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Senate Bill 169 (Substitute S-2 as passed by the Senate)
Senate Bill 170 (Substitute S-2 as passed by the Senate)
Sponsor: Senator John Proos
Committee: Education

Date Completed: 4-27-15

RATIONALE

As Michigan's economy improves, employers are expected to increase their hiring for technical positions. The number of STEM (science, technology, engineering, and mathematics) jobs is projected to increase more rapidly than other job categories. Some groups claim that there are too few qualified individuals available to fill these positions. To address this situation, some have suggested that students should be encouraged to complete STEM coursework within their secondary education, and those who complete STEM coursework beyond what is required for a high school diploma should be recognized.

CONTENT

Senate Bill 170 (S-2) would amend the Revised School Code to provide that a pupil would be eligible for a STEM endorsement if the pupil completed the requirements specified under the bill.

Senate Bill 169 (S-2) would amend the Revised School Code to provide that a school district or public school academy could notate a pupil's transcript or diploma to indicate that the pupil had earned a STEM endorsement, and to allow a parent of an individual educated at home, or the principal or chief administrative officer of the nonpublic school, to issue a STEM endorsement.

The bills are tie-barred and would take effect 90 days after their enactment.

Senate Bill 170 (S-2)

The bill provides that a pupil would be eligible for a STEM endorsement if the pupil, while in grades 7 to 12, successfully completed all of the following credit requirements: a) all applicable requirements of the Michigan Merit standard for a high school diploma under Sections 1278a and 1278b of the Revised School Code; b) at least six credits in mathematics; c) at least six credits in science; and, d) at least one-half credit featuring significant course work involving technology activities and at least one-half credit featuring significant course work involving engineering activities. At least five of the math credits would have to be in courses listed in, or covering the same content standards as a course listed in, Section 1278a(1)(a)(i), including a credit that covered content standards for precalculus or calculus. At least four of the science credits would have to be in courses listed in, or covering the same content standards as a course listed in, Section 1278b(1)(b). The engineering and technology credits could be gained through separate technology and engineering course work or in conjunction with course work associated with the math and science credits required for a STEM endorsement.

(Courses listed in Section 1278a(1)(a)(i) include algebra I, geometry, algebra II, trigonometry, statistics, precalculus, calculus, applied math, business math, and certain Department of Education-approved career or technical education programs or curricula. Courses listed in Section

1278b(1)(b) include biology, chemistry, physics, anatomy, agricultural science, forensics, astronomy, Earth science, environmental science, geology, physiology, microbiology, and certain Department-approved computer science or technical education programs or curricula.)

Senate Bill 169 (S-2)

The bill would allow a school district or public school academy to notate a pupil's transcript or diploma to indicate that the pupil had earned a STEM endorsement.

For an individual who was educated at home or in a nonpublic school, if the individual's parent or legal guardian, or the principal or chief administrative officer of the nonpublic school, as applicable, determined that the individual had met substantially the same requirements as those under Senate Bill 170 (S-2) for a STEM endorsement, the parent or legal guardian, or the principal or chief administrative officer of the nonpublic school, could issue a STEM endorsement.

Proposed MCL 380.1287e (S.B. 169)

Proposed MCL 380.1287d (S.B. 170)

ARGUMENTS

(Please note: The arguments contained in this analysis originate from sources outside the Senate Fiscal Agency. The Senate Fiscal Agency neither supports nor opposes legislation.)

Supporting Argument

In September 2013, manufacturers in Michigan had over 11,000 job openings as the result of a shortage of skilled and qualified talent.¹ Current and future manufacturing jobs, as well as careers in other sectors of the economy, are expected to be heavily reliant on math and science skills. The bills would allow for the recognition of students who completed coursework in STEM beyond what is required for graduation, and would encourage students to devote more time to courses in STEM subjects. The endorsement would serve as an indicator that the student had a robust foundation of science and math skills. The bills would not involve the Department of Education or other subdivisions of State government, and would keep the implementation of this program at the local level. The bills also would ensure that students who attended nonpublic schools and home-schooled students would have the opportunity to receive a STEM diploma endorsement.

Opposing Argument

The STEM endorsement would create a class system for high school diplomas. As a result, a student who did not complete the required coursework could be led to believe that he or she was unqualified. It would be preferable if a high school diploma carried a guarantee of a robust education in all subjects. In addition, a STEM endorsement would duplicate existing efforts because all of the coursework that a student completes already is available on a transcript. If an employer wants to know if a pupil has sufficient exposure to STEM coursework, the employer can request a copy of the individual's transcript. Also, STEM endorsement could encourage a student to make career-defining decisions before he or she was ready.

Legislative Analyst: Jeff Mann

FISCAL IMPACT

State: The bills would have no fiscal impact on the State, because the responsibilities of verifying that a student had met the STEM criteria and issuing the endorsement would be at the local level.

Local: Costs could vary depending on the extent to which changes would need to occur at the school level. If schools needed to redesign multiple classroom curricula to meet statutory guidelines or add classes, then the schools would have to spend resources that could have been needed elsewhere. However, since schools would not be required to have curricula that would allow

¹ Michigan Manufacturers Association-written testimony, Senate Education Committee, 3-17-2015.

for STEM endorsements, schools would not have to make these changes if they did not have the resources to do so.

The costs of confirming that students met the qualifications for a STEM endorsement would be minor and fit within the current costs of determining if a student meets graduation requirements. The costs of issuing and keeping track of the STEM endorsement would fit within the current cost of issuing diplomas and maintaining transcripts.

Fiscal Analyst: Cory Savino

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This analysis was prepared by nonpartisan Senate staff for use by the Senate in its deliberations and does not constitute an official statement of legislative intent.