
SENATE COMMITTEE ON EDUCATION

Senator Carol Liu, Chair
2015 - 2016 Regular

Bill No: AB 252
Author: Holden
Version: June 2, 2015
Urgency: No
Consultant: Lenin Del Castillo
Hearing Date: July 8, 2015
Fiscal: Yes

Subject: Advanced placement program: Advanced Placement STEM Access Grant Program

SUMMARY

This bill establishes the Advanced Placement (AP) STEM Access Grant Program through July 1, 2021, for purposes of awarding funds to cover the costs associated with a high school establishing or expanding its AP science, technology, engineering and mathematics (STEM) curriculum.

BACKGROUND

Existing law:

- 1) Declares the Legislature's intent that certain state funding currently provided to school districts be made available to provide financial assistance to economically disadvantaged pupils in the payment of AP examination fees.
- 2) Expresses the intent of the Legislature that a competitive grant program be established for the purpose of awarding grants to economically disadvantaged pupils to cover the costs of AP examination fees, thereby creating a second source of financial assistance for economically disadvantaged pupils taking AP examinations.
- 3) Requires the Superintendent of Public Instruction (SPI) to annually update information on the AP programs posted on the California Department of Education's (CDE) web site and specifies that this information include the various means available to school districts to offer or access AP courses, including online courses.
- 4) Requires the SPI to annually communicate with high schools that offer less than 5 AP courses in fewer than 5 subjects, and inform those schools of the various options for making AP courses and other rigorous courses available to pupils who may benefit from them.

ANALYSIS

This bill:

- 1) Makes various findings and declarations regarding the benefits of AP STEM courses and the shortfall in minority students taking these courses.

- 2) Defines “STEM curriculum” as courses in any of the following subject areas: biology, calculus, chemistry, computer sciences, environmental science, physics, and statistics.
- 3) Establishes the Advanced Placement (AP) STEM Access Grant Program to be administered by the California Department of Education (CDE) for the purpose of awarding monies to cover the costs associated with a high school establishing or expanding its AP science, technology, engineering and mathematics (STEM) curriculum.
- 4) Establishes the AP STEM Access Grant Program Account in the State Treasury and authorizes funds in the account to be used to fund grants for purposes of this program.
- 5) Requires the grants awarded by the CDE to be matched by the participating school district on a dollar-for-dollar basis, or the equivalent value in services or resources.
- 6) Authorizes grant funds to be used for one-time costs of establishing or expanding AP STEM courses, including but not limited to, professional development, instructional materials, and laboratory materials and supplies.
- 7) Requires the grant amount to be determined based on the cost of the type of AP course in the STEM curriculum, not to exceed \$8,000 per grant application.
- 8) Provides that a school district may apply for a maximum of one grant per high school and 10 grants per school district if the high school or school district does not offer AP courses in the STEM curriculum or its AP STEM courses are oversubscribed. Requires that a high school has identified pupils from populations that are underrepresented in STEM courses and who have demonstrated they have high potential to be successful in one or more AP courses in the STEM curriculum, using any means it deems appropriate, as specified.
- 9) Provides that the grant program shall be implemented only if moneys are made available for its purpose from any source.
- 10) Provides that the program shall become inoperative on July 1, 2021.

STAFF COMMENTS

- 1) **Need for the bill.** According to the author’s office, “AP courses give students access to rigorous college-level work and builds their confidence to learn the essential time management and study skills needed for college and career success. Research shows that students who take AP courses are much more likely than their peers to complete a college degree on time.” However, “in many areas throughout California, minority, female, and lower income students who have the potential of succeeding in AP courses and could receive college credit, do not have access to those classes.”
- 2) **AP courses and exams.** The AP Program was established over 40 years ago by the College Board, which is a national not-for-profit organization that fosters students' transitions to college through programs and services in college readiness

and college success, including the Scholastic Aptitude Test and the Advanced Placement (AP) Program. The AP Program consists of college-level courses in 31 subject areas offered at the high school level.

The AP Program provides incentives for public high schools in California to provide access to rigorous, college-level courses for interested and prepared students. AP courses are recognized by virtually all public and private universities. Successful completion of AP courses, and the related tests, can greatly help students in the very competitive process of university admission. Exams are administered every May and are scored on a scale from 1 to 5. Students earning qualifying scores, typically scores of 4 or 5, on AP examinations may obtain course credit and/or placement from colleges and universities. The recently-enacted Local Control Accountability Plan (LCAP) includes AP scores among several outcomes used to measure student achievement. Specifically, student achievement will be measured, in part, by the percentage of students who score a 3 or higher on AP exams.

- 3) **STEM courses.** The United States Department of Commerce estimates that STEM jobs are expected to grow by 17 percent during the 2008-2018 period, nearly double the rate of non-STEM jobs. There are currently 10 AP courses and examinations in the following science, technology, engineering and mathematics (STEM) areas: calculus, computer science, statistics, biology, chemistry, environmental science, and physics. In the fall of 2013, the College Board implemented a nationwide AP STEM Access Program utilizing a \$5 million private grant it received. This program focuses on expanding AP course offerings to typically underrepresented minority and female students who have demonstrated strong academic potential to enroll in and explore these areas of study and related careers. The College Board estimates that by 2016, this program will have provided 36,000 students the opportunity to study college-level STEM course work in these newly offered AP classes.

This bill is intended to provide incentive for schools to offer or expand AP courses in the STEM fields and increase participation of low-income and or minority students who currently are not offered such courses, which is substantially similar to the objectives of the College Board's existing AP STEM Access Program. While that program serves high schools nationwide, one could argue whether this bill is necessary. Additionally, as part of the AP STEM Access Program, participating schools and the College Board agree to work together to achieve the stated objectives of the program to meet specific school circumstances. This includes supporting communications to create awareness, encouraging students to seek out additional support, ensuring that low-income students take advantage of federal funding for AP Exams, as well as increasing participation of underrepresented students in AP STEM courses. Should this bill also include a similar partnership with the College Board, especially if it could result in additional AP course offerings?

- 4) **Need for diversity.** In a survey of chemists and chemical engineers conducted by the Bayer Corporation ("Bayer Facts of Science Education XIV: Female and Minority Chemists and Chemical Engineers Speak about Diversity and Underrepresentation in STEM," March 2010), 75% of respondents agreed that lack of quality science and math education programs in poorer school districts is a top cause of underrepresentation in STEM, and 66% agreed that stereotypes that say STEM is not for girls or minorities is a top cause of underrepresentation in STEM.

The Bayer survey also reports that 77% of respondents say "significant numbers of women and underrepresented minorities are missing from the United States STEM workforce today because they were not identified, encouraged or nurtured to pursue STEM studies early on."

- 5) ***Fiscal impact.*** According to the Assembly Appropriations Committee, this bill would result in unknown Proposition 98 General Fund cost pressure in the hundreds of thousands. Program requirements would be contingent upon state, federal or non-state funding; however, no specific funding source has been identified. Actual costs will depend on the amount of the total grant award. For illustration, assuming 100 schools qualify for the maximum grant award of \$8,000; costs would be in excess of \$800,000. Additionally, there would be administrative costs of approximately \$400,000 to the California Department of Education (CDE) to review and approve applications, provide technical assistance and write an evaluation of the program. CDE would likely contract with a statewide evaluator to evaluate the effectiveness of the programs.
- 6) ***Related and prior legislation.*** AB 1940 (Holden, 2014) proposed to establish a pilot program to expand science, technology, engineering, and mathematics advanced placement programs in high schools. This bill failed passage in the Assembly Appropriations Committee.

SUPPORT

Advanced Medical Technology Association
 American Chemistry Council
 American Council of Engineering Companies, California
 BayBio
 Bayer Corporation
 Biocom
 Boehringer-Ingelheim Pharmaceutical Company
 California Chamber of Commerce
 California Communities United Institute
 California Healthcare Institute
 California Manufacturers and Technology Association
 California State PTA
 California Teachers Association
 College Board
 Hispanic Association of Colleges and Universities
 Pharmaceutical Researchers and Manufacturers Association
 Service Employees International Union
 Silicon Valley Community Foundation
 TechNet

OPPOSITION

None received.

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