

MARYLAND REGISTER

Proposed Action on Regulations

Transmittal Sheet PROPOSED OR REPROPOSED Actions on Regulations	Date Filed with AELR Committee	TO BE COMPLETED BY DSD
	04/28/2014	Date Filed with Division of State Documents
		Document Number
		Date of Publication in MD Register

1. Desired date of publication in Maryland Register: 6/13/2014

2. COMAR Codification

Title Subtitle Chapter Regulation

13A 04 12 01

3. Name of Promulgating Authority

Maryland State Department of Education

4. Name of Regulations Coordinator Telephone Number
Charlene L Necessary 410-767-0467

Mailing Address

200 W. Baltimore Street

City State Zip Code
Baltimore MD 21201

Email
cnecessary@msde.state.md.us

5. Name of Person to Call About this Document Telephone No.
Judy Jenkins 410-767-0348

Email Address
jjenkins@msde.state.md.us

6. Check applicable items:
 New Regulations

A STATE BOARD OF EDUCATION

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

□

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 four 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.

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.

Economic Impact Statement Part C

A. Fiscal Year in which regulations will become effective: FY 15

B. Does the budget for the fiscal year in which regulations become effective contain funds to implement the regulations?

No

C. If 'yes', state whether general, special (exact name), or federal funds will be used:

D. If 'no', identify the source(s) of funds necessary for implementation of these regulations:

Local school system.

E. If these regulations have no economic impact under Part A, indicate reason briefly:

F. If these regulations have minimal or no economic impact on small businesses under Part B, indicate the reason and attach small business worksheet.

G. Small Business Worksheet:

Title 13A STATE BOARD OF EDUCATION

Subtitle 04 Specific Subjects

Chapter 12 Program in Mathematics

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

.01 Mathematics Instructional Programs for Grades Prekindergarten—12.

A. Each local school system shall:

(1) Provide in public schools an instructional program in mathematics each year for all students in grades prekindergarten—8; and

(2) Offer in public schools a mathematics program in grades 9—12 [which enables students to meet graduation requirements and to select mathematics electives]. *Students entering grade 9 in the 2014 school year shall enroll in a mathematics course in each year of high school that the student attends high school, up to a maximum of four 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[®] Computer Science;*

(h) *AP[®] Calculus (A/B);*

(i) *AP[®] Calculus (B/C);* or

(j) *A Computer Science course that is not AP[®] Computer 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—[I]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. Student Participation. Each student shall have the opportunity to participate in the comprehensive mathematics program required by this chapter.

Ed.D.
Superintendent of Schools

LILLIAN M. LOWERY,
State