

The Florida Senate
BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Policy and Steering Committee on Ways and Means

BILL: CS/CS/SB 4

INTRODUCER: Policy and Steering Committee on Ways and Means, Education Pre-K - 12 Committee,
Senator Detert, and others

SUBJECT: High School Graduation Requirements

DATE: March 16, 2010

REVISED: _____

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Carrouth	Matthews	ED	Fav/CS
2.	Hamon	Coburn	WPSC	Fav/CS
3.				
4.				
5.				
6.				

Please see Section VIII. for Additional Information:

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| A. COMMITTEE SUBSTITUTE..... | ☒ | Statement of Substantial Changes |
| B. AMENDMENTS..... | ☐ | Technical amendments were recommended |
| | ☐ | Amendments were recommended |
| | ☐ | Significant amendments were recommended |

I. Summary:

The bill is a high school graduation initiative that:

- Increases the high school graduation requirements, beginning with students entering grade 9 in the following years, to include:
 - Geometry for the 2010-2011 school year;
 - Biology I for the 2011-2012 school year;
 - Algebra II for the 2012-2013 school year;
 - Chemistry or physics for the 2013-2014 school year; and
 - An additional equally rigorous science course for the 2013-2014 school year.
- Requires student passage of statewide, standardized end-of-course (EOC) assessments in the following courses for students entering grade 9 in specified school years:
 - Algebra I, 2011-2012;
 - Biology I and geometry, 2012-2013; and
 - Algebra II and chemistry or physics, 2014-2015.
- Requires student passage of district, standardized EOC assessments for other courses, when they are developed;

- Provides for the discontinuation of the Florida Comprehensive Assessment Test (FCAT) for mathematics (Grades 9 and 10) and science (Grade 11), as EOC assessments are implemented;
- Allows students to earn course credit without sitting for the course if the student passes an EOC assessment;
- Requires a student entering grade 9 in the 2013-2014 school year to take a virtual education course; and
- Requires high schools to offer certain acceleration courses in which a student can earn college credit.

This bill substantially amends, creates, or repeals the following sections of the Florida Statutes: 1003.413, 1003.4156, 1003.428, 1003.429, 1003.4295, 1003.493, 1007.35, 1008.22, 1008.25, 1008.30, 1008.34, 1008.341, and 1008.36.

II. Present Situation:

High School Graduation Requirements

Florida high school students are currently required to complete 24 credits in order to earn a high school diploma:¹

- 4 credits in English;
- 4 credits in mathematics, which must include one credit in an Algebra I or higher-level course;
- 3 credits in science, two of which must include laboratory components;
- 3 credits in social studies;
- 1 credit in fine or performing arts, speech and debate, or a practical arts course;
- 1 credit in physical education; and
- 8 elective credits, including four credits in a major area of interest.

Additionally, students must earn passing scores on the Florida Comprehensive Assessment Test (FCAT) or attain a concordant score on the SAT or the ACT.

The Senate Committee on Education Pre-K – 12 conducted an interim study of high school coursework requirements and the skills required for high school graduates to compete effectively in a global, knowledge-based economy.² U.S. students cannot compete in a global economy given the current status of mathematics and science skills taught in public schools.³ Furthermore,

¹ s. 1003.428, F.S., applicable to students entering high school in the 2007-2008 school year. See s. 1003.43, F.S., for the high school graduation requirements for students who entered high school before the 2007-2008 school year.

² Senate Interim Report 2010-112, available at:

http://www.flsenate.gov/data/Publications/2010/Senate/reports/interim_reports/pdf/2010-112ed.pdf.

³ See *Accelerating the Agenda*, The National Governors Association, the National Conference of State Legislatures, the Council of Chief State School Officers, and the National Association of State Boards of Education; *The Economic Impact of the Achievement Gap in America's Schools, Benchmarking for Success 2008*, The National Governors Association, the Council of Chief State School Officers, and Achieve, Inc.; *Fostering Learning in a Networked World*, The National Science Foundation; *Foundations for Success*, National Mathematics Advisory Panel; *Out of Many, One*, Achieve, Inc.; *Building a STEM Agenda*, National Governors Association; *Rigor at Risk*, American College Testing; *Taking Science to School*, National Research Council; and *Tough Choices or Tough Times*, National Center on Education and the Economy.

much of the research establishes that the mathematics and science skills necessary to succeed in both the workforce and postsecondary institutions are almost identical.⁴

Major Areas of Interest

High school students are required to earn four of eight elective credits in a student-selected area of interest and to update individual academic plans if the selected area of interest is changed. In addition, local school districts are required to submit annually a list of newly proposed major areas of interest to the Florida Department of Education (DOE) for approval.⁵

Accelerated High School Graduation

Students may choose an accelerated 18-credit, 3-year college preparatory program or career preparatory program to graduate from high school early. Students choosing one of these options must also pass the grade 10 FCAT in reading and mathematics or attain concordant scores on either the SAT or the ACT.⁶

Students selecting an accelerated 18-credit, 3-year college preparatory program must complete three credits in mathematics at the Algebra I level or higher in courses that qualify for state university admission.⁷ Students selecting an accelerated 18-credit, 3-year career preparatory program must complete three credits in mathematics, one of which must be Algebra I.⁸

Middle Grades Students Enrolled in High School Level Courses

Each middle school must offer at least one high school level mathematics course for which students may earn high school credit.⁹ There are no means in place to determine that the level of rigor in these mathematics courses is commensurate with the corresponding high school courses.

Secondary Student Assessment

High school students are currently tested in FCAT reading, mathematics, writing, and science.¹⁰ In order to receive a standard high school diploma, in addition to earning credits in required high school courses, students must pass the reading and mathematics portions of the Grade 10 FCAT or attain concordant scores on either the SAT or ACT.¹¹

End-Of-Course (EOC) Assessments

Current law authorizes the Commissioner of Education (Commissioner) to select one or more nationally developed comprehensive examinations for use as an EOC assessment to be administered in addition to the subject area FCAT assessments, provided that the content knowledge and skills assessed are aligned to the core curricular content established in the

⁴ *Math at Work*, Achieve, Inc., available at <http://www.achieve.org/mathatwork>.

⁵ s. 1003.428(2)(b), F.S.

⁶ s. 1003.429, F.S.

⁷ s. 1003.429(1)(b)2., F.S.

⁸ s. 1003.429(1)(c)2., F.S.

⁹ See s. 1003.4156(1)(a)2., F.S. Based on information provided by the DOE, in 2008-2009, 63,178 grade 8 students were enrolled in Algebra I or an equivalent and 13,648 grade 7 students were enrolled in Algebra I or an equivalent. In 2008-2009, 8,834 grade 8 students were enrolled in geometry or an equivalent and 87 grade 7 students were enrolled in geometry or an equivalent.

¹⁰ Florida Department of Education, FCAT Fact Sheet, available at: <http://fcats.fldoe.org/fcatpub3.asp>.

¹¹ ss. 1003.428(4)(b) and 1003.429(5)(a), F.S.

Sunshine State Standards.¹² The Commissioner is collaborating with the American Diploma Project in the adoption and development of rigorous EOC assessments. The DOE is conducting field test administrations of Algebra I, plans to conduct a field test in geometry EOC assessments, and is scheduled to field test a Biology I EOC assessment during the 2010-2011 school year.¹³

Concordant Scores

High school students are required to take each subject area of the Grade 10 FCAT a total of three times (without earning a passing score) in order to use concordant scores from the SAT or ACT.¹⁴ A new student entering the Florida public school system in the 12th grade, however, is authorized to use a concordant score without taking the FCAT.

High School Grades¹⁵

Section 1008.34(3), F.S., provides that 50 percent of a high school's grade is based upon a combination of student achievement scores and student learning gains on FCAT reading, writing, mathematics, and science, and improvement of the school's lowest performing students.¹⁶ The remaining 50 percent of a high school's grade is based on the school's graduation rate; the graduation rate of at-risk students (those scoring at achievement Levels 1 or 2 in reading and mathematics on the Grade 8 FCAT); performance and participation of the school's students in Advanced Placement (AP) courses, International Baccalaureate (IB) program, dual enrollment courses, Advanced International Certificate of Education (AICE) program, and industry certification courses; postsecondary readiness of the students, as measured by the SAT, ACT, or the Common Placement Test; and performance of the school's students on EOC assessments approved by the DOE.¹⁷

Florida School Recognition Program

The Florida School Recognition Program provides public recognition and financial awards to schools sustaining high student performance by receiving a school grade of "A" or showing substantial improvement in student performance by improving a letter grade. Funds must be distributed as determined jointly by the school's staff and school advisory council, and if an agreement cannot be reached on the expenditure of the funds by November 1, the awards must be equally distributed to all classroom teachers currently teaching in the school.¹⁸

¹² s. 1008.22(3)(c), F.S.

¹³ Florida Department of Education, Office of Assessment, *Transition to Next Generation and Computer-Based Tests in Florida: Plans Currently Included in the FCAT Contract*, January 2010. Field test administrations will occur in a sample of high schools.

¹⁴ See s. 1008.22(10), F.S.

¹⁵ Public schools, including charter schools are assigned a school grade. Student achievement data from the FCAT are used to establish both proficiency levels and annual progress for individual students, schools, districts, and the state.

¹⁶ Despite the statutory requirement, learning gains cannot be calculated for FCAT Writing because it is only administered once at the elementary, middle, and high school levels.

¹⁷ s. 1008.34(3), F.S.

¹⁸ s. 1008.36(4), F.S.

III. Effect of Proposed Changes:

High School Graduation Requirements

To support the statewide needs for an educated workforce and to help students achieve the skills necessary for postsecondary education or the workforce, the bill adopts more rigorous mathematics and science requirements at the middle and high school grades, and the development or acquisition of end-of-course assessments aligned to those courses.¹⁹

Specifically, the legislation would require that for purposes of high school graduation:

Algebra I and Geometry

- Beginning with students entering grade 9 in the 2010-2011 school year, students must complete four credits of mathematics to include Algebra I and geometry.
 - Students would take the Algebra I assessment in 2010-2011 and the assessment would count towards 30 percent of the student's grade. For students entering the 9th grade in 2011-2012, the student must pass the Algebra I EOC assessment to earn course credit and graduate.
 - Students would take the geometry course in 2010-2011. For students entering the 9th grade in 2011-2012, all students enrolled in geometry must take the geometry assessment and the assessment would count towards 30 percent of the student's grade. For students entering the 9th grade in 2012-2013, the student must pass the geometry EOC assessment to earn course credit and graduate.

Biology I

- Beginning with students entering grade 9 in the 2011-2012 school year, students must complete three credits in science, one of which must include Biology I. Two of the required science credits must have a laboratory component. In the 2011-2012 school year, all students enrolled in Biology I must take the Biology I EOC assessment. The Biology I EOC assessment counts towards 30 percent of a student's grade in the 2011-2012 school year. Beginning with students entering the 9th grade in the 2012-2013 school year, a student must pass the Biology I EOC assessment to earn course credit and graduate.

Algebra II

- Beginning with students entering grade 9 in the 2012-2013 school year, students must complete, in addition to Algebra I and geometry, a course in Algebra II. The Algebra II EOC assessment would count towards 30 percent of a student's grade in 2013-2014. Beginning with students entering the 9th grade in 2014-2015, a student must pass the Algebra II EOC assessment to earn course credit and graduate.

¹⁹ *High School Level Stem Initiatives*, Education Commission of the States, available at <http://mb2.ecs.org/reports/Report.aspx?id=1415>.

Chemistry or Physics

- Beginning with students entering grade 9 in the 2013-2014 school year, students must complete, in addition to Biology I, a course in chemistry or physics and one higher-level science course. At least two of the science courses must have a laboratory component. Students would take a chemistry or physics EOC assessment in 2013-2014, which would count towards 30 percent of a student's grade. Beginning with students entering the 9th grade in 2014-2015, students must pass the chemistry or physics EOC assessment to earn course credit and graduate.

The bill uses the 30 percent calculation for a student's grade to establish an appropriate baseline for the test.²⁰ Students would also need to pass district EOC assessments for other subjects in order to graduate, as they are developed.

The bill establishes an implementation schedule for additional EOC assessments contingent upon funds being made available. Priority is given to the development of an EOC assessment in English/Language Arts II to support the transition from the 9th and 10th grade FCAT Reading and the high school level FCAT Writing.

The bill requires the establishment and use of scaled scores and achievement levels for all statewide, standardized EOC assessments. Achievement levels would range from 1 through 5, with level 1 being the lowest achievement level, level 5 being the highest, and level 3 indicating satisfactory performance on an assessment.²¹ Under the bill, the State Board of Education would designate passing scores for statewide, standardized EOC assessments and would designate a score for each statewide, standardized EOC assessment to indicate that a student is high achieving and likely to meet college-readiness standards by the time the student graduates from high school.

Transition from the FCAT to EOC assessments

The Grade 9 FCAT Mathematics, Grade 10 FCAT Mathematics, and Grade 11 FCAT Science administered at the high school level would be eliminated as the EOC assessments are implemented. The transition to EOC assessments for Algebra I, geometry, Algebra II, Biology I, chemistry, and physics would provide increased accountability in content-specific areas in mathematics and science.

Waivers of EOC Assessment Results for Certain Students

The bill provides that if the individual education plan (IEP) committee determines that an EOC assessment cannot accurately measure the abilities of a student with a disability, considering all allowable accommodations and alternate assessments, then the results of the EOC assessment must be waived for the purpose of determining the student's course grade and credit. The student, however, would be eligible for a special diploma and not a standard high school diploma.

²⁰ The Florida Department of Education surveyed several states currently implementing end-of-course assessments. For those states responding to specific questions with regard to assigning a weight to end-of-course assessment performance on student grades, states count the EOC assessments in a range between 15 and 33 percent or simply allow the local school districts to make this determination. The report is on file with the committee.

²¹ Currently, student performance on FCAT Reading, Mathematics, and Science are evaluated using five achievement levels; however, current law does not identify or define the five levels.

Equivalent Scores

The bill directs the Commissioner of Education to analyze the content and equivalent data sets for nationally recognized high school achievement tests and specific industry certification tests²² to verify if equivalent scores for EOC assessment scores can be determined. If content alignment and equivalent scores can be determined, the commissioner must adopt those scores as meeting the requirement to pass the EOC assessment.

Also, new equivalent scores must be established each time that assessment content or scoring procedures change for an EOC assessment, a high school achievement test, or a specific industry certification test for which an equivalent score is determined.

Accelerated High School Graduation Options

To prevent student disengagement, the bill allows students to progress based on subject knowledge and skills. The bill creates the Credit Acceleration Program (CAP) to allow a middle school or high school student to earn credit in a high school course, provided that the student takes the required EOC assessment and attains a score that indicates the student has attained satisfactory performance on a statewide, standardized EOC or a passing score on a district-created standardized EOC.²³ Under the bill, students who are not enrolled in or who have not completed the course may take the statewide, standardized EOC assessment during the regular administration of the assessment.

The bill modifies the current 18-credit accelerated college preparatory and career preparatory high school graduation requirements for receipt of a standard high school diploma by identifying the mathematics and science courses required and increases the required mathematics credits from three to four, thereby mirroring the requirements for students in a standard 24-credit program. This change will result in an alignment to increasingly competitive college entrance requirements and the research associated with essential workforce skills.²⁴

In order to increase access for all students to an accelerated and rigorous curriculum, by the 2011-2012 school year, each public high school must offer an International Baccalaureate Program, an Advanced International Certificate of Education Program, or a combination of at least four courses in dual enrollment or Advanced Placement, including one each in English, mathematics, science, and social studies. Schools may use the virtual courses to meet the requirement, provided that the student could earn college credit through the course, and a standardized EOC assessment, approved by the DOE, is administered.

Online Courses

The bill requires that, beginning with students entering grade 9 in the 2013-2014 school year, one of the required courses which a high school student must take to meet the 24 credits required for graduation must be earned in a virtual education course, which is aligned to the appropriate state curriculum standards and includes an EOC assessment. To ensure alignment to state

²² The industry certification tests identified in the bill are those associated with the Industry Certification Funding List, which is updated annually by the State Board of Education and for which school districts are eligible to receive bonus funding.

²³ The bill requires the establishment of achievement levels ranging from 1 through 5 for statewide standardized end-of-course assessments, with level 1 being the lowest, level 5 being the highest, and level 3 designating satisfactory performance.

²⁴ <http://www.edweek.org/ew/articles/2010/01/27/19report-1.h29.html?r=2010295124>

curriculum standards and assessment of student knowledge, both the virtual course and the EOC assessment must be approved by the DOE.²⁵

Major Areas of Interest

The bill repeals the requirement for students to earn four of eight elective credits in a student-selected area of interest. Although the major areas of interest have only been a requirement for three school years, no data has been collected to indicate that this requirement has had a positive effect on student achievement or academic engagement at the secondary level. It does not appear that a means of identifying its effect on student achievement is available. Moreover, the requirement burdens school districts and the DOE to annually review and approve additional groupings of electives.

Transfer of Credits and Grades Earned

For students who transfer into a Florida high school, the bill requires the school principal to determine whether a student must take the required EOC for a course in which the transfer student has already earned credit, in accordance with State Board of Education rule.

Middle Grades Students Enrolled in High School Level Courses

For purposes of a course grade or for middle grades promotion, a middle school student's successful completion of a high school level Algebra I, geometry, or Biology I course is not contingent upon the student's performance on the EOC assessment. However, a student must pass the respective EOC assessment to earn high school credit. This provision may produce more in-depth and rigorous content coverage at the middle school level and better prepare these students to be successful in higher level mathematics courses at the high school and postsecondary level.

Assessment Testing Schedules

Under the bill, FCAT test results must be made available no later than the week of June 8. As the transition is made from FCAT testing to EOC assessments at the high school level, EOC assessment schedules are implemented as follows:

- A statewide, standardized EOC assessment must be administered within a 2-week window during the final three weeks of a year-long course. The Commissioner must determine the most appropriate testing dates, based on a school district's academic calendar, for EOC assessments administered at the end of a semester-long course.
- The Commissioner must select a 3-week period for the administration of the assessment in order to provide student results before the end of the course.
- School districts would be required to select one testing week within the 3-week administration period for each EOC assessment.

School Grades

A high school's grade under the state grading formula would change depending on the performance of the school's students on the EOC assessments in Algebra I, geometry, Biology I, Algebra II, and physics or chemistry.

²⁵ A student who is enrolled in a full-time virtual instruction program under s. 1002.45, F.S., is considered to have met this requirement.

FCAT Writing

The bill removes the required revision of FCAT Writing for budgetary reasons.

School Recognition Funds

If a school recognized under the school recognition fund program closes, the funds must be distributed as a bonus to the classroom teachers who taught at the school and whose performance earned the school recognition funds.

Other Potential Implications:

If students learn additional mathematics and science skills, the state and its high school graduates would possess the tools necessary to compete in the global workplace. The success of this initiative is contingent upon changing the quality of instruction in the classroom.

IV. Constitutional Issues:**A. Municipality/County Mandates Restrictions:**

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

V. Fiscal Impact Statement:**A. Tax/Fee Issues:**

None.

B. Private Sector Impact:

Employers would benefit from having employees with greater mathematics and science skills. Graduates would benefit from having the skills that are in demand in the global economy, as a means of obtaining employment and advancing through the workplace.

C. Government Sector Impact:

The fiscal impact of this bill is indeterminate.

End-of-Course Assessments (EOCs)

The bill requires end-of-course assessments in Algebra I, Algebra II, geometry, Biology I, chemistry, and physics. The cost associated with development and administration of a statewide, standardized assessment is approximately \$1.5 million annually. Costs for development and validation begin approximately two years before implementation.

EOC assessments in Algebra I and geometry will replace the Grade 9 and Grade 10 FCAT Mathematics, and an EOC assessment in Biology I will replace Grade 11 FCAT Science, which should offset annual administration costs once the transition is finalized. Additional costs may be incurred during the transition. The DOE is field testing the Algebra I EOC this spring (2010) and the Geometry EOC next spring (2011) and plans for all EOC assessments to be computer-based tests, which should result ultimately in a lower cost for test administration.

EOCs are also required for Earth/Space Science, English/Language Arts II, United States History, and World History, but are subject to appropriation.

By eliminating the requirement for a revised assessment in FCAT Writing in 2012-2013, there should be a reduction in cost.

Support for the cost of the development and validation of the EOCs may be provided in the future if the Department is successful in receiving a Race to the Top grant for the development of common assessments.

Increased Higher Level Course Requirements for Graduation

The number of credits required for high school graduation will remain at 24; however, students will be required to take higher-level courses in math: Algebra II and geometry, and in science: Biology I, and chemistry or physics. In these courses, student enrollment will increase substantially and additional teachers will be required. The teacher need will have to be met by reassigning appropriately certified teachers within the district or by hiring from outside. Reassignment of appropriately certified teachers may necessitate additional district professional development expenditures. The hiring of new teachers when sufficient teachers are not available within the district, particularly for chemistry or physics, may require payment of higher, market rate salaries. The cost of new hires may be partially offset through attrition.

Initially, there may be some additional cost for credit recovery or non-promotion for some students who are unsuccessful with the higher standards. However, student performance generally will improve to meet the higher expectations as the program is fully implemented. Moreover, there may be a reduction in future years for remediation costs.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Additional Information:**A. Committee Substitute – Statement of Substantial Changes:**

(Summarizing differences between the Committee Substitute and the prior version of the bill.)

CS by Policy and Steering Committee on Ways and Means on March 16, 2010:

The Committee Substitute makes technical corrections to the bill.

CS by Education Pre-K-12 on March 10, 2010:

The committee substitute:

- Delays the administration of the end-of-course assessment (EOC) in Geometry by one year. Students will still be required to take the Geometry course in 2010-2011, but will not take the EOC until 2011-2012;
- Authorizes the Commissioner of Education to consider religious holidays and school district calendars as the schedules for test administrations are developed; and
- Requires the Commissioner to adopt equivalency scores from certain industry certification assessments for use in meeting end-of-course assessment requirements under the bill, if appropriate.

B. Amendments:

None.