## RATIONALE

Public Acts 123 and 124 of 2006 established specific graduation requirements, the Michigan Merit Standard, for all pupils graduating from a public school or public school academy in Michigan, beginning with those entering $8^{\text {th }}$ grade in 2006. The legislation requires a pupil to complete certain credits that meet established content expectations or guidelines, but gives districts a degree of flexibility in designing courses that meet those criteria. The first class of students affected by the graduation requirements will be entering the $11^{\text {th }}$ grade in 2009, and schools are grappling with how to offer courses that comply with the Merit Standard, including a requirement for algebra II, while still offering pupils flexibility in their course offerings.

Many districts have well established career and technical education (CTE) programs to provide pupils with job-specific training or real-world experience that will enable them to find employment after high school or will prepare them for further education and training. Those programs often incorporate math into the curriculum, presenting the material in an applied manner. It has been suggested that the Revised School Code should specifically allow districts to use those courses to meet the algebra II requirement of the Merit Standard, if approved by the Department of Education.

## CONTENT

The bill would amend the Revised School Code to permit a pupil to meet the algebra II requirement of the Michigan Merit Standard by completing

## an approved CTE program that had embedded math content.

Under the Code, the Michigan Merit Standard requires at least four credits in math, including algebra I, geometry, and algebra II, or an integrated sequence of that course content that consists of three credits. A pupil may complete algebra II over two years with a credit awarded for each of those years for the purpose of meeting that requirement.

Under the bill, a pupil also could fulfill the algebra II requirement by completing a formal CTE program or curriculum that was approved by the Department of Education and had embedded math content, including a program or curriculum in electronics, machining, construction, welding, engineering, or renewable energy.

Within 30 days after the bill's effective date, the Department would have to post on its website and submit to the Senate and House standing committees on education guidelines for implementing that provision.

MCL 380.1278a

## 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

The bill would allow students to tailor their high school mathematics education to their personal interests and career goals, while still meeting the credit requirements of the

Michigan Merit Standard. When the high school graduation requirements were enacted in 2006, proponents of the legislation argued that local school districts would have flexibility in designing courses that met the academic credit requirements. There reportedly has been some confusion, however, over whether a CTE program can meet the content expectations of the required algebra II courses, or if a student in such a program must receive a waiver from the math credit requirements. The bill would eliminate that confusion.

Teaching math in an applied environment can be very effective, and can help students grasp the content in a way that may not be possible in a more traditional classroom setting. Math is used extensively in many applied fields, including electronics, construction, and the other programs mentioned in the bill. Demonstrating math in a real-world context can help students appreciate why they are learning the material, and can motivate them to master the concepts. Moreover, CTE programs can appeal to students who otherwise might be in danger of dropping out, by helping them see the applicability of the material that they are learning.

While some believe that the current language of the Code gives local school districts the flexibility to develop alternative methods of presenting course content, the bill would explicitly permit schools to use CTE programs as a vehicle to meet the algebra II requirement. Only those programs approved by the Department of Education could be used to meet that requirement, which would ensure that the courses were rigorous and thorough in their presentation of the material. Without weakening the current standard, the bill would acknowledge that students with different interests and various career objectives can learn the same material in a variety of settings. Under the bill, CTE students could earn the same credit as earned by those in more traditional settings, fulfilling the Merit Standard requirement for algebra II. The bill also would increase respect for the role that CTE programs play in modern high schools.

Legislative Analyst: Curtis Walker

## FISCAL IMPACT

State: The Department of Education would see increased costs under this legislation. The costs would stem from the requirement that the Department determine, within 30 days of the bill's enactment, what would constitute an "approved formal career and technical education program or curriculum that has embedded mathematics content", and then post the guidelines on its website.

Also, to the extent that fewer students dropped out of school because of a real or perceived inability to complete algebra II, the State would incur higher per-pupil foundation allowance costs for the additional length of time these students remained in school. In other words, the State saves foundation allowance funding when a student drops out, and if students remain in school, the State pays school districts foundation allowance funding for each student counted in membership. If, as a result of this legislation, more students were counted in membership than otherwise will occur, higher State school aid foundation allowance costs would result.

Local: Since this legislation would allow for alternative methods of fulfilling algebra II requirements, but would not mandate those alternative methods, there are no local costs associated with the bill. If a district chose to use a CTE program for algebra II completion, it would be the option of the local district based on the needs within the district.

Fiscal Analyst: Kathryn Summers

