
SENATE COMMITTEE ON EDUCATION

Senator Benjamin Allen, Chair

2017 - 2018 Regular

Bill No: AB 616 **Hearing Date:** June 7, 2017
Author: Aguiar-Curry
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Urgency: No **Fiscal:** Yes
Consultant: Ian Johnson

Subject: Pupil instruction: California State Summer School for Mathematics and Science: funding: tuition

SUMMARY

This bill extends by five years existing law related to tuition and financial aid for the California State Summer School for Mathematics and Science (COSMOS), operated by the University of California (UC), from January 1, 2018, to January 1, 2023.

BACKGROUND

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) Specifies that pupils who have demonstrated academic excellence in mathematics and science and who meet one of the following criteria shall 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.
 - c) The pupil graduated from high school during the school year immediately preceding the summer school session for which he or she is applying.

Until January 1, 2018, existing law related to the program's tuition and financial aid:

- 1) Expresses the intent of the Legislature that at least 50 percent, but not more than 75 percent, 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.
- 2) 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 five percent each year thereafter.

- 3) Expresses the intent of the Legislature that the University of California (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 may petition the UC for a fee reduction or waiver to ensure that a qualified applicant is not denied admission solely because of his or her inability to pay part or all of the fee.
- 4) 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.
- 5) 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.
- 6) 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.

ANALYSIS

This bill extends from January 1, 2018, to January 1, 2023, existing law related to tuition and financial aid for the California State Summer School for Mathematics and Science (COSMOS).

STAFF COMMENTS

- 1) ***Need for the bill.*** Existing law establishes the current tuition and annual rate of increase for COSMOS with a sunset on January 1, 2018. The purpose of this bill is to extend the sunset date to January 1, 2023. Without the authority to increase tuition and fees, UC would likely decrease the number of participants every year.
- 2) ***Program mission and goals.*** The mission of COSMOS is to provide outstanding high school students in the science, technology, engineering, and mathematics (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:
 - a) To engage talented students in high-level teaching and learning.
 - b) To establish a community of scholars that fosters analytical thinking and experimentation.
 - c) To connect students to institutions of higher learning and research facilities.
 - d) To develop models for excellence in science and mathematics education.

- e) To ensure that the California State Summer School for Mathematics and Science (COSMOS) student body reflects California's geographic, economic, and cultural diversity.

In the course of a four-week summer session, COSMOS courses address advanced topics in the science, technology, engineering, and mathematics (STEM) fields that go beyond the typical high school curriculum. The courses typically consist of two science and/or mathematics courses, and a science communication course. The courses vary by campus—offered at University of California (UC) Davis, UC Irvine, UC San Diego, and UC Santa Cruz—and may cover astronomy, aerospace and mechanical engineering, biomedical sciences, computer science, ecology, marine science, robotics, game theory, and more. Each campus can accommodate about 150 pupils for each summer session and admission is competitive, with about 40 percent of the school's applicants being admitted.

- 3) **Program costs for students and the state.** The average cost per pupil for COSMOS is about \$6,500, which includes instruction and room and board. In 2015, the maximum tuition amount charged to students was \$3,250. Full and partial financial assistance is available to families earning up to \$85,000 annually. For example, a family of four with an annual income of \$40,000 could qualify for a full scholarship, while a family of four with an annual income of \$80,000 could qualify for a 25 percent scholarship.

The program has received about \$1.6 million in state funds annually since its inception, and another \$200,000 in private donations.

- 4) **The effectiveness of the program.** Existing law requires the UC to report to the Legislature and the Governor on the effectiveness of COSMOS in increasing the quality and supply of science and mathematics students and teachers. According to the UC's April 2016 evaluation, upon completion of high school, a vast majority (more than 85 percent) of COSMOS alumni enroll in post-secondary education. About 54 percent attend a UC campus and more than 22 percent enroll at a private or out-of-state university. During the past decade, nearly 200 COSMOS alumni have enrolled in an Ivy League university.

The April 2016 evaluation also includes the following COSMOS data:

- a) From 2011 through 2015, 3,482 students participated in the program. Over time, enrollment has risen steadily, from 680 participants in 2011 to 733 in 2015, an increase of 8 percent.
- b) The demand for admission to the program has been strong since its inception. Specifically, of the 3,924 completed applications for 2015, 1,534 (39 percent) were accepted, and 86 (2 percent) were wait-listed.
- c) UC has been able to track 2,669 of 3,139 (85 percent) participants from 2006 to 2010 as having enrolled at a college or university within one year of completing high school. Similarly, even though not all participants from 2011 to 2015 have yet completed high school, 2,304 of 3,481 (66 percent)

have enrolled in a college or university. This means that at least three out of four (4,973 or more of 6,620) participants from the past decade have already enrolled in a college or university.

- d) Of the 4,973 alumni enrolled at colleges and universities, 4,088 (82 percent) were at four-year institutions, with 2,709 (54 percent) at University of California (UC) campuses, 1,082 (22 percent) at private or out-of-state universities, and 297 (6 percent) at California State University campuses. Another 878 (18 percent) enrolled at California Community Colleges (two-year programs), and the remaining 7 (0.1 percent) enrolled at private or out-of-state two-year institutions.

- e) After UC, the top ten four-year universities at which program alumni most often enrolled are California Polytechnic State University, Stanford University, Massachusetts Institute of Technology, University of Southern California, Brown University, Cornell University, Harvard University, San Diego State University, California Institute of Technology, and Princeton University.

SUPPORT

California School Boards Association
University of California (Sponsor)

OPPOSITION

None received

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