



Lillian M. Lowery, Ed.D.
State Superintendent of Schools

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TO: Members of the State Board of Education

FROM: Lillian M. Lowery, Ed.D. *L. Lowery*

DATE: August 26, 2014

SUBJECT: COMAR 13A.04.12 Program in Mathematics
ADOPTION

PURPOSE:

The purpose of this action is to seek the adoption of the amended regulations that govern the Program in Mathematics in elementary, middle and high schools (attached).

HISTORICAL BACKGROUND:

In June 2010 members of the Maryland State Board of Education adopted the Common Core State Standards, now known as the Maryland College- and Career-Ready Standards for Mathematics. In response to the changes to the mathematics standards, the Code of Maryland Administration Regulations (COMAR) governing mathematics has been modified to reflect the language of the Maryland College- and Career-Ready Standards. Additionally, the COMAR reflects the legislative requirements of the College and Career Ready Completion Act of 2013. In that legislation, students are required to take mathematics every year they are enrolled in high school. By the end of eleventh grade, students must be assessed to determine whether they are college- and career-ready in mathematics. Students who do not meet the criteria will be enrolled in a mathematics transition course in their twelfth grade year.

At their April 2014 meeting, the Maryland State Board of Education approved permission to publish the proposed amended regulations.

SUMMARY:

Opportunities for comments on the proposed amended COMAR were provided. No comments have been received. However, clarification on the listing of mathematics courses under 13A.04.12.01A(2) has been requested by local mathematics coordinators. The listed courses are examples of non-trivial mathematics courses that students may have available to them in their high schools. The list does not prohibit systems from including additional non-trivial mathematics courses. Not all of the listed courses may be offered by all local systems every year.

ACTION:

I request that you approve for adoption COMAR 13A.04.12.

Attachment

L. The decision of the State Superintendent may be appealed to the circuit court pursuant to Maryland Rules 7-201, et seq. On appeal:

(1) If the State Superintendent has reversed the local superintendent's decision to deny the [HSA] *Maryland High School Assessment* waiver and the local school system appeals that decision, the State Superintendent shall defend the decision on appeal; or

(2) (text unchanged)

M.—N. (text unchanged)

[O. Section E(2)(a) of this regulation shall sunset on June 30, 2010 with no further action of the State Board of Education.]

[P] O. Section E(2)(b) (a) of this regulation, upon review, approval, and promulgation of an amendment of these Regulations by the State Board of Education, shall sunset on June 30, 2015.

.12 General Provisions.

A. (text unchanged)

B. Transfer Students.

(1) (text unchanged)

(2) *Maryland High School Assessment Exemption Requirements.*

(a) A student who transfers from a nonpublic school or a school out of State is exempt from one or more of the *Maryland High School Assessments* if, consistent with local school system policy and procedure, the principal of the *Maryland* public school in which the student enrolls determines that the course taken is aligned with the relevant *Maryland High School Assessment* and awards the student credit for taking any of the courses aligned with the *Maryland High School Assessments*, that is, algebra/[data analysis], biology, English, or government, or all of these, in accordance with the principles set forth in §B(2)(c) of this regulation.

(b) A student who transfers from a nonpublic school or a school out of State and has not received credit for algebra/[data analysis] but has demonstrated mastery of the [core learning goals] *Maryland College and Career Ready Standards* [of] for algebra/[data analysis] either through an evaluation or successful completion of subsequent mathematics courses for which algebra/[data analysis] is a prerequisite is exempt from the *Maryland High School Assessment* for algebra/[data analysis].

(c) To award credit for taking any of the courses aligned with the *Maryland High School Assessments*, that is, algebra/[data analysis], biology, English, or government, a principal shall determine through the following considerations whether the transfer student demonstrates subject matter knowledge aligned with the content standards for the subject:

(i)—(iv) (text unchanged)

(d)—(e) (text unchanged)

(3)—(4) (text unchanged)

[C. Notice to Parents or Guardians and Students. Each principal shall inform all students and their parents or guardians annually at a minimum of the following:

(1) Maryland's graduation requirements;

(2) The student's progress on fulfilling the credit, *Maryland High School Assessment*, service, and applicable IEP requirements for graduation;

(3) The results of each *Maryland High School Assessment* taken by the student;

(4) A plan for appropriate assistance, if applicable; and

(5) The Department's schedule for *Maryland School Assessment* and *Maryland High School Assessment* administration.

D. Grading and Reporting.

(1) Each local school system shall develop a written policy on grading and reporting that shall include but not be limited to the following:

(a) Establishment of instructional objectives and standards of performance for each course:

(b) Factors to be used in determining grades;

(c) Reporting contacts between parent (guardian) and teacher; and

(d) Compliance with the student record requirements as set forth in COMAR 13A.08.02.

(2) Each local school system shall file its policies on grading and reporting with the State Superintendent of Schools.]

LILLIAN M. LOWERY, Ed.D.
State Superintendent of Schools

Subtitle 04 SPECIFIC SUBJECTS

13A.04.12 Program in Mathematics

Authority: Education Article, §§2-205(h) and 7-205.1, Annotated Code of Maryland

Notice of Proposed Action

[14-176-F]

The Maryland State Board of Education proposes to amend Regulation .01 under COMAR 13A.04.12 Program in Mathematics. This action was considered at the April 22, 2014 meeting of the State Board of Education.

Statement of Purpose

The purpose of this action is to be in compliance with the College and Career Readiness and College Completion Act of 2013 (Senate Bill 740) by requiring 4 years of math during high school for each ninth grade student entering high school beginning in the fall of 2014 and to align the mathematics standards to the *Maryland College and Career Ready Standards*.

Comparison to Federal Standards

There is no corresponding federal standard to this proposed action.

Estimate of Economic Impact

I. Summary of Economic Impact. Because students are now required to enroll in a mathematics course every year they are in high school, additional staffing may be required by local school systems.

II. Types of Economic Impact	Revenue (R+/R-)	Magnitude
	Expenditure (E+/E-)	
A. On issuing agency:	NONE	
B. On other State agencies:	NONE	
C. On local governments:	(E-)	Unknown
	Benefit (+) Cost (-)	Magnitude
D. On regulated industries or trade groups:	NONE	
E. On other industries or trade groups:	NONE	
F. Direct and indirect effects on public:	NONE	

III. Assumptions. (Identified by Impact Letter and Number from Section II.)

C. Positions for high school mathematics teachers. Some local systems already require four credits of mathematics in high school, but students may earn these four credits in fewer than four years.

PROPOSED ACTION ON REGULATIONS

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Economic Impact on Small Businesses

The proposed action has minimal or no economic impact on small businesses.

Impact on Individuals with Disabilities

The proposed action has no impact on individuals with disabilities.

Opportunity for Public Comment

Comments may be sent to Judy Jenkins, Director of Curriculum, Maryland State Department of Education, Division of Curriculum, Assessment and Accountability, 200 West Baltimore Street, Baltimore, Maryland 21201, or call 410-767-0348 (TTY 410-333-6442), or email to jjenkins@msde.state.md.us, or fax to 410-333-2369. Comments will be accepted through July 14, 2014. A public hearing has not been scheduled.

Open Meeting

Final action on the proposal will be considered by the Maryland State Board of Education during a public meeting to be held on August 26, 2014, at 200 West Baltimore Street, Baltimore, Maryland 21201.

.01 Mathematics Instructional Programs for Grades Prekindergarten—12.

A. Each local school system shall:

(1) text unchanged)

(2) Offer in public schools a mathematics program in grades 9—12 [which enables students to meet graduation requirements and to select mathematics electives]. *Beginning with students entering grade 9 in the 2014—2015 school year, each student shall enroll in a mathematics course in each year of high school that the student attends, up to a maximum of 4 years of attendance, unless in the 5th or 6th year a mathematics course is needed to meet a graduation requirement and to select mathematics and mathematics-related courses that shall include:*

- (a) *Mathematics Transition Course;*
- (b) *Algebra II;*
- (c) *Pre-Calculus;*
- (d) *Discrete Mathematics;*
- (e) *Linear Algebra;*
- (f) *Probability and Statistics;*
- (g) *AP^C Computer Science;*
- (h) *AP^D Calculus (A/B);*
- (i) *AP^D Calculus (B/C); or*
- (j) *A Computer Science course that is not AP^C Computer Science if the local school system determines the course meets the mathematics standards required by this regulation.*

Science if the local school system determines the course meets the mathematics standards required by this regulation.

B. Maryland Mathematics Program. The comprehensive instructional program shall provide for the diversity of student needs, abilities, and interests at the early, middle, and high school learning years. Each local school system shall include the content standards in §§C—[1]F of this regulation in its curriculum.

C. [Algebra, Patterns, and Functions. Students shall demonstrate knowledge of algebra, patterns, and functions by algebraically representing, modeling, or solving mathematical or real-world problems involving patterns or functional relationships, using technology when appropriate.] *For prekindergarten through grade 5, students shall demonstrate knowledge of the domains: Number, Counting and Cardinality, Number Operations and the Problems They Solve, Numbers in Base Ten, Number – Fractions, Measurement and Data Analysis, and Geometry.*

D. [Geometry. Students shall demonstrate knowledge of geometry by applying the properties of one-dimensional, two-dimensional and three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects, using technology when appropriate.] *For grades 6—8, students shall*

demonstrate knowledge of the domains: Ratios and Proportional Reasoning, The Number System, Expressions and Equations, Functions, Geometry, and Statistics and Probability.

E. [Measurement. Students shall demonstrate knowledge of measurement by identifying attributes, units, or systems of measurement by applying a variety of techniques, formulas, tools, or technology.] *For high school students, students should demonstrate knowledge of the conceptual categories: Number and Quantity, Algebra, Functions, Geometry, and Statistics and Probability.*

[F. Statistics. Students shall demonstrate knowledge of statistics by collecting, organizing, displaying, analyzing, or interpreting data to make decisions or predictions, using technology when appropriate.

G. Probability. Students shall demonstrate knowledge of probability by using experimental methods or theoretical reasoning to determine probabilities to make predictions or solve problems about events whose outcomes involve random variation, using technology when appropriate.

H. Number Relationships and Computation. Students shall demonstrate knowledge of number relationships and arithmetic/computation by describing, representing, or applying numbers and shall estimate or compute using mental strategies, paper/pencil, or technology.

I. Processes of Mathematics. Students shall demonstrate knowledge of the processes of mathematics by making connections and applying reasoning to solve problems and communicate their findings.]

F. Standards for Mathematical Practice. *Students in prekindergarten through high school shall demonstrate knowledge of the processes and proficiencies of mathematics: make sense of problems and persevere in solving them, reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, model with mathematics, use appropriate tools strategically, attend to precision, look for and make use of structure, and look for and express regularity in repeated reasoning.*

[J.] G. Curriculum Documents. Consistent with Education Article, §4-110, Annotated Code of Maryland, each local school system shall provide mathematics curriculum documents for the elementary and secondary schools under its jurisdiction that:

(1) Include the content standards described in §§C—[I] F of this regulation; and

(2) Are aligned with the [Voluntary State Curriculum as developed by the Maryland State Department of Education in collaboration with local school systems] *Maryland College- and Career-Ready Standards as developed by the Maryland State Department of Education in collaboration with local school systems.*

[K.] H. (text unchanged)

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