The demand for admission to the program has been strong since its inception. Specifically, of the 4,833 completed applications for 2019, 1,060 (22%) were accepted, and 340 (7%) were wait-listed.
- 3) UC has been able to track 3,354 of 3,483 (96%) participants from 2011 to 2015 as having enrolled at a college or university within one year of completing high school. Similarly, even though not all participants from 2016 to 2019 have yet completed high school, 2,832 of 3,172 (89%) have enrolled in a college or university. This means that at least nine out of ten (6,186 or more of 6,655) participants from the past decade have already enrolled in a college or university.
- 4) Of the 6,186 alumni enrolled at colleges and universities, 5,440 (90%) were at four-year institutions, with 3,384 (55%) at UC campuses, 1,858 (30%) at private or out-of-state universities, and 198 (3%) at CSU campuses. Another 737 (12%) enrolled at California Community Colleges (two-year programs), and the remaining 9 (less than 0.1%) enrolled at private or out-of-state two-year institutions.
- 5) After UC, the top ten four-year universities at which COSMOS alumni most often enrolled are Stanford University, University of Southern California, Massachusetts Institute of Technology, Carnegie Mellon University, California Polytechnic State University, Cornell University, University of Pennsylvania, the University of Illinois at Urbana, the University of Chicago, and Brown University.

Program not yet meeting its mission to reflect the diversity of state. As noted above, one of the long standing goals of COSMOS is to “ensure that the COSMOS student body reflects California’s geographic, economic, and cultural diversity.” Current participation data suggests that the program is not yet meeting this goal.

The 2021 evaluation notes that while participation in COSMOS is evenly split by gender, the student composition

in COSMOS “continues to show imbalances in the attendance of different ethnic groups.” As shown in the table below, in 2020 only 8% of admitted students were Hispanic/Latino (55% of



California school enrollment is Hispanic/Latino), and 0.8% were African American (5% of California school enrollment is Hispanic/Latino). 66% of admitted students were Asian American, and 16% were white. While 60% of statewide student enrollment are considered low income, 10% of the COSMOS participants qualified for financial aid.

The UC notes that, “In consultation with equity, diversity, and inclusion specialists at the Office of the President and UC Davis, COSMOS leadership is conducting an analysis of the selection process to determine whether adverse biases are affecting the program’s faculty-led admissions decisions. Early findings indicate that identifying more prospective students from underrepresented groups and encouraging them to apply can positively affect admission and enrollment of more participants from these groups. The program is also revamping its outreach strategies to better reach all qualified students in the state by building stronger relationships with schools and K-12 STEM programs with substantial populations of students from underrepresented groups.”

In light of this concern, *staff recommends that the bill be amended* to require, as part of the reporting requirement in existing law, that the UC report on its planning and actions taken to increase the participation of students traditionally under-represented in STEM fields, including those who are low income.

Out-of-state and international student participation. Current law (EC 8663) states the intent of the Legislature that out-of-state and international students not result in the denial of qualified California students, and limits participation to 20 students per year. The COSMOS 2021 report states that 67 out-of-state/international students (2% of enrollment) attended COSMOS between 2016 and 2019. ***The Committee may wish to consider*** whether this state-funded, highly competitive program (22% admission rate) should be authorized to admit even a small number of out-of-state and international students when it is likely that some qualified California students are denied admission. Accordingly, *staff recommends that the bill be amended* to require that to be eligible to participate in the program students must be attending California schools, and make conforming changes in the section which requests that the Regents of the UC adopt policies that will enable pupils who are not California residents, including residents of other countries, to be admitted to the California State Summer School for Mathematics and Science.

Arguments in support. The UC Office of the President writes, “The University of California (UC) is pleased to strongly support SB 1299. SB 1299 seeks to extend the California State Summer School for Mathematics (COSMOS) program operated by UC until January 1, 2028 and allow for appropriate application and program fees to support the program. COSMOS helps California meet its need for a talented workforce by encouraging the brightest students in high schools across the state to continue and expand their interest in STEM fields. COSMOS consequently plays a vital role in support of the UC’s efforts to develop a talented STEM workforce that advances the state’s economic climate. SB 1299 represents a necessary sunset extension to ensure that COSMOS can continue to provide access to highly qualified students wishing to attend the program and provide financial assistance to those students who need it.”

Related legislation. AB 616 (Aguiar-Curry), Chapter 781, Statutes of 2017, extended the sunset for the COSMOS program’s funding provisions from 2018 to 2023.

AB 1663 (Dickinson), Chapter 422, Statutes of 2012, extended the sunset for the COSMOS program’s funding provisions from 2013 to 2018.

AB 2536 (Poochigian), Chapter 805, Statutes of 1998 established the COSMOS program.

REGISTERED SUPPORT / OPPOSITION:

Support

University of California

Opposition

None on file

Analysis Prepared by: Tanya Lieberman / ED. / (916) 319-2087