



COMMONWEALTH of VIRGINIA

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December 1, 2020

The Honorable Janet D. Howell
Chair, Senate Committee on Finance
and Appropriations
Virginia General Assembly
P. O. Box 2608
Reston, Virginia 20195-0608

The Honorable Luke E. Torian
Chair, House Appropriations Committee
Virginia General Assembly
4222 Fortuna Plaza, Suite 659
Dumfries, Virginia 22025

The Honorable L. Louise Lucas
Chair, Senate Committee on
Education and Health
Virginia General Assembly
P. O. Box 700
Portsmouth, Virginia 23705-0700

The Honorable Roslyn C. Tyler
Chair, House Committee on Education
Virginia General Assembly
25359 Blue Star Highway
Jarratt, Virginia 23867

Dear Senators Howell and Lucas and Delegates Torian and Tyler:

I am pleased to submit the attached report, *Virginia Department of Education Plan to Adopt and Implement Standards for Microcredentials for Science, Technology, Engineering, and Mathematics (STEM) Fields*. [House Bill 836](#) of the 2020 General Assembly requires that the Department of Education develop a plan to adopt and implement standards for microcredentials used toward add-on endorsements and renewal of licenses earned by Virginia license holders in STEM.

If you have any questions or require additional information, please do not hesitate to contact Michael Bolling, Assistant Superintendent for Learning and Innovation, at Michael.Bolling@doe.virginia.gov or (804) 225-2034, or Maggie Clemmons, Director of Licensure and School Leadership, at Maggie.Clemmons@doe.virginia.gov or (804) 371-2471.

Sincerely,

A handwritten signature in black ink that reads "James F. Lane".

James F. Lane

JFL/psp

Enclosure

c: The Honorable Atif Qarni,
Secretary of Education



**VIRGINIA DEPARTMENT OF EDUCATION PLAN
TO ADOPT AND IMPLEMENT STANDARDS FOR
MICROCREDENTIALS FOR SCIENCE,
TECHNOLOGY, ENGINEERING, AND
MATHEMATICS (STEM) FIELDS**

December 1, 2020

*Virginia Department of Education
P. O. Box 2120
Richmond, Virginia 23218-2120*



Virginia Department of Education Plan to Adopt and Implement Standards for Microcredentials for Science, Technology, Engineering, and Mathematics (STEM) Fields

December 1, 2020

Authority

The 2020 Virginia General Assembly approved [House Bill 836](#) that requires the Department of Education to develop a plan to adopt and implement standards for microcredentials. The bill requires the following:

The Department of Education shall develop a plan to adopt and implement standards for microcredentials used toward add-on endorsements and renewal of licenses earned by Virginia license holders in science, technology, engineering, and mathematics (STEM) fields. Such plan shall include (i) a process for reviewing and administering educator microcredentials; (ii) assurances that educator microcredentials rely upon demonstrable evidence from the submission of artifacts, such as student projects and teacher lesson plans, that are then objectively scored against existing rubrics; and (iii) assurances that educator microcredentials focus on interrelated competencies leading to logical teacher professional development pathways and stacks of educator microcredentials and align with the Board of Education's ongoing work on educator professional development. Such plan shall also include the resources needed for statewide implementation. The Department of Education shall complete and submit the plan to the Chairmen of the House Committee on Education, the House Committee on Appropriations, the Senate Committee on Education and Health, and the Senate Committee on Finance and Appropriations no later than December 1, 2020.

Background

The 2019 Virginia General Assembly passed identical bills, Senate Bill 1419 and House Bill 2217, which allowed the Virginia Department of Education to establish a microcredential program that permits a Virginia teacher who holds a renewable or provisional license or an individual who participates in an alternate route to licensure to complete additional coursework



and earn microcredentials in science, technology, engineering, and mathematics (STEM) endorsement areas, including computer science. The bills required that the Advisory Board on Teacher Education and Licensure (ABTEL) convene a workgroup to determine how such microcredentials could be used to award add-on endorsements and certifications for teachers in STEM endorsement areas, including computer science.

The workgroup on microcredentials was convened on behalf of ABTEL. Members of the workgroup included teachers, school and central office administrators, Department of Education staff, and representatives from professional organizations, higher education, and CodeVA, an organization that provides computer science training to teachers in Virginia.

The workgroup considered research and other states' use of microcredentials. Information was presented to the workgroup on Radford University's Appalachian Support for Specialized Education Training (ASSET) program, which delivers self-paced and competency-based online professional development sessions for K-12 educators that may result in microcredentials. In addition, information was provided on the partnership currently under development between Old Dominion University and CodeVA to offer microcredentials to K-12 teachers. In the field of education, microcredentials focus on a skill that supports an educator's practice. Educators must submit evidence that is evaluated by the issuer before the microcredential is awarded. The components of a microcredential generally include:

- **Stated Skill or Content Area** – The instructions for the microcredential state the intended skill or content to be mastered, with a general overview of how it will be substantiated.
- **Components** – This section outlines the activities to be conducted, leading to the evidence that will be submitted for evaluation.
- **Research and Resources** – Generally there is no “course” required to earn a microcredential, so the microcredential issuer may need to provide research and resources to support the educator in mastering the topic or technique and preparing the evidence for submission. These resources may include articles or books to read, websites to review, videos to watch, etc.
- **Submission Criteria** – This section describes the evidence to be submitted for evaluation.
- **Scoring Rubric** – A rubric is provided that outlines the criteria that must be met in order to earn the microcredential.

Members of the workgroup engaged in a robust discussion of the benefits of microcredentials in providing professional development for K-12 educators and the potential for use in teacher licensure and renewal. Given the emerging nature of microcredentials for teachers in K-12 education, concerns also were expressed about the large number of microcredential issuers, the broad number of topics covered, and the difficulty in evaluating the content covered, the quality of the evidence teachers must submit, and the rigor of rubrics and evaluators in scoring that evidence.



A major consideration is how microcredentials, in their current unregulated state, would comport with Virginia’s present system of teacher licensure. Some have expressed concerns about multiple issuers designing and offering hundreds of microcredentials, with no standard criteria for content, research-base, rigor, or scoring. The challenge is how to balance Virginia’s specific teacher license content requirements, which are currently demonstrated by completing courses within an approved teacher preparation program or by passing an approved Praxis content exam with the array of options in the world of microcredentials.

Recommendations from Virginia’s Workgroup on Microcredentials for Teachers

The discussion of the workgroup on microcredentials produced recommendations related to the development and use of microcredentials. The areas of recommendation by ABTEL addressed both existing policies and future considerations.

1. Clarify Virginia license renewal language about the use of microcredentials for professional development points.

Provisions in the *Virginia Licensure Renewal Manual* (Virginia Department of Education, 2019) allow a teacher to use microcredentials to earn professional development points toward license renewal. Option 8, Professional Development Activities, encourages local employing education agencies “to design staff development activities . . . to enhance professional performance and advance the goals of the employing local agency. Non-college credit activities previously sponsored by educational agencies are now included in several of the options, especially Option 8.” (Virginia Department of Education, 2019)

Effective July 1, 2018, renewable teaching licenses are now issued for 10 years. Prior to that date, they were issued for five years. Individuals who currently hold a five-year license must earn 180 professional development points for license renewal, with one clock/contact hour counting as one point. Professional development activities must meet the following criteria to be used for license renewal:

- Must be a **minimum of five hours per activity**. (The five hours do not have to be consecutive.)
- Must have prior approval from the chief executive officer or designee if the license holder is employed in a Virginia educational agency. Prior approval for employing educational agency professional development activity is a commitment that professional development points will be awarded for the activity. If job-related leave is being requested, the license holder must follow the guidelines in the personnel handbook of the employing agency.



Suggested Action:

Add language based on the *Code of Virginia* (§ [22.1-299.7](#). *Microcredential program; certain STEM subjects.*) to the *Virginia Licensure Renewal Manual* to make it clear that microcredentials can be used to earn professional development points for license renewal.

2. Consider microcredentials as a component of an alternate route to licensure or a teacher preparation program submitted to the Virginia Board of Education for approval.

The Virginia Board of Education must approve all teacher preparation programs. Additionally, the 2019 Virginia General Assembly approved House Bill 2486 that required the Board of Education to develop guidelines that establish a process to permit a school board or any organization sponsored by a school board to petition the Board for approval of an alternate route to licensure that may be used to meet the requirements for a provisional or renewable license or any endorsement.

Suggested Action:

Consider including microcredentials in programs seeking approval if they address the content and expertise required in the approved program competencies set forth in the Board of Education's regulations.

3. Allow microcredentials, regardless of delivery modality, to be considered for use by educators.

The language approved by the 2019 Virginia General Assembly in Senate Bill 1419 and House Bill 2217 appears to require that microcredentials for teachers may be offered only in person or in a blended format of in-person and online instruction.

§ [22.1-299.7](#). *Microcredential program; certain STEM subjects.*

. . . .C. *Any course offered through any microcredential program established pursuant to subsection A shall be offered in-person or in a blended format of in-person and online instruction.*

However, many microcredentials are offered solely online, and the language in the *Code of Virginia* should reflect this provision.

Suggested Action:

Add language to make it clear that microcredentials can include completely online instruction in addition to in-person or in a blended format.



4. Allow the opportunity to pilot the development, use, and evaluation of microcredentials for Virginia educators in accordance with Board of Education guidelines.

Many questions about the use of microcredentials for teachers exist, especially given the emerging nature of their development and use. One or more microcredential pilots, especially conducted by colleges, universities, or organizations in Virginia that have recognized success in teacher preparation and professional development, would help to respond to some of these questions including the interest of teachers in pursuing microcredentials, their effectiveness in providing professional development in areas of need, and their potential role in teacher licensure and renewal. Such work also may provide insight into how higher education views the use of microcredentials as an element of programs, which may assist with the calibration of content and/or skills addressed by microcredentials with the current teacher licensure requirements in Virginia.

Suggested Action:

Allow a collaboration of stakeholders (Department of Education/State Council of Higher Education for Virginia (SCHEV)/colleges and universities/school divisions/professional organizations) to pilot the development, use, and evaluation of microcredentials for Virginia educators.

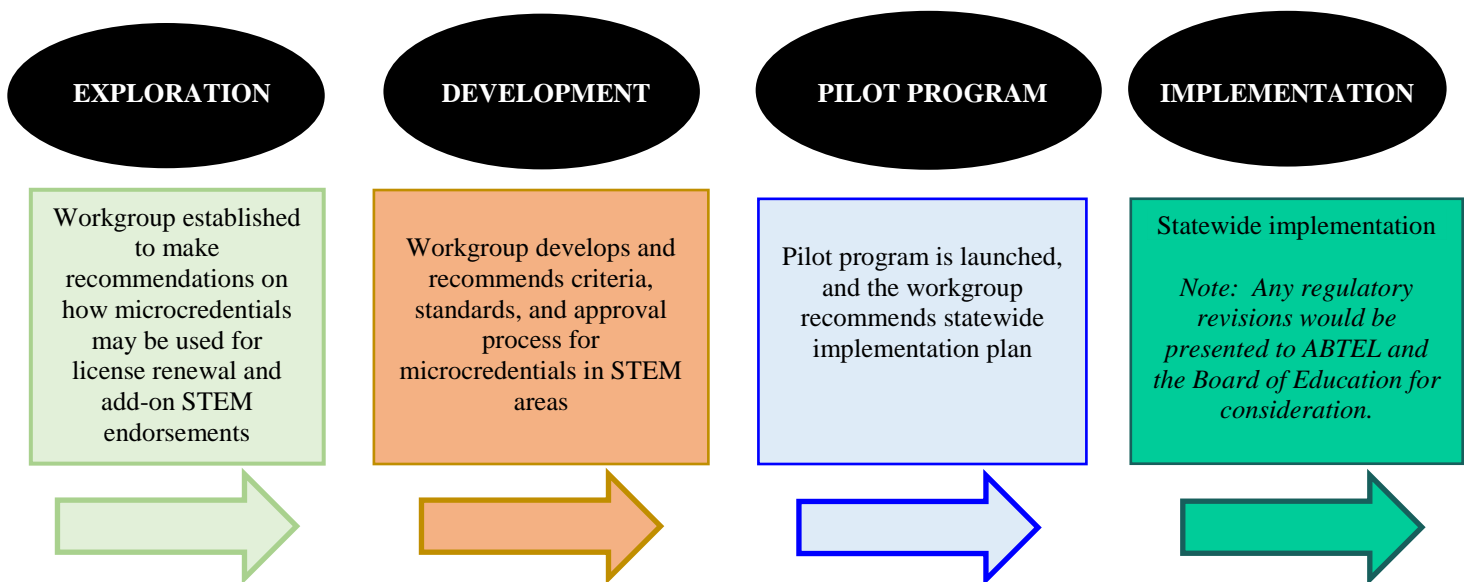
The Virginia Association for Supervision and Curriculum Development (VASCD) was represented on ABTEL's workgroup. Subsequently, VASCD has reviewed the use of microcredentialing for professional development and learning. This fall, VASCD is conducting a pilot in which teachers are completing microcredentials and providing feedback on the process. This information, though not specific to STEM areas, will provide information on the use of microcredentialing for professional development and learning, as well as license renewal.



Plan to Adopt and Implement Standards for Microcredentials for Science, Technology, Engineering, and Mathematics (STEM) Fields

The Department of Education’s plan to adopt and implement standards for microcredentials for science, technology, engineering, and mathematics (STEM) fields will include the following four phases:

- Exploration;
- Development;
- Pilot Program; and
- Implementation.



Exploration: Virginia’s Workgroup on Microcredentials for Teachers

Continuing the work of ABTEL’s Virginia Workgroup on Microcredentials for Teachers, the Virginia Department of Education will convene a collaboration of stakeholders (Department of Education, State Council of Higher Education for Virginia, colleges and universities, school divisions, professional organizations, school leaders, and teachers). The workgroup will be staffed by the Director of STEM and the Director of Licensure in the Department of Education to make recommendations for the development, use, and evaluation of microcredentials for Virginia educators.



Development: Criteria and Standards for Microcredentials

This workgroup's charge will be to recommend the following to the Department of Education:

- standards and criteria for microcredentials;
- process for microcredentials to be reviewed and approved;
- recommended microcredentials for renewal;
- requirements for an add-on endorsement in STEM;
- partnerships; and
- any funding that may be needed to provide staffing or resources to implement the microcredentialing program.

The workgroup's recommendations should ensure that each vetted microcredential focuses on interrelated competencies leading to logical teacher professional development pathways and that stacks of educator microcredentials align with the Board of Education's ongoing work on educator professional development, renewal requirements, and performance standards for teachers. In addition, each vetted microcredential list will rely upon demonstrable evidence from the submission of artifacts, such as student projects and teacher lesson plans, that are then objectively scored against existing rubrics, in order for the microcredential to be awarded.

Any actions requiring revisions to the *Licensure Regulations for School Personnel* will be subject to statutory and regulatory processes. Pursuant to Section § 22.1-305.2 of the *Code of Virginia*, the Advisory Board on Teacher Education and Licensure shall advise the Board of Education and submit recommendations on policies applicable to the qualifications, examination, licensure, and regulation of school personnel. Final approval rests with the Board of Education.

Pilot Program: Implement Pilot and Review Recommendations

Once criteria and standards have been developed and approved for microcredentials in STEM areas, the Virginia Department of Education will conduct a microcredential pilot to implement a program, gather feedback, and explore avenues to more personalized learning for educators. The goal of the pilot will be to directly impact teachers in STEM areas. The pilot will seek to capture teacher perceptions around microcredentials as a form of personalized learning, including details about the general quality, rigor, and relevance of the credentials and curated set of programs.

The pilot also aims to collect teacher input on the process required to earn the microcredential. This input will address questions about isolation and collaboration, helpfulness of associated resources, and cost benefit analysis regarding time required to earn the credential. The workgroup will use findings from the pilot to help inform capacity and sustainability of a statewide program. The pilot will be deployed for a period of up to six months, with an anticipated start date in Fall 2021, in conjunction with educational partners established from the



workgroup. The pilot group will provide feedback, gain support, share insights, and express concerns as they work to earn microcredentials.

Implementation: Statewide Rollout for Microcredentials in STEM areas

Building on the insights from the pilot program, the Virginia Department of Education will use available resources to begin building capacity to review and approve professional learning and STEM microcredentialing opportunities that meet the established and approved criteria and standards approved by the Board of Education. Building capacity to provide a curated list of personalized, competency-based professional learning opportunities is critical to developing and retaining high-quality educators in the Commonwealth.

Recommendations for revisions of the *Licensure Regulations for School Personnel* will need to be presented to ABTEL for recommendations and to the Board of Education for approval.