



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. *Lillian M. Lowery*  
**DATE:** May 20, 2014  
**SUBJECT:** COMAR 13A.12.02.29, Instructional Leader: STEM, PreK- grade 6  
**APPROVAL**

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**PURPOSE:**

The purpose of this item is to request your approval of a new regulation, COMAR 13A.12.02.29, Instructional Leader: STEM, PreK- grade 6 and to present an analysis of the comments received regarding the proposed regulation.

**BACKGROUND INFORMATION:**

Maryland's application for *Race to the Top* included provisions for the development of Science, Technology, Engineering, and Mathematics (STEM) preparation programs at the elementary level. Local school systems currently provide STEM training for teachers who are also serving as STEM resources for their respective schools. The Department convened a Work Group to determine certification requirements for the proposed regulation which specifies the post-baccalaureate credits and teaching experience requisite to adding this proposed certification as an endorsement to an existing professional certificate.

The Professional Standards and Teacher Education Board (PSTEB) granted permission to publish the proposed regulation at its November, 2013 meeting. Subsequently, you reviewed the proposed regulation at your December 16, 2013 meeting and determined that a Joint Conference Committee was not needed.

A copy of the proposed regulation as in appeared in the *Maryland Register* on April 4, 2014 is attached; the public comment period ended May 5, 2014. Also attached is an analysis if those comments. The proposed regulation does not have any economic impact nor does it have any impact on individuals with disabilities. There is no corresponding federal standard for this proposed action.

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**SUMMARY:**

A Work Group of key constituents met to discuss and recommend a new regulation for Instructional Leader: STEM. This new regulation will provide leadership opportunities for teachers in local school systems in the area of STEM education as well as support the provisions of the *Race to the Top* application for the preparation of STEM teachers at the elementary level.

**ACTION:**

I am requesting approval of the proposed regulation, COMAR 13A.12.02.29, Instructional Leader: STEM, PreK-6.

LML/ jes

Attachments

**ANALYSIS OF WRITTEN TESTIMONY PROVIDED TO THE MARYLAND STATE BOARD OF EDUCATION CONCERNING PROPOSED REGULATION, COMAR 13A.12.02.29, INSTRUCTIONAL LEADER: STEM, PREK- GRADE 6**

- TOPIC:** Adopting the new regulation
- Writer:** Honi J. Bamberger, Ph.D., Department of Mathematics, Towson University, Towson, MD 21286
- Comments:** The State of Maryland should adopt this regulation so that the many dedicated elementary science and mathematics teachers can aspire to continue their passion of the sciences and be rewarded for their efforts. I strongly support this regulation.
- TOPIC:** Availability of course work
- Writer:** Jean A. Mantegna, SPHR, Assistant Superintendent for Human Resources, Harford County Public schools
- Comments:** Is course work available (both on campus and online)?
- Staff Response:** The following colleges/universities offer course work in the STEM area: Hood, McDaniel, Notre Dame University of MD, Towson University, University of Maryland, Baltimore County (on-line), and University of Maryland. The regulation also provides flexibility for local school systems to develop Continuing Professional Development (CPD) programs to address the STEM needs in their respective systems.
- Comments:** Would undergraduate credit earned as part of the bachelor's degree also be acceptable?
- Staff response:** The focus of the recommended post-baccalaureate credits requires integration of the specified content which typically does not occur at the undergraduate level. There have been numerous work groups which have consistently reported that the mathematics preparation for elementary and early childhood teachers could be strengthened.

PROPOSED ACTION ON REGULATIONS

(ii) Introduction to orientation and mobility training emphasizing the development of concepts and skills required for independent travel;

(d) Practical aspects and disorders of the eye including their current and future impact on the development of the student; and

(e) A practicum of not less than 6 semester hours completed with students with visual impairments.

(2) Two years of satisfactory teaching of students with visual impairments may be substituted for the 6 semester-hour practicum in §C(1)(e) of this regulation. Satisfactory teaching experience shall be established by a series of at least four observation periods per year. If a supervisor certified in teaching students with visual impairments is not available, a mentor teacher, not certified in teaching students with visual impairments shall work in cooperation with the special education administrator to provide the required evaluation.]

[D.] C. Special Provision. A teacher professionally certified in early childhood, elementary [or middle school, secondary, generic special education, or PreK—grade 12 education who seeks an endorsement to teach students with visual impairments [at that level] shall meet the requirements of §C [§B(1)]—(3) of this regulation.

[E.] D. Renewal.

(1) A teacher certified for teaching blind/visually impaired students [with visual impairments] shall present [at least one course, continuing education unit, or professional development activity indicating maintenance of Braille proficiency, a qualifying score on a Department approved test of Braille competency, before the expiration of the initial professional certificate or 15 semester hours of course work from an IHE or in Department-approved continuing Professional Development credits or Continuing Education Credits (CEUs).

(2) For continued renewal, a teacher certified for teaching blind/visually impaired students shall submit a same amount of course work from an IHE or Department-approved continuing Professional Development credits or Continuing Education Credits (CEUs) which must include maintenance of knowledge of the code.

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**Impact on Individuals with Disabilities**  
The proposed action has no impact on individuals with disabilities.

**Opportunity for Public Comment**

Comments may be sent to Jean Satterfield, Assistant State Superintendent, Division of Educator Effectiveness, Maryland State Department of Education, 200 West Baltimore Street, Baltimore, Maryland 21201, or call 410-767-0385 (TTY 410-333-6442), or email to jsatterfield@msde.state.md.us, or fax to 410-333-8963. Comments will be accepted through May 5, 2014. A public hearing has not been scheduled.

**Open Meeting**

Final action on the proposal will be considered by the Professional Standards and Teacher Education Board during a public meeting to be held on June 5, 2014, at 200 West Baltimore Street, Baltimore, Maryland 21201.

**.29 Instructional Leader: STEM (Grades PreK—6).**

To add an endorsement as Instructional Leader: STEM, grades PreK—6, an applicant shall:

A. Hold a valid, professional certificate with certification in early childhood education or elementary education;

B. Complete a minimum of 18 semester hours of post-baccalaureate credit or Department-approved Continuing Professional Development credits, to include the following:

(1) 12 semester hours in STEM education which integrates a balance of the following content:

- (a) Authentic problem-based and project-based learning;
  - (b) Essential skills including questioning, spatial reasoning, communication, critical thinking, and problem solving;
  - (c) Engineering design process;
  - (d) Application of scientific practices and content;
  - (e) Application of mathematical practices and content;
  - (f) Technology literacy; and
  - (g) Collaborative learning.
- (2) 3 semester hours or the equivalent in leadership knowledge and skills in providing professional learning in a school/district setting; and

(3) At least 3 semester hours or the equivalent in a supervised practicum or school-based internship in which the applicant works with a range of students in grades PreK—6 and adult learners in a variety of professional development settings; and

C. Present verification of 27 months of satisfactory teaching experience.

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**Subtitle 12 CERTIFICATION**

**13A.12.02 Teachers**

Authority: Education Article, §§2-205, 2-303(g), 6-121, and 6-701—6-705, Annotated Code of Maryland

**Notice of Proposed Action**  
[14-090-P]

The Professional Standards and Teacher Education Board proposes to adopt new Regulation .29 under COMAR 13A.12.02 Teachers. This action was considered at the Professional Standards and Teacher Education Board meeting on October 3, 2013.

**Statement of Purpose**

The purpose of this action is to add a new teaching endorsement in the area of Instructional Leader: STEM, PreK-grade 6.

**Comparison to Federal Standards**

There is no corresponding federal standard to this proposed action.

**Estimate of Economic Impact**

The proposed action has no economic impact.

**Economic Impact on Small Businesses**

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