Virginia Board of Education Agenda Item

Agenda Item: E **Date:** April 28, 2016

Title	First Review of Recommendation of the Advisory Board on Teacher Education and Licensure (ABTEL) to Revise the *Regulations Governing the Review and Approval of Education Programs in Virginia* (8VAC20-543-10 et seq.) (Final Stage)		
Presenter	Mrs. Patty S. Pitts, Assistant Superintendent for Teacher Education and Licensure		
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Purpose of Presentation:
Action required by state or federal law or regulation.

Previous Review or Action:
Previous review and action. Specify date and action taken below:

Date: September 27, 2012
Action: First Review of a Notice of Intended Regulatory Action (NOIRA) to Revise the *Regulations Governing the Review and Approval of Education Programs in Virginia*

Date: October 25, 2012
Action: Final Review of a Notice of Intended Regulatory Action (NOIRA) to *Revise the Regulations Governing the Review and Approval of Education Programs in Virginia*

Date: May 23, 2013
Action: First Review of Recommendation of the Advisory Board on Teacher Education and Licensure (ABTEL) to Revise the *Regulations Governing the Review and Approval of Education Programs in Virginia* (Proposed Stage)

Date: June 27, 2013
Action: Final Review of Recommendation of the Advisory Board on Teacher Education and Licensure (ABTEL) to Revise the *Regulations Governing the Review and Approval of Education Programs in Virginia* (Proposed Stage)

Date: October 22, 2015
Action: Public Hearing on the Proposed *Regulations Governing the Review and Approval of Education Programs in Virginia*

Action Requested:
Action will be requested at a future meeting. Specify anticipated date below:
Date: May 26, 2016

Alignment with Board of Education Goals: Please indicate (X) all that apply:

	Goal 1: Accountability for Student Learning
	Goal 2: Rigorous Standards to Promote College and Career Readiness

	Goal 3: Expanded Opportunities to Learn
	Goal 4: Nurturing Young Learners
X	Goal 5: Highly Qualified and Effective Educators
	Goal 6: Sound Policies for Student Success
	Goal 7: Safe and Secure Schools
	Other Priority or Initiative. Specify:

Background Information and Statutory Authority:
Goal 5: The *Regulations Governing the Review and Approval of Education Programs in Virginia* set forth the requirements for the accreditation and approval of programs preparing teachers, administrators, and other instructional personnel requiring licensure. These regulations will establish policies and standards for the preparation of instructional personnel, further ensuring educational quality for Virginia public school students.

The Board of Education has the statutory authority to prescribe requirements for the approval of education preparation programs. Section 22.1-298.2 of the *Code of Virginia*, states, in part, the following:

> …Education preparation programs shall meet the requirements for accreditation and program approval as prescribed by the Board of Education in its regulations….

The *Code of Virginia* sections below provide authority for the Board of Education to promulgate the *Regulations Governing the Review and Approval of Education Programs in Virginia*:

Code of Virginia, Section 22.1-16. Bylaws and regulations generally.

Code of Virginia, Section 22.1-305.2. Advisory Board on Teacher Education and Licensure.

On October 25, 2012, the Board of Education approved the Notice of Intended Regulatory Action (NOIRA), which is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA) and Executive Order 14 (2010). The NOIRA was filed with the Virginia Registrar, and the public comment period for the NOIRA concluded on January 16, 2013.

The Advisory Board on Teacher Education and Licensure received the proposed revisions to the *Regulations Governing the Review and Approval of Education Programs* on April 22, 2013. The Advisory Board unanimously recommended that the Board of Education accept the proposed revisions to the regulations in the proposed stage of the Administrative Process Act process.

On June 27, 2013, the Board of Education approved proposed revisions to the *Regulations Governing the Review and Approval of Education Programs*. Due to the significant number of revisions, the Board recommended repealing the current regulations (8VAC20-542-10 et seq.) and promulgating new, revised regulations (8VAC20-543-10 et seq.).

Highlighted below are the major proposed revisions to the *Regulations Governing the Review and Approval of Education Programs* (Proposed Stage) recommended in 2013.

8VAC20-543-20 Accreditation and administering this chapter. (page 7)

- Required professional education accreditation by the Council for the Accreditation of Educator Preparation (CAEP) and discontinued the Board of Education accreditation process.
- Eliminated the professional studies coursework cap for undergraduate programs.
- Required education programs to ensure candidates have completed training or certification in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillators

8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education and 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education (pages 21 and 65)

- Revised professional studies requirements. Competencies in "Assessment of and for Learning" must be addressed in programs, and "Foundations of Education" was proposed to be changed to "The Teaching Profession." *[Note: In the final stage, ABTEL has recommended that that "Foundations of Education" be changed to "Foundations of Education and the Teaching Profession" and "Reading" be changed to "Language and Literacy" based on public comment.]*

8VAC20-543-30 Application for new education endorsement programs (page 10)

- Set forth documents to be submitted for new education endorsement programs.

8VAC20-543-40 Standards for biennial approval of education endorsement programs (page 11)

- Revised the biennial standard for candidate progress and performance on Board of Education licensure assessments.
- Stipulated 10 weeks of a summative clinical student teaching experience under the supervision of a cooperating teacher with demonstrated effectiveness in the classroom.
- Added an indicator for biennial reporting: "Employer job satisfaction documentation must address teachers' performance, including student academic progress."

8VAC20-543-70 Annual report card (page 18)

- Required an Annual Report Card

8VAC20-543-80 Competencies and requirements for endorsement areas (page 19)

- Added a requirement of six semester hours of reading coursework for elementary education and special education endorsements.
- Provided a testing option to reduce hours required for elementary endorsements and added elementary methods for mathematics and science.

8VAC20-543-280. Engineering. (page 102)

- Established a new endorsement.

8VAC20-543-510. Special education – general curriculum K-6 (add-on endorsement); 8VAC20-543-520. Special education – general curriculum middle grades 6-8 (add-on endorsement); 8VAC20-543-530. Special education – general curriculum secondary grades 6-12 (add-on endorsement). (pages 183, 188, and 192)

- Established new add-on endorsements.

8VAC20-543-580. Mathematics specialist for elementary education. (page 206)
8VAC20-543-590. Mathematics specialist for middle education. (page 208)

- Established separate endorsements specific to the population of students being served. *[In the final stage, ABTEL is recommending the establishment of the mathematics specialist for elementary education endorsement and maintaining the mathematics specialist for elementary and middle education endorsement.]*

Special education: speech language pathologist preK-12.

- Discontinued issuing an initial license with an endorsement in speech/language pathology. Individuals will seek a license from the Virginia Board of Examiners for Audiology and Speech Pathology.

Summary of Important Issues:
The proposed regulations were published in the *Virginia Register of Regulations* VOL. 31, ISS.26, on August 24, 2015. An online comment period was opened on the Virginia Register's Town Hall. Public comments were accepted through Saturday, October 32, 2015. A public hearing on the proposed regulations was held on Thursday, October 22, 2015. Advisory Board on Teacher Education and Licensure members received a written summary of all comments received. The public comments received are included in **Attachment C**.

On November 16, 2015, the Advisory Board on Teacher Education and Licensure reviewed public comments on the proposed *Regulations Governing the Review and Approval of Education Programs*. On February 29, 2016, the Advisory Board continued review of public comments and proposed revisions to the *Regulations Governing the Review and Approval of Education Programs*. On March 21, 2016, the Advisory Board on Teacher Education and Licensure reviewed and discussed proposed revisions. The Advisory Board recommended that the proposed revisions to the *Regulations Governing the Review and Approval of Education Programs* be submitted to the Board of Education; authorized the Department Education staff to make technical edits to the regulations; and recommended a transition period for the implementation of the regulations. The following transition period from the effective date of the regulations was recommended by the Advisory Board:

- Colleges and universities be granted two years to align their programs with the new regulations.
- Colleges and universities accredited by the Board of Education process be granted four years to become accredited by the Council for the Accreditation of Educator Preparation (CAEP) with the option of submitting a progress report to the Superintendent of Public Instruction to request an additional year, if needed.

Attachment A contains a chart highlighting proposed revisions to the *Regulations Governing the Review and Approval of Education Programs*. Additional details and technical revisions are set forth in **Attachment B** Proposed *Regulations Governing the Review and Approval of Education Programs* (8VAC20-543-10 et seq.).

Impact on Fiscal and Human Resources:
The administrative impact of revising and implementing new regulations will be absorbed within existing resources.

Timetable for Further Review/Action:
The timetable for further action will be governed by the requirements of the Administrative Process Act.

Superintendent's Recommendation:
The Superintendent of Public Instruction recommends that the Board of Education accept for first review the recommendation of the Advisory Board on Teacher Education and Licensure (ABTEL) to revise the *Regulations Governing the Review and Approval of Education Programs in Virginia* (Final Stage).

ATTACHMENT A

Proposed
Regulations Governing the Review and Approval of Education Programs in Virginia
(Final Stage)

Presented to the Virginia Board of Education
April 28, 2016

Virginia Department of Education
Division of Teacher Education and Licensure
P. O. Box 2120
Richmond, Virginia 23218-2120

Summary of Proposed Revisions (Final Stage)
Regulations Governing the Review and Approval of Education Programs in Virginia

SECTION	PROPOSED REVISION
DEFINITIONS	
8VAC20-543-10. Definitions. (Page 4) Amended definitions Reiterated that field experiences are required for all programs Revised definition of noncompleter	**8VAC20-543-10. Definitions.** "Accredited program" means a Virginia professional education program accredited by the Council for the Accreditation of Educator Preparation (CAEP)[~~, including CAEP/National Council for the Accreditation of Teacher Education (NCATE) and CAEP/Teacher Education Accreditation Council (TEAC)~~]. "Field experiences" means program components that are (i) conducted in off-campus settings or on-campus settings dedicated to the instruction of children who would or could otherwise be served by school divisions in Virginia or accredited nonpublic schools and (ii) accredited for this purpose by external entities such as regional accrediting agencies. Field experiences include classroom observations, tutoring, assisting teachers and school administrators, and supervised clinical experiences (i.e., practica, student teaching, and internships). [Field experiences are required for all programs.] "Program noncompleters" means individuals who have been officially admitted into an education program and who have taken, regardless of whether the individuals passed or failed, required licensure assessments and [have successfully completed all coursework, but who have not completed supervised student teaching or the required internship. ~~who exit the program prior to completion.~~] Program noncompleters shall have been officially released in writing from an education endorsement program by an authorized administrator of the program. Program noncompleters who did not take required assessments are not included in biennial reporting pass rates.
ACCREDITATION AND ADMINISTERING THIS CHAPTER	
8VAC20-543-20. Accreditation and Administering this Chapter. (Page 7) Eliminated National Council for the Accreditation of Teacher Education (NCATE) and Teacher Education Accreditation Council (TEAC) from the text. Note: Effective July 1, 2013, consolidation of the National Council for the Accreditation of Teacher Education (NCATE) and the Teacher Education Accreditation Council (TEAC) created the Council for the Accreditation of Educator Preparation (CAEP).	**8VAC20-543-20. Accreditation and Administering this Chapter.** B. Professional education programs in Virginia shall obtain and maintain national accreditation from the Council for the Accreditation of Educator Preparation (CAEP)[~~, including CAEP/National Council for the Accreditation of Teacher Education (NCATE) and CAEP/Teacher Education Accreditation Council (TEAC)~~].
8VAC20-543-20. Accreditation and Administering this Chapter. (Page 7) Revised text; professional studies are required	**8VAC20-543-20. Accreditation and Administering this Chapter.** E. Professional studies coursework and methodology, including field experiences, required in this chapter shall be designed for completion within a[n approved ~~baccalaureate degree]~~ program.

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for undergraduate and graduate programs Clarified that candidates must demonstrate an understanding competencies, including *Virginia Standards of Learning* and skills needed to help preK-12 student achieve college and career performance expectations	F. Professional education programs shall ensure that candidates demonstrate proficiency in the use of educational technology for instruction; complete study in child abuse recognition and intervention; and complete training or certification in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillators. [Candidates in education endorsement programs must demonstrate an understanding of competencies, including the core concepts and facts of the disciplines and the *Virginia Standards of Learning*, for the content areas they plan to teach. Professional education programs shall ensure that candidates demonstrate skills needed to help preK-12 students achieve college and career performance expectations.]
8VAC20-543-40. Standards for biennial approval of education endorsement programs. (Page 11) Revised definition of program noncompleters Clarified diverse school settings	**8VAC20-543-40. Standards for biennial approval of education endorsement programs.** 1. Candidate progress and performance on prescribed Board of Education licensure assessments. Candidate passing rates, reported by percentages, shall not fall below 80% biennially for program completers and program noncompleters. Program completers are individuals who have successfully completed all coursework, required licensure assessments, and supervised student teaching or required internship. Program noncompleters are those individuals who have been officially admitted into the education program and who have taken, regardless of whether the individual passed or failed, required licensure assessments, [have successfully completed all coursework, but who have not completed supervised student teaching or the required internship.] Program noncompleters shall have been officially released (in writing) from an education endorsement program by an authorized administrator of the program. 3. Structured and integrated field experiences to include early clinical experiences and a summative supervised student teaching experience. Indicators of the achievement of this standard shall include the following: a. Evidence that candidates receive quality clinically-based structured and integrated field experiences that prepare them to work in diverse educational environments; and b. Evidence that supervised clinical experiences are continuous and systematic and comprised of early field experiences with a minimum of 10 weeks of [successful] full-time student teaching under the supervision of a cooperating teacher with demonstrated effectiveness in the classroom, as indicated by a proficient or exemplary evaluation rating. The supervised student teaching experience shall include at least 150 clock hours spent in direct teaching at the level of endorsement.

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	4. Evidence of opportunities for candidates to participate in diverse school settings that provide experiences with populations that include racial, [gender, exceptionality, religion, geographic,] economic, linguistic, and ethnic diversity throughout the program experiences. The indicator of the achievement of this standard shall include evidence that the professional education program provides opportunities for candidates to have program experiences in diverse school settings that provide experiences with populations that include racial, [gender, exceptionality, religion, geographic,] economic, linguistic, and ethnic diversity within each biennial period.
APPLICATION OF THE STANDARDS	
8VAC20-543-50. Application of Standards for Biennial Approval of Education Endorsement Programs. (Page 15) Revised definition of program noncompleters Amended to add a process to allow an institution of higher education that has an education (endorsement) program falling below 80 percent to submit a corrective action plan Clarified diverse school settings	**8VAC20-543-50. Application of Standards for Biennial Approval of Education Endorsement Programs.** B. The education endorsement program's candidate passing rates, reported by percentages, shall not fall below 80% biennially for program completers and program noncompleters. Program completers are individuals who have successfully completed all coursework, required licensure assessments, and supervised student teaching or [the] required internship. Program noncompleters are those individuals who have been officially admitted into the education program and who have taken, regardless of whether the individual passed or failed, required licensure assessments, and [have successfully completed all coursework, but who have not completed supervised student teaching or the required internship.~~who exit the program prior to completion~~.] Program noncompleters shall have been officially released (in writing) from an education endorsement program by an authorized administrator of the program. C. The professional education program's authorized administrator is responsible to certify documented evidence that the following standards as set forth in 8VAC20-543-40 have been met by the education endorsement program: 1. The professional education program shall demonstrate candidate progress and performance on an assessment of basic skills as prescribed by the Board of Education for individuals seeking entry into an approved education endorsement program. 2. The professional education program shall provide structured and integrated field experiences. 3. The professional education program shall provide evidence of opportunities for candidates to participate in diverse school settings that provide experiences with populations that include racial, [gender, exceptionality, religion, geographic,] economic, linguistic, and ethnic diversity throughout the program experiences. D. After submitting to the Department of Education the information contained in 8VAC20-543-40, education endorsement programs in Virginia shall receive one of the following three ratings:

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	1. Approved. The education endorsement program has met all standards set forth in 8VAC20-543-40. 2. Approved with stipulations. The education endorsement program has met standards in subsections A and B of this section and is making documented progress toward meeting standards in subsection C of this section. [Institutions with education endorsements programs that fall below the 80% biennial requirement shall submit to the Board of Education for approval an improvement plan to address the area(s) of stipulation including measurable goals and timelines. Semi-annual reports must be submitted to the Director of Teacher Education to document the progress in addressing the goals toward elimination of the stipulation until the next biennial review period. The ~~B~~b]iennial passing rates that fall below the 80% requirement for program completers and noncompleters shall result in the education endorsement program receiving a rating of "approved with stipulations." The passing rate for program completers and noncompleters must meet the 80% passing rate requirement by the end of the next biennial period for the program to be approved; if the 80% pass rate is not achieved, the program will be denied. [However, if the education endorsement program has less than 10 program completers and noncompleters, the institution must submit an annual report attesting to continued progress in meeting the requirements.]
ANNUAL REPORT CARD	
8VAC20-543-70. Annual report card. (Page 18) Revised required criteria for the Annual Report Card	**8VAC20-543-70. Annual report card.** 5. Number of program completers [for each endorsement program, ~~including number of program completers in critical shortage teaching areas~~];
8VAC20-543-70. Annual report card. (Page 18) Amended to add criteria for the Annual Report Card	**8VAC20-543-70. Annual report card.** [11. Recognition of other program achievements; and]
8VAC20-543-70. Annual report card. (Page 18) Eliminated select criteria for the Annual Report Card	**8VAC20-543-70. Annual report card.** 4. [Comparison of candidates, admitted to education endorsement programs to overall college or university population;] ~~Number of candidates admitted in education endorsement programs who are in the top quartile of the college or university population.~~] ~~[8. Number of candidates admitted into the program for the reporting year who did not meet the prescribed admission assessment requirement;~~ ~~9. Number of program completers for the reporting year who were admitted without meeting the prescribed admission assessment requirement;~~ ~~10. Number of program noncompleters for the reporting year who were admitted to the program without meeting the prescribed~~

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	~~admission assessment requirement;~~]
COMPETENCIES AND REQUIREMENTS FOR ENDORSEMENT AREAS	
8VAC20-543-80. Competencies and requirements for endorsement areas. (Page 19) Amended to require a methods course in elementary history and social sciences for the elementary education endorsement	**8VAC20-543-80. Competencies and requirements for endorsement areas.** E. Candidates seeking an early/primary education preK-3 or an elementary education preK-6 endorsement must complete [a minimum of]12[~~-15~~] semester hours each in English, history and social sciences, mathematics, and science addressing competencies set forth in this chapter or complete the following: 2. History and social sciences: complete six semester hours in history and social sciences[, complete a methods teaching elementary history and social sciences course,] and pass a rigorous assessment in elementary history and social sciences prescribed by the Board of Education.
8VAC20-543-80. Competencies and requirements for endorsement areas. Eliminated a requirement of a specialization for a special education-general curriculum endorsement	**8VAC20-543-80. Competencies and requirements for endorsement areas.** [~~F. Candidates seeking an endorsement in special education-general curriculum K-12 must have one area of specialization in English, history and social sciences, mathematics, or science with 12-15 semester hours in the specialization area.~~]
PROFESSIONAL STUDIES COURSEWORK	
8VAC20-543-90. Professional studies requirements for early/primary education, elementary education, and middle education. (Page 21) **8VAC20-543-140. Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.** (Page 65) Amended the professional studies requirements Changed "The teaching profession" to "Foundations of education and the teaching profession" Changed "Language and reading" to "Language and literacy"	**8VAC20-543-90. Professional studies requirements for early/primary education, elementary education, and middle education.** **8VAC20-543-140. Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.** 1. Human development and learning (birth through adolescence). b. The interaction of children with individual differences - economic, social, racial, ethnic, religious, physical, and [cognitive~~mental~~] - should be incorporated to include skills contributing to an understanding of developmental issues related[,] but not limited to[,] low socioeconomic status[~~,~~;] attention deficit disorders[~~,~~;] developmental disorders[~~,~~;] gifted education, including the use of multiple criteria to identify gifted students[~~,~~;] substance abuse[~~,~~;] [~~child abuse~~, trauma, including child abuse, and neglect and other adverse childhood experiences;] and family disruptions. 2. Curriculum and instruction. (1) Skills in this area shall contribute to an understanding of the principles of learning; the application of skills in discipline-specific methodology; [varied and] effective [methods of] communication with and among students;… (3) Instructional practices that are sensitive to culturally and linguistically diverse learners, including [English learners~~limited English proficient students~~],…

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	(5) Study in (i) methods of improving communication between schools and families, (ii) communicating with families regarding social and instructional needs of children, (iii) ways of increasing family [engagement~~involvement~~] in student learning at home and in school, (iv) the [~~Virginia Standards of Learning~~*Virginia Standards of Learning]*, and (v) [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds]* ... 5. [Foundations of education and t~~T~~he] teaching profession. 6. [Language and Literacy~~Reading~~]. (2) Reading and writing: Skills in this area shall be designed to impart a thorough understanding of the [~~Virginia English Standards of Learning~~*Virginia English Standards of Learning*] as well as the reciprocal nature of reading and writing. Reading shall include phonemic [and other phonological] awareness, concept of print, phonics, fluency, vocabulary development, ~~[and]~~comprehension strategies[, and the ability to foster appreciation of a variety of fiction and nonfiction text and independent reading]. Writing shall include writing strategies and conventions as supporting the composing and [~~writing~~written] expression and usage and mechanics domains. Additional skills shall include proficiency in understanding the stages of spelling development, the writing process[. ~~as well as the ability to foster appreciation of a variety of fiction and nonfiction text and independent reading~~.]
ENDORSEMENTS	
8VAC20-543-100. Early childhood for three-year-olds and four-year-olds (add-on endorsement). (Page 29) Amended to add a practicum requirement to the endorsement area	**8VAC20-543-100. Early childhood for three-year-olds and four-year-olds (add-on endorsement).** [8. The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experience in a public or accredited nonpublic school with children from three years old to age five.]
8VAC20-543-110. Early/primary education preK-3. (Page 33) Amended competencies in endorsement area	**8VAC20-543-110. Early/primary education preK-3.** 1. Methods. [k. Adapt task and interactions to maximize language development, conceptual understanding, and skill competence within each child's zone of proximal development.] 2. Knowledge and skills. c. History and social sciences. (2) Understanding of the nature of history and the social sciences, and how the study of the disciplines assists students in developing [historical thinking, geographical analysis, economic decision making, and responsible citizenship by:] (a) Using artifacts and primary and secondary sources

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	to understand events in history; (b) [Using geographic skills to explain the interaction of people, places, and events to support an understanding of events in history~~The use of primary sources such as artifacts, letters, photographs, and newspapers~~]; (c) [Using charts, graphs, and pictures to determine characteristics of people, places, or events in history~~How events in history are shaped both by the ideas and actions of people~~]; (d) [Asking appropriate questions and summarizing points to answer a question~~Diverse cultures and shared humanity~~]; (e) [Comparing and contrasting people, places, and events in history~~Civic participation in a democracy~~]; (f) [Recognizing direct cause and effect relationships in history~~The relationship between history, literature, art, and music~~]. [(g) Explaining connections across time and place; (h) Using a decision-making model to identify costs and benefits of a specific choice made; (i) Practicing good citizenship skills and respect for rules and laws, and participating in classroom activities; and (j) Developing fluency in content vocabulary and comprehension of verbal, written and visual sources.]
8VAC20-543-120. Elementary education preK-6. (Page 44) Amended competencies in endorsement area	**8VAC20-543-120. Elementary education preK-6.** 1. Methods [k. Adapt task and interactions to maximize language development, conceptual understanding, and skill competence within each child's zone of proximal development.] 2. Knowledge and skills. b. Mathematics. (1) Understanding of the mathematics relevant to the content identified in *Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds* and the *Virginia Standards of Learning* and how the standards provide the foundation for teaching mathematics in grades preK-6. Experiences with practical applications and the use of appropriate technology and concrete materials should be used within the following content: (e) Probability and statistics: permutations and combinations; experimental and theoretical probability; [~~prediction;~~data collection and] graphical representations

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	including box-and-whisker plots; [data analysis and interpretation for predictions; ~~and]~~ measures of center, [spread of data, variability,] range, and normal distribution[~~.; and~~ ~~(f) Computer science: terminology, simple programming, and software applications.]~~ (2) Understanding of the sequential [~~and developmental]~~ nature of mathematics [and vertical progression of mathematical standards]. (6) Understanding of the [~~role of technology and the ability to~~appropriate] use [of] calculators and [~~computers~~technology] in the teaching and learning of mathematics[,including virtual manipulatives. [(7) Understanding of and the ability to use strategies to teach mathematics to diverse learners.] c. History and social sciences. (2) Understanding of the nature of history and the social sciences, and how the study of the disciplines assists students in developing historical thinking, geographical analysis, economic decision making, and responsible citizenship by: (a) [Using artifacts and primary and secondary sources to understand events in history~~The relationship between past and present~~; (b) Using geographic skills to explain the interaction of people, places, and events to support an understanding of events in history~~The use of primary sources such as artifacts, letters, photographs, and newspapers~~; (c) Using charts, graphs, and pictures to determine characteristics of people, places, or events in ~~historyHow events in history are shaped both by the ideas and actions of people~~; (d) Asking appropriate questions and summarizing points to answer a question.~~Diverse cultures and shared humanity~~; (e) Comparing and contrasting people, places, and events in history; (f) Recognizing direct cause and effect relationships in history; (g) Explaining connections across time and place; (h) Using a decision-making model to identify costs and benefits of a specific choice made; (i) Practicing good citizenship skills and respect for rules and laws, and participating in classroom activities; and (j) Developing fluency in content vocabulary and comprehension of verbal, written and visual sources.]
8VAC20-543-130. Middle education 6-8. (Page 55) Amended competencies in endorsement area	**8VAC20-543-130. Middle education 6-8.** The program in middle education 6-8 with at least one area of academic preparation shall ensure that the candidate has demonstrated the following competencies:

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	2. English. a. [Be proficient in the knowledge, skills, and processes necessary for teaching writing, including the domains of composing and written expression, and usage and mechanics and the writing process of planning, drafting, revising, editing, and publishing;] 5. Science. b. Understanding of the nature of science and scientific inquiry, including: [(~~3) Science skills of data analysis, measurement, observation, prediction, and experimentation.]~~ [(3) Practices required to provide empirical answers to research questions, including data collection and analysis, modeling, argumentation with evidence, and constructing explanations; (4) Reliability of scientific knowledge and its constant scrutiny and refinement; (5) Self-checking mechanisms used by science to increase objectivity including peer review; and (6) Assumption, influencing conditions, and limits of empirical knowledge.] c. Understanding of the knowledge, skills, and [practices~~processes]~~ for an active middle school science program, including the ability to: ~~[(2) Conduct research projects and experiments~~; (3) Conduct research projects and experiments including applications of the design process and technology; (4) Conduct systematic field investigations using the school grounds, the community, and regional resources;] [(8) Conduct formative and summative assessments of student learning; (9~~7]~~) Incorporate instructional technology to enhance student performance [~~in science~~; and (10) Ensure student competence in middle school science. e. Understanding of the core scientific disciplines to ensure: [(~~3) Student achievement in science~~.] (3) The application of key principles in science to solve practical problems; and (4) A "systems" understanding of the natural world.]
8VAC20-543-150. Adult education. (Page 72) Amended competencies in endorsement area	**8VAC20-543-150. Adult education.** The program in adult education shall ensure that the candidate has demonstrated the following competencies: 3. Understanding of the knowledge, skills, and processes needed for the selection, evaluation, and instructional applications of the methods and materials for [~~adult basic skills~~adults to become college and career ready] including:

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	a. Curriculum development in adult basic education or [high school equivalency (HSE)~~general educational development (GED)]~~ instruction; b. [Literacy skills for adults~~Beginning reading for adults]~~; c. [Numeracy skills for adults~~Beginning mathematics for adults]~~; [and] d. [Workforce skills for adults. ~~Reading comprehension for adult education~~]; ~~[e. Foundations of adult education; and~~ ~~f. Other adult basic skills instruction~~.]
8VAC20-543-160. Adult English as a second language (add-on endorsement). (Page 73) Amended competencies in endorsement area	**8VAC20-543-160. Adult English as a second language (add-on endorsement).** The program in adult English as a second language shall ensure that the candidate holds an active license with a teaching endorsement or endorsements issued by the Virginia Board of Education and has demonstrated the following competencies: 2.[~~Knowledge of teaching methods and materials in adult English as a second language~~Knowledge in methods and materials in the teaching of English to adult speakers of other languages; 3. ~~Knowledge in adult language acquisition~~Skills in the teaching of reading and writing to include (i) the five areas of reading instruction: phonemic awareness, phonics, fluency, vocabulary, and text comprehension: (ii) similarities and differences between reading in a first language and reading in a second language; and (iii) a balanced literacy approach; 4. ~~Knowledge of assessment methods in adult English as a second language instruction~~Knowledge in adult second language acquisition; 5. Knowledge of assessment methods in instruction of English to adult speakers of other languages;]
8VAC20-543-250. **Computer science.** (Page 94) Amended competencies in endorsement area	**8VAC20-543-250**. **Computer science.** ~~[5. Knowledge of programming languages including definition, design, comparison, and evaluation;~~]
8VAC20-543-270. **Driver education (add-on endorsement).** (Page 97) Amended competencies in endorsement area	**8VAC20-543-270**. **Driver education (add-on endorsement).** 2. Understanding of knowledge, skills, and processes of classroom driver education instruction including: a. Traffic laws, signs, signals, pavement markings, and right-of-way rules; b. Licensing procedures and other legal responsibilities associated with the driving privilege and vehicle ownership; c. [~~The~~Ability to explain the] effect of speed and steering on vehicle balance and control; d. [Knowledge of performance characteristics of~~Communicating and interacting with]~~ other highway users, [and ability to apply problem-solving skills to minimize risks with] (pedestrians, animals, motorcycles, bicycles, trucks, buses, trains, trailers, motor homes, ATVs, and other recreational users) [~~in a positive manner~~;

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	e. Facilitating students' ability to manage~~Managing of~~ time, space, and visibility, ~~and~~] using perceptual skills [and a ~~in the~~ risk management process; f. Ability to identify and analyze the physiological, psychological, cognitive, and economic consequences associated with a~~A~~lcohol] and other drug use; [g. Understanding of proper use of vehicle occupant~~Passive~~] protective devices and [analyzing how they can reduce injury severity and increase collision survival~~active restraint systems~~;] h. [Recognizing how regular preventive maintenance reduces ~~Vehicle controls, vehicle maintenance, vehicle functions, and~~] vehicle malfunctions[, and the warning signs that indicate the need for maintenance, repair, or replacement;] i. [Recognizing the c~~C~~]onsequences of aggressive driving, [~~road rage,~~] fatigue, distracted driving, and other physical, social, and psychological influences that affect [~~the~~] driver [behavior and performance; j. Understand the effects of momentum, gravity, and inertia on vehicle control and balance, and the relationship between kinetic energy and force of impact~~Natural laws and environmental factors that influence the decision-making process~~]; k. Ability to evaluate emergency-response strategies to avoid or reduce the severity of a collision in high-risk driving situations, and how technological advancements in intelligent handling and stability control systems affect driving practices~~Adverse driving conditions and handling emergencies~~; l. Knowledge about map-reading and trip p~~P~~lanning technologies and evaluating personal transportation needs and their impact on the environment~~a safe trip~~;]
8VAC20-543-300. English as a second language preK-12. (Page 105) Amended competencies in endorsement area	**8VAC20-543-300**. **English as a second language preK-12.** The program in English as a second language shall ensure that the candidate has demonstrated the following competencies: 2. Skills in [designing and administering formative or classroom-based assessments and interpreting results of both formative and summative assessments, including the WIDA Access test. Using the results of a variety of formative assessments, including performance-based assessments of oral language and writing, to direct instruction. Ensuring that formative assessments reflect high validity and reliability for the purposes for which they are used and are appropriate for the targeted students. Teaching test-taking skills in preparation for standardized tests. [~~student assessment for English as a second language to include the Assessing Comprehension and Communication in English State-to-State for English Language Learners (Access for ELLs®) test~~]; 3. Skills in the teaching of reading [~~and writing~~]to include [~~(i) the five areas of reading instruction~~]: phonemic awareness[~~,~~;pre-reading, during-reading, and post-reading strategies; vocabulary development; and guided reading. Ability to structure interactive tasks that engage students in using oral language to develop reading skills. Ability to determine students' reading levels and design instruction for multi-level classrooms by incorporating appropriate scaffolding or language

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	supports~~phonics, fluency, vocabulary and text comprehension; (ii) similarities and differences between reading in a first language and reading in a second language; and (iii) a balanced literacy approach~~; 4. Skills in teaching grammar and syntax in the context of writing. Ability to model and teach editing skills and organization of writing using predominant text structures in the content areas. [54]. Knowledge of the effects of sociocultural variables in the instructional setting; [65]. Proficiency in spoken and written English; [76. Skills in providing language and cognitive support or scaffolding bases on the various stages of the second language acquisition process~~Understanding of second language acquisition~~]; ~~9. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes; and~~]
8VAC20-543-320. **Gifted education (add-on endorsement).** (Page 111) Amended competencies in endorsement area	**8VAC20-543-320**. **Gifted education (add-on endorsement).** The program in gifted education shall ensure that the candidate holds an active license with a teaching endorsement or endorsements issued by the Virginia Board of Education and has demonstrated the following competencies: [6. Understanding the fundamental principles of differentiated curricula for effective program planning and evaluation, including: a. Program design and development for gifted learners; b. Research and topics for effective administrative arrangements, supervision, and program implementation; c. Activities to encourage parental and community involvement in gifted education; and d. Strategies for building an effective advisory committee.]
8VAC20-543-330. **Health and physical education preK-12.** (Page 115) Amended competencies in endorsement area	**8VAC20-543-330**. **Health and physical education preK-12.** The program in health and physical education preK-12 shall ensure that the candidate has demonstrated the following competencies: 1. Understanding of the knowledge, skills, and processes of health and physical education as defined in the [*Virginia Standards of Learning* including; a. Competence in motor skills and movement patterns needed to perform a variety of physical activities; b. Knowledge of structures and functions of the body and how they relate to and are affected by human movement to learning and developing motor skills and specialized movement forms; c. Demonstrate the aptitude, attitude, and skills to lead responsible, fulfilling, and respectful lives; and d. Understand the importance of energy balance and nutritional needs of the body to maintain optimal health and prevent chronic disease.]

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	2. Understanding basic human anatomy, physiology, [and]kinesiology[, and exercise physiology] needed to apply discipline-specific biomechanical concepts critical to the development of physically educated individuals. [5. Understanding of the knowledge, skills, and processes of health education as defined in the *Virginia Standards of Learning*, including; a. Demonstrate the knowledge and skills to make healthy decisions that reduce health risks and enhance the health of self and others; b. Demonstrate the ability to access, evaluate, and use health information, products, and services that influence health and wellness in a positive manner; and c. Demonstrate the use of appropriate health practices and behaviors to promote a safe and healthy community when alone, with family, at school, and in other group settings.]
8VAC20-543-380. **Mathematics.** (Page 130) Amended competencies, including requiring programming, for the endorsement area.	**8VAC20-543-380**. **Mathematics.** The program in mathematics shall ensure that the candidate has demonstrated the following competencies: [12. Knowledge of programming in at least two widely used programming languages, including definition, structure, and comparison; 13. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing; and ~~Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.~~; and 14.Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes. ~~Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing~~.]
8VAC20-543-510. **Special education – general curriculum elementary education K-6 (add-on endorsement).** (Page 183) **8VAC20-543-520**. **Special education – general curriculum middle education grades 6-8 (add-on endorsement).** (Page 188) **8VAC20-543-530**. **Special education – general curriculum.** (Page 192) Amended to add a practicum requirement to the endorsement areas	**8VAC20-543-510. Special education – general curriculum elementary education K-6 (add-on endorsement).** **8VAC20-543-520. Special education – general curriculum middle education grades 6-8 (add-on endorsement).** **8VAC20-543-530. Special education – general curriculum secondary education grades 6-12 (add-on endorsement).** [5. The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experiences with students with disabilities accessing the general curriculum in a public or accredited nonpublic school.]

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8VAC20-543-550. Theatre arts preK-12. (Page 197) Amended competencies in endorsement area	**8VAC20-543-550. Theatre arts preK-12.** 2. Understanding of the knowledge, skills, and processes for teaching theatre arts to the developmental levels and academic needs of students in preK-12, including the following: i. Knowledge and understanding of classroom management and safety, including performance and studio [and use of toxic art materials in various aspects of theatre arts production, performance, and the classroom];
8VAC20-543-580. **Mathematics specialist for elementary education**. (Page 206) **8VAC20-543-590. Mathematics specialist for [elementary and middle education]** (Page 208) Amended the mathematics specialist proposed endorsements. [Currently, Virginia offers one mathematics specialist endorsement -- mathematics specialist for elementary and middle education. In the proposed regulatory process, the one endorsement was recommended to be changed to two endorsements, mathematics specialist for elementary education and mathematics specialist for middle education. In the final stage, the following endorsements are recommended: mathematics specialist for elementary education and mathematics specialist for elementary and middle education.]	**8VAC20-543-580. Mathematics specialist for elementary education.** **8VAC20-543-590. Mathematics specialist for [elementary and middle education]** A. A mathematics specialist is a teacher in the [elementary and/or] middle grades who has interest and special preparation in mathematics content, scientifically-based research in the teaching and learning of mathematics, diagnostic and assessment methods, and leadership skills.
8VAC20-543-600. **Reading specialist.** (Page 210) Amended to clarify a practicum is required for the Reading Specialist endorsement	**8VAC20-543-600**. **Reading specialist.** 6. Leadership, coaching, and specialization. The candidate shall: [n. The candidate shall complete a supervised practicum or field experience in the diagnosis and remediation of reading difficulties in a public or accredited nonpublic school.]
8VAC20-543-610. School counselor preK-12. (Page 214) Clarified the experience requirement for the school counselor preK-12 endorsement.	**8VAC20-543-610. School counselor preK-12.** The school counselor preK-12 program shall ensure that the candidate has completed [two years of successful, full-time teaching experience or two years of successful full-time experience in school counseling in a public or an accredited nonpublic school (two years of successful, full-time experience in school counseling in a public or an accredited nonpublic school under a nonrenewable Provisional License may be accepted to meet this requirement),]
8VAC20-543-630. **School social worker.** (Page 219) Revised the requriements for the school social worker endorsement to recognize an earned	**8VAC20-543-630**. **School social worker.** The school social worker program shall ensure that the candidate has demonstrated the following competencies: 9. The candidate shall have earned a master's of social work degree

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advanced standing master's of social work degree from a regionally accredited college or university with a minimum of 30 graduate-level semester hours.	from a regionally accredited college or university school of social work with a minimum of 60 graduate semester hours [or earned an advanced standing master's of social work degree from a regionally accredited college or university with a minimum of 30 graduate-level semester hours.]

ATTACHMENT B

Proposed *Regulations Governing the Review and Approval of Education Programs in Virginia*

Presented to the Virginia Board of Education
April 28, 2016

Virginia Department of Education
Division of Teacher Education and Licensure
P. O. Box 2120
Richmond, Virginia 23218-2120

PROPOSED *REGULATIONS GOVERNING THE REVIEW AND APPROVAL OF EDUCATION PROGRAMS IN VIRGINIA*

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Project 3477 - Proposed

STATE BOARD OF EDUCATION

CHAPTER 543

REGULATIONS GOVERNING THE REVIEW AND APPROVAL OF

EDUCATION PROGRAMS IN VIRGINIA

Part I

Definitions

8VAC20-543-10. Definitions.

The following words and terms when used in this chapter shall have the meanings indicated unless the context implies otherwise:

"Accreditation" means a process for assessing and improving academic and educational quality through voluntary peer review. This process informs the public that an institution has a professional education program that has met national standards of educational quality.

"Accredited institution" means an institution of higher education accredited by a regional accrediting agency recognized by the United States Department of Education.

"Accredited program" means a Virginia professional education program accredited by the Council for the Accreditation of Educator Preparation (CAEP)[~~, including CAEP/National Council for the Accreditation of Teacher Education (NCATE) and CAEP/Teacher Education Accreditation Council (TEAC)~~].

"Annual report card" means the Virginia Department of Education yearly data report card required of all professional education programs in Virginia that offer approved programs for the preparation of school personnel.

"Biennial accountability measures" means those specific benchmarks set forth in 8VAC20-543-40 to meet the standards required to obtain or maintain education endorsement program approval status.

"Biennial accountability measurement report" means the compliance report submitted to the Virginia Department of Education every two years by an accredited professional education program.

"Candidates" means individuals enrolled in education programs.

"Department" means the Virginia Department of Education.

"Diversity" means the wide range of differences among groups of people and individuals based on ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, and geographical area.

"Education endorsement program" means a state-approved course of study, the completion of which signifies that an enrollee has met all the state's educational and training requirements for initial licensure in a specified endorsement area.

"Field experiences" means program components that are (i) conducted in off-campus settings or on-campus settings dedicated to the instruction of children who would or could otherwise be served by school divisions in Virginia or accredited nonpublic schools and (ii) accredited for this purpose by external entities such as regional accrediting agencies. Field experiences include classroom observations, tutoring, assisting teachers and school administrators, and supervised clinical experiences (i.e., practica, student teaching, and internships). [Field experiences are required for all programs.]

"Indicators" means operational definitions that suggest the kinds of evidence that professional education programs shall provide to demonstrate that a standard is met.

"Instructional technology" means the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning and the use of computers and other technologies.

"Licensing" means the official recognition by a state governmental agency that an individual has met state requirements and is, therefore, approved to practice as a licensed professional.

"Professional education program" means the Virginia institution, college, school, department or other administrative body within a Virginia institution of higher education, or another Virginia entity, for a defined education program that is primarily responsible for the preparation of teachers and other professional school personnel.

"Professional studies" means courses and other learning experiences designed to prepare candidates to demonstrate competence in the areas of human development and learning, curriculum and instruction, assessment of and for learning, classroom and behavior management, the [foundations of education and the] teaching profession, reading, and supervised clinical experiences.

"Program approval" means the process by which a state governmental agency reviews an education program to determine if it meets the state's standards for the preparation of school personnel.

"Program completers" means individuals who have successfully completed all coursework, required licensure assessments, including those prescribed by the Board of Education, and supervised student teaching or [the] required internship.

"Program noncompleters" means individuals who have been officially admitted into an education program and who have taken, regardless of whether the individuals passed or failed, required licensure assessments and [have successfully completed all coursework, but who have not completed supervised student teaching or the required internship. ~~who exit the program~~

~~prior to completion.~~] Program noncompleters shall have been officially released in writing from an education endorsement program by an authorized administrator of the program. Program noncompleters who did not take required assessments are not included in biennial reporting pass rates.

"Regional accrediting agency" means one of the six accrediting associations recognized by the United States Department of Education as follows: New England Association of Schools and Colleges, Middle States Association of Colleges and Schools, North Central Association of Colleges and Schools, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and Western Association of Schools and Colleges.

"[*Virginia* ~~Standards of Learning~~ *Standards of Learning*] for Virginia public schools" means the Commonwealth's expectations for student learning and achievement in grades K-12 in English, mathematics, science, history/social science, technology, fine arts, foreign language, health and physical education, and driver education.

Part II

Accreditation and Administering this Chapter

8VAC20-543-20. Accreditation and administering this chapter.

A. Institutions of higher education seeking approval of an education endorsement program shall be accredited by a regional accrediting agency.

B. Professional education programs in Virginia shall obtain and maintain national accreditation from the Council for the Accreditation of Educator Preparation (CAEP)[~~, including CAEP/National Council for the Accreditation of Teacher Education (NCATE) and CAEP/Teacher Education Accreditation Council (TEAC)~~]. Professional education programs in Virginia seeking accreditation through CAEP shall adhere to procedures and timelines established by CAEP and

the CAEP/Virginia Partnership Agreement. Professional education programs shall ensure and document that programs are aligned with standards set forth in 8VAC20-543-40 through 8VAC20-543-50 and meet competencies outlined in 8VAC20-543-60 through 8VAC20-543-640.

C. If a professional education program fails to maintain accreditation, enrolled candidates shall be permitted to complete their programs of study. Professional education programs that fail to maintain accreditation shall not admit new candidates. Candidates shall be notified of the education endorsement program's approval status.

D. Teacher candidates shall complete academic degrees in the arts and sciences, or equivalent, except in health, physical, and career and technical education. Candidates in early/primary education [(]preK-3[)], elementary education (preK-6), middle education (6-8), and special education programs may complete a major in interdisciplinary studies or its equivalent. Candidates seeking a secondary endorsement area must have earned a major, or the equivalent, in the area sought.

E. Professional studies coursework and methodology, including field experiences, required in this chapter shall be designed for completion within a[n approved ~~baccalaureate degree~~] program.

F. Professional education programs shall ensure that candidates demonstrate proficiency in the use of educational technology for instruction; complete study in child abuse recognition and intervention; and complete training or certification in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillators. [Candidates in education endorsement programs must demonstrate an understanding of competencies, including the core concepts and facts of the disciplines and the *Virginia Standards of Learning*, for the content areas they plan to teach. Professional education programs shall ensure that candidates demonstrate skills needed to help preK-12 students achieve college and career performance expectations.]

G. Standards and procedures for the review and approval of each education endorsement program shall adhere to procedures for administering the chapter as defined in this section and in 8VAC20-543-40, 8VAC20-543-50, and 8VAC20-543-60. These procedures shall result in biennial recommendations to the Board of Education for one of the following three ratings: "approved," "approved with stipulations," or "approval denied."

H. Education endorsement programs shall be approved under this chapter biennially based on compliance with the criteria described in 8VAC20-543-40, 8VAC20-543-50, and 8VAC20-543-60.

I. The Department of Education will determine the timeline and procedures for applying for education endorsement program approval.

J. Education endorsement programs in Virginia shall address the competencies set forth in this chapter, and the curriculum for each program must be documented and submitted to the Department of Education for approval.

K. Professional education programs shall submit to the Department of Education on behalf of each education endorsement program under consideration a biennial accountability measurement report and an annual report card to include data prescribed by the Board of Education on education endorsement programs in accordance with department procedures and timelines.

L. The professional education program authorized administrator shall maintain copies of approved education endorsement programs and required reports.

M. The Department of Education may conduct onsite visits to review education endorsement programs and verify data.

N. The Advisory Board on Teacher Education and Licensure (ABTEL) is authorized to review and make recommendations to the Board of Education on approval of Virginia education

endorsement programs for school personnel. The Board of Education has final authority on education endorsement program approval.

[O. In administering these regulations, licensure requirements for Virginia are outlined in the *Licensure Regulations for School Personnel* (8VAC20-23). This document should be referenced for detailed information regarding requirements for Virginia licensure.]

[~~O~~P]. Modifications may be made by the Superintendent of Public Instruction in the administration of this chapter. Proposed modifications shall be made in writing to the Superintendent of Public Instruction, Commonwealth of Virginia.

Part III

Application for New Education Endorsement Programs

8VAC20-543-30. Application for new education endorsement programs.

A. Requests for new education endorsement programs shall be approved by the Virginia Board of Education.

B. The professional education program shall submit a request for the new program in a format provided by the Department of Education that shall address the following requirements:

1. Rationale for the new education endorsement program, to include local division or service area demand data and statements of support from the institution's dean, provost, president, or designee and Virginia school divisions. A summary of the stakeholders' involvement in the development of the education endorsement program must be included.

2. Capacity of the institution to offer the education endorsement program.

3. List of the requirements for the education endorsement program, to include the degree, major, and the curriculum.

4. Matrices demonstrating that the competencies set forth in this chapter have been incorporated in the education endorsement program.

5. Description of structured and integrated field experiences to include early clinical experiences and a summative supervised student teaching experience.

6. Description of the partnerships and collaborations based on preK-12 school needs.

Part IV

Standards for Biennial Approval of Education Endorsement Programs

8VAC20-543-40. Standards for biennial approval of education endorsement programs.

Education endorsement programs in Virginia shall be approved by the Board of Education and demonstrate achievement biennially of the accountability measures in this section. The institution of higher education must report evidence of the standards for Board of Education review biennially.

1. Candidate progress and performance on prescribed Board of Education licensure assessments. Candidate passing rates, reported by percentages, shall not fall below 80% biennially for program completers and program noncompleters. Program completers are individuals who have successfully completed all coursework, required licensure assessments, and supervised student teaching or required internship. Program noncompleters are those individuals who have been officially admitted into the education program and who have taken, regardless of whether the individual passed or failed, required licensure assessments, [have successfully completed all coursework, but who have not completed supervised student teaching or the required internship.] Program noncompleters shall have been officially released (in writing) from an education endorsement program by an authorized administrator of the program.

2. Candidate progress and performance on an assessment of basic skills as prescribed by the Board of Education for individuals seeking entry into an approved education endorsement program.

Indicators of the achievement of this standard shall include the following:

a. Results on Board of Education prescribed entry-level assessments;

b. Documentation that candidates enrolled in the program who fail to achieve a minimum score established by the Board of Education have the opportunity to address deficiencies; and

c. Documentation of the number of candidates admitted into the program who did not meet the prescribed admission assessment and the opportunities provided to the candidates to address deficiencies.

3. Structured and integrated field experiences to include early clinical experiences and a summative supervised student teaching experience.

Indicators of the achievement of this standard shall include the following:

a. Evidence that candidates receive quality clinically-based structured and integrated field experiences that prepare them to work in diverse educational environments; and

b. Evidence that supervised clinical experiences are continuous and systematic and comprised of early field experiences with a minimum of 10 weeks of [successful] full-time student teaching under the supervision of a cooperating teacher with demonstrated effectiveness in the classroom, as indicated by a proficient or exemplary evaluation rating. The supervised student teaching experience shall include at least 150 clock hours spent in direct teaching at the level of endorsement.

4. Evidence of opportunities for candidates to participate in diverse school settings that provide experiences with populations that include racial, [gender, exceptionality, religion, geographic,] economic, linguistic, and ethnic diversity throughout the program experiences.

The indicator of the achievement of this standard shall include evidence that the professional education program provides opportunities for candidates to have program experiences in diverse school settings that provide experiences with populations that include racial, [gender, exceptionality, religion, geographic,] economic, linguistic, and ethnic diversity within each biennial period.

5. Evidence of contributions to preK-12 student achievement by candidates completing the program.

Indicators of the achievement of this standard shall include the following:

a. Evidence to show that candidates know about, create, and use appropriate and effective data-driven assessments in teaching that shall provide dependable information about student achievement;

b. Evidence to document that faculty have made provisions for evaluating the effects that candidates have on preK-12 student learning in the context of teaching as they design unit assessment systems and assessments for each program; and

c. Evidence that the education program assesses candidates' mastery of exit criteria and performance proficiencies, including the ability to affect student learning, through the use of multiple sources of data such as a culminating experience, portfolios, interviews, videotaped and observed performance in schools, standardized tests, and course grades.

6. Evidence of employer job satisfaction with [graduates~~candidates~~] completing the program.

Indicators of the achievement of this standard shall include:

a. Documentation that the professional education program has two years of evidence regarding [graduate~~candidate~~] performance based on employer surveys.

b. Documented evidence of teacher effectiveness, including student academic progress.

7. Partnerships and collaborations based on preK-12 school needs.

Indicators of the achievement of this standard shall include the following:

a. Documented evidence that the education endorsement program has established partnerships reflecting collaboratively designed program descriptions based on identified needs of the preK-12 community.

b. Documented evidence that the administration and supervision program collaborates with partnering schools to identify and select candidates for school leadership programs who meet local needs, demonstrate both potential for and interest in school leadership, and meet the qualifications for admission to advanced programs.

Part V

Application of Standards for Biennial Approval of Education Endorsement Programs

8VAC20-543-50. Application of the standards.

A. As a prerequisite to education endorsement program approval, professional education programs in Virginia shall have national accreditation. Failure to do so will result in the education endorsement program being designated as "approval denied."

B. The education endorsement program's candidate passing rates, reported by percentages, shall not fall below 80% biennially for program completers and program noncompleters. Program completers are individuals who have successfully completed all coursework, required licensure assessments, and supervised student teaching or [the] required internship. Program noncompleters are those individuals who have been officially admitted into the education program and who have taken, regardless of whether the individual passed or failed, required licensure assessments, and [have successfully completed all coursework, but who have not completed supervised student teaching or the required internship.~~who exit the program prior to completion.~~] Program noncompleters shall have been officially released (in writing) from an education endorsement program by an authorized administrator of the program.

C. The professional education program's authorized administrator is responsible to certify documented evidence that the following standards as set forth in 8VAC20-543-40 have been met by the education endorsement program:

1. The professional education program shall demonstrate candidate progress and performance on an assessment of basic skills as prescribed by the Board of Education for individuals seeking entry into an approved education endorsement program.

2. The professional education program shall provide structured and integrated field experiences.

3. The professional education program shall provide evidence of opportunities for candidates to participate in diverse school settings that provide experiences with populations that include racial, [gender, exceptionality, religion, geographic,] economic, linguistic, and ethnic diversity throughout the program experiences.

4. The professional education program shall provide evidence of contributions to preK-12 student achievement by [graduates~~candidates~~] completing the program.

5. The professional education program shall provide evidence of employer job satisfaction with [graduates~~candidates~~] completing the program.

6. The professional education program shall develop and provide evidence of biennial accountability measures for partnerships and collaborations based on preK-12 school needs.

D. After submitting to the Department of Education the information contained in 8VAC20-543-40, education endorsement programs in Virginia shall receive one of the following three ratings:

1. Approved. The education endorsement program has met all standards set forth in 8VAC20-543-40.

2. Approved with stipulations. The education endorsement program has met standards in subsections A and B of this section and is making documented progress toward meeting standards in subsection C of this section. [Institutions with education endorsements programs that fall below the 80% biennial requirement shall submit to the Board of Education for approval an improvement plan to address the area(s) of stipulation including measurable goals and timelines. Semi-annual reports must be submitted to the Director of Teacher Education to document the progress in addressing the goals toward elimination of the stipulation until the next biennial review period. The

~~B~~b]iennial passing rates that fall below the 80% requirement for program completers and noncompleters shall result in the education endorsement program receiving a rating of "approved with stipulations." The passing rate for program completers and noncompleters must meet the 80% passing rate requirement by the end of the next biennial period for the program to be approved; if the 80% pass rate is not achieved, the program will be denied. [However, if the education endorsement program has less than 10 program completers and noncompleters, the institution must submit an annual report attesting to continued progress in meeting the requirements.]

3. Approval denied. Approval may be denied if:

a. The education endorsement program has not met standards in subsection A of this section;

b. The education endorsement program has met standards in subsection A of this section but has not met requirements in subsection B of this section for two consecutive biennial reporting periods. The program shall be denied and the public notified. The program may resubmit a request for approval at the end of the next biennial period.

Part VI

Professional Education Program Accountability

8VAC20-543-60. Biennial accountability measurement report.

The accredited professional education program shall report, every two years, in accordance with Virginia Department of Education procedures, those specific criteria set forth in 8VAC20-543-40 to meet the standards required to obtain or maintain education endorsement program approval status.

8VAC20-543-70. Annual report card.

The accredited professional education program shall submit to the Virginia Department of Education a yearly data report card on the preparation of professional school personnel. The report card shall be published on the department's website. The information required on the report card shall be approved by the Board of Education and will include the following:

1. Institution's accreditation status;

2. Education endorsement program status;

3. Number of candidates admitted in education endorsement programs;

4. [Comparison of candidates, admitted to education endorsement programs to overall college or university population; ~~Number of candidates admitted in education endorsement programs who are in the top quartile of the college or university population.~~]

5. Number of program completers [for each endorsement program~~, including number of program completers in critical shortage teaching areas~~];

6. Number of program noncompleters;

7. Biennial accountability data results;

~~[8. Number of candidates admitted into the program for the reporting year who did not meet the prescribed admission assessment requirement;~~

~~9. Number of program completers for the reporting year who were admitted without meeting the prescribed admission assessment requirement;~~

~~10. Number of program noncompleters for the reporting year who were admitted to the program without meeting the prescribed admission assessment requirement;]~~

[8~~11~~]. Satisfaction ratings by school administrators and clinical experience supervisors o[f~~n~~] student teachers;

[9~~12~~]. Satisfaction ratings by employers of program [graduates~~completers~~];

[10~~13~~]. Satisfaction ratings of program [graduates~~completers~~] within two years of employment; [~~and~~]

[11. Recognition of other program achievements; and]

[12~~14~~]. Other data as required by the Board of Education.

Part VII

Competencies for Endorsement Areas

Article 1

General Competencies

8VAC20-543-80. Competencies and requirements for endorsement areas.

A. The professional education program develops, maintains, and continuously evaluates high quality education endorsement programs that are collaboratively designed and based on identified needs of the preK-12 community. Candidates in education endorsement programs shall demonstrate competence in the areas in which they plan to practice and complete professional studies requirements and applicable assessments, in addition to meeting requirements for specific licenses, pursuant to the Licensure Regulations for School Personnel (8VAC20-22). The Licensure Regulations for School Personnel set forth the required degrees from regionally accredited colleges or universities for licenses, endorsements, and prerequisite licenses or endorsements for add-on endorsements.

B. All education endorsement programs in early/primary education preK-3, elementary education preK-6, middle education 6-8, and history and social sciences must include local government and civics instruction specific to Virginia.

C. Candidates in education endorsement programs demonstrate an understanding of competencies, including the core concepts and facts of the disciplines and the [~~Virginia Standards of Learning~~*Virginia Standards of Learning]*, for the content areas in which they plan to teach where required.

D. Candidates in early/primary education preK-3, elementary education preK-6, and special education complete a minimum of six semester hours of reading coursework as outlined in the reading competencies.

E. Candidates seeking an early/primary education preK-3 or an elementary education preK-6 endorsement must complete [a minimum of]12[-~~15]~~ semester hours each in English, history and social sciences, mathematics, and science addressing competencies set forth in this chapter or complete the following:

1. English: complete six semester hours in English and pass a rigorous assessment in elementary English prescribed by the Board of Education.

2. History and social sciences: complete six semester hours in history and social sciences[, complete a methods of teaching elementary history and social sciences course,] and pass a rigorous assessment in elementary history and social sciences prescribed by the Board of Education.

3. Mathematics: complete six semester hours in mathematics, complete a methods of teaching elementary mathematics course, and pass a rigorous assessment in elementary mathematics prescribed by the Board of Education.

4. Science: complete six semester hours in laboratory sciences in two science disciplines, complete a methods of teaching elementary science course, and pass a rigorous assessment in elementary science prescribed by the Board of Education.

[~~F. Candidates seeking an endorsement in special education-general curriculum K-12 must have one area of specialization in English, history and social sciences, mathematics, or science with 12-15 semester hours in the specialization area.~~

F.] Candidates seeking a middle education endorsement must have an area of concentration in English, history and social sciences, mathematics, or science with 21[~~-24~~] semester hours in the concentration area.

Article 2

Early/Primary Education, Elementary Education, and Middle Education Endorsements

8VAC20-543-90. Professional studies requirements for early/primary education, elementary education, and middle education.

Professional studies requirements for early/primary education, elementary education, and middle education:

1. Human development and learning (birth through adolescence).

a. Skills in this area shall contribute to an understanding of the physical, social, emotional, speech and language, and intellectual development of children and the ability to use this understanding in guiding learning experiences and relating meaningfully to students.

b. The interaction of children with individual differences - economic, social, racial, ethnic, religious, physical, and [cognitive~~mental~~] - should be incorporated to include skills contributing to an understanding of developmental issues related[,] but not limited to[,] low socioeconomic status[~~,~~;] attention deficit disorders[~~,~~;] developmental disorders[~~,~~;] gifted education, including the use of multiple criteria to identify gifted students[~~,~~;] substance abuse[~~,~~;] [~~child abuse~~, trauma, including child abuse, and neglect and other adverse childhood experiences;] and family disruptions.

2. Curriculum and instruction.

a. Early/primary education preK-3 or elementary education preK-6 curriculum and instruction.

(1) Skills in this area shall contribute to an understanding of the principles of learning; the application of skills in discipline-specific methodology; [varied and] effective [methods of] communication with and among students; selection and use of materials, including media and contemporary technologies; selection, development, and use of appropriate curricula, methodologies, and materials that support and enhance student learning and reflect the research on unique, age-appropriate, and culturally relevant curriculum and pedagogy.

(2) Understanding of the principles of online learning and online instructional strategies and the application of skills to deliver online instruction must be included.

(3) Instructional practices that are sensitive to culturally and linguistically diverse learners, including [English learners~~limited English proficient students~~], gifted and talented students, and students with disabilities, and appropriate for the level of endorsement (preK-3 or preK-6) sought shall be included.

(4) Teaching methods shall be tailored to promote student engagement and student academic progress and effective preparation for the Standards of Learning assessments.

(5) Study in (i) methods of improving communication between schools and families, (ii) communicating with families regarding social and instructional needs of children, (iii) ways of increasing family [engagement~~involvement~~] in student learning at home and in school, (iv) the [~~Virginia Standards of Learning~~*Virginia Standards of Learning*], and (v) [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards~~

~~for Four-Year-Olds~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds]* prepared by the department's Office of Humanities and Early Childhood shall be included.

(6) Early childhood educators must understand the role of families in child development and in relation to teaching educational skills.

(7) Early childhood educators must understand the role of the informal and play-mediated settings for promoting students' skills and development and must demonstrate knowledge and skill in interacting in such situations to promote specific learning outcomes as reflected in [~~Virginia's Foundation Blocks for Early Learning~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds].*

(8) Demonstrated proficiency in the use of educational technology for instruction shall be included. Persons seeking initial licensure as teachers and persons seeking licensure renewal as teachers for the first time shall complete study in child abuse recognition and intervention in accordance with curriculum guidelines developed by the Virginia Board of Education in consultation with the Virginia Department of Social Services that are relevant to the specific teacher licensure routes. Pre-student teaching experiences (field experiences) should be evident within these skills.

b. Middle education 6-8 curriculum and instruction.

(1) Skills in this area shall contribute to an understanding of the principles of learning; the application of skills in discipline-specific methodology; effective communication with and among students, selection and use of materials, including media and contemporary technologies; evaluation of pupil performance; and the relationships among assessment, instruction, and monitoring student progress to include student

performance measures in grading practices, the ability to construct and interpret valid assessments using a variety of formats in order to measure student attainment of essential skills in a standards-based environment, and the ability to analyze assessment data to make decisions about how to improve instruction and student performance.

(2) Understanding of the principles of online learning and online instructional strategies and the application of skills to deliver online instruction must be included.

(3) Instructional practices that are sensitive to culturally and linguistically diverse learners including [English learners~~limited English proficient students~~], gifted and talented students, and students with disabilities, and must be appropriate for the middle education endorsement shall be included.

(4) Teaching methods shall be tailored to promote student engagement and student academic progress and effective preparation for the [~~Virginia Standards of Learning~~*Virginia Standards of Learning*] assessments.

(5) Study in methods of improving communication between schools and families, ways of increasing family [engagement~~involvement~~] in student learning at home and in school, and the [~~Standards of Learning~~*Virginia Standards of Learning*] shall be included.

(6) Demonstrated proficiency in the use of educational technology for instruction shall be included.

(7) Persons seeking initial licensure as teachers and persons seeking licensure renewal as teachers for the first time shall complete study in child abuse recognition and intervention in accordance with curriculum guidelines developed by the Virginia Board of Education in consultation with the Virginia Department of Social Services

that are relevant to the specific teacher licensure routes. Pre-student teaching experiences (field experiences) should be evident within these skills.

3. Classroom and behavior management. Skills in this area shall contribute to an understanding and application of research-based classroom and behavior management techniques, classroom community building, positive behavior supports, and individual interventions, including techniques that promote emotional well-being and teach and maintain behavioral conduct and skills consistent with norms, standards, and rules of the educational environment. This area shall address diverse approaches based upon [culturally responsive] behavioral, cognitive, affective, social, and ecological theory and practice. Approaches should support professionally appropriate practices that promote positive redirection of behavior, development of social skills, and [~~self-discipline~~self-discipline]. Knowledge and an understanding of various school crisis management and safety plans and the demonstrated ability to create a safe, orderly classroom environment must be included. The link between classroom management and students' ages must be understood and demonstrated in techniques used in the classroom.

4. Assessment of and for learning.

a. Skills in this area shall be designed to develop an understanding and application of creating, selecting, and implementing valid and reliable classroom-based assessments of student learning, including formative and summative assessments. Assessments designed and adapted to meet the needs of diverse learners must be addressed.

b. Analytical skills necessary to inform ongoing planning and instruction, as well as to understand, and help students understand their own progress and growth must be included.

c. Skills also include the ability to understand the relationships among assessment, instruction, and monitoring student progress to include student performance measures in grading practices; the ability to interpret valid assessments using a variety of formats in order to measure student attainment of essential skills in a standards-based environment; and the ability to analyze assessment data to make decisions about how to improve instruction and student performance.

d. Understanding of state assessment programs and accountability systems, including assessments used for student achievement goal setting as related to teacher evaluation and determining student academic progress, including knowledge of legal and ethical aspects of assessment.

e. Skills include developing familiarity with assessments used in preK-12 education (e.g., diagnostic, college admission exams, industry certifications, placement assessments).

5. [Foundations of education and t~~T~~he] teaching profession.

a. Skills in this area shall be designed to develop an understanding of the historical, philosophical, and sociological foundations underlying the role, development, and organization of public education in the United States.

b. Attention must be given to the legal status of teachers and students, including federal and state laws and regulations; school as an organization and culture; and contemporary issues and current trends in education, including the impact of technology on education. Local, state, and federal governance of schools, including the roles of teachers and schools in communities, must be included.

c. Professionalism and ethical standards as well as personal integrity must be addressed.

d. Knowledge and understanding of Virginia's Guidelines for Uniform Performance Standards and Evaluation Criteria for Teachers must be included.

6. [Language and Literacy~~Reading~~].

a. Early/primary education preK-3 and elementary education preK-6 [~~–~~] language acquisition and reading and writing. Skills listed for these endorsement areas represent the minimum competencies that a beginning teacher must be able to demonstrate. These skills are not intended to limit the scope of a beginning teacher's program. Additional knowledge and skills that add to a beginning teacher's competencies to deliver instruction and improve student achievement should be included as part of a quality learning experience.

(1) Language acquisition: Skills in this area shall be designed to impart a thorough understanding of the [~~Virginia English Standards of Learning~~*Virginia English Standards of Learning*] as well as the complex nature of language acquisition as a precursor to literacy. Language acquisition shall follow the typical development of linguistic competence in the areas of phonetics, semantics, syntax, morphology, phonology, and pragmatics.

(2) Reading and writing: Skills in this area shall be designed to impart a thorough understanding of the [~~Virginia English Standards of Learning~~*Virginia English Standards of Learning*] as well as the reciprocal nature of reading and writing. Reading shall include phonemic [and other phonological] awareness, concept of print, phonics, fluency, vocabulary development, [~~and~~]comprehension strategies[, and the ability to foster appreciation of a variety of fiction and nonfiction text and independent reading]. Writing shall include writing strategies and conventions as supporting the composing and [~~writing~~written] expression and usage and mechanics domains. Additional skills shall include proficiency in understanding the stages of

spelling development, the writing process[. ~~as well as the ability to foster appreciation of a variety of fiction and nonfiction text and independent reading~~.]

b. Middle education - language acquisition and reading development and literacy in the content areas.

(1) Language acquisition and reading development: Skills in this area shall be designed to impart a thorough understanding of the complex nature of language acquisition and reading, to include phonemic awareness, phonics, fluency, vocabulary development, and comprehension strategies for adolescent learners. Additional skills shall include proficiency in writing strategies, as well as the ability to foster appreciation of a variety of fiction and nonfiction text and independent reading for adolescent learners.

(2) Literacy in the content areas: Skills in this area shall be designed to impart an understanding of vocabulary development and comprehension skills in areas of English, mathematics, science, history and social science, and other content areas. Strategies include teaching students how to ask effective questions, summarize and retell both verbally and in writing, and to listen effectively. Teaching strategies include literal, interpretive, critical, and evaluative comprehension, as well as the ability to foster appreciation of a variety of fiction and nonfiction text and independent reading for adolescent readers.

7. Supervised clinical experiences. The supervised clinical experiences shall be continuous and systematic and comprised of early field experiences with a minimum of 10 weeks of [successful] full-time student teaching under the supervision of a cooperating teacher with demonstrated effectiveness in the classroom. The summative supervised student teaching experience shall include at least 150 clock hours spent in direct teaching at the level of endorsement [in a public or accredited nonpublic school].

One year of successful full-time teaching experience in the endorsement area in any public school or accredited nonpublic school may be accepted in lieu of the supervised student teaching experience. A fully licensed, experienced teacher shall be available in the school building to assist a beginning teacher employed through the alternate route.

8VAC20-543-100. Early childhood for three-year-olds and four-year-olds (add-on endorsement).

The program in early childhood education for three-year-olds and four-year-olds shall ensure that the candidate holds an active license with an endorsement in elementary education (such as preK-3 or preK-6) or special education early childhood issued by the Virginia Board of Education and has demonstrated the following competencies:

1. Understanding child growth and development from birth through age five, with a specific focus on three-year-olds and four-year-olds, including:

a. Knowledge of characteristics and developmental needs of three-year-olds and four-year-olds, including the ability to recognize indicators of typical and atypical development, in the domains of language, social, emotional, cognitive, physical, and gross and fine motor development;

b. Understanding of the multiple interacting influences on child development (biological and environmental), interconnectedness of developmental domains, the wide range of ages at which developmental skills are manifested, and the individual differences in behavioral styles; and

c. Knowledge of child development within the context of family, culture, and society.

2. Understanding principles of developmental practice, with a focus on three-year-olds and four-year-olds, including practices that are:

a. [~~Appropriate to the~~Effective in supporting each] child's age and stage of development;

b. Appropriate for children with a wide range of individual differences in abilities, interests, and [~~learning styles~~approaches to learning]; and

c. Appropriate for the child's cultural background and experience.

3. Understanding health and nutritional practices that impact early learning including:

a. Practices and procedures that support health status conducive to optimal development (e.g., health assessment, prevention of the spread of communicable disease, oral hygiene, reduction of environmental hazards, [protection from toxic stress] injury prevention, and emergency preparedness);

b. Indicators of possible child abuse or neglect and the appropriate response if such indicators are observed;

c. Nutritional and dietary practices that support healthy growth and development while remaining sensitive to each family's preferences, dietary restrictions, and culture;

d. Skills for communicating with families about health and dietary concerns;

e. Community resources that support [~~healthy living~~child and family health and well-being]; and

f. Practices that allow children to become independent and knowledgeable about healthy living.

4. Understanding and application of formal and informal assessment procedures for documenting development and knowledge of how to use assessment to plan curriculum, including:

a. Age-appropriate and stage-appropriate methods for documenting, assessing, and interpreting development and learning;

b. Identifying and documenting children's interests, strengths, and challenges; and

c. Communicating with families to acquire and to share information relevant to assessment.

5. Understanding effective strategies for (i) facilitating positive reciprocal relationships with children for teachers, families, and communities through mutual respect, communication strategies, collaborative linkages among families, and community resources and (ii) nurturing the capacity of family members to serve as advocates on behalf of children.

6. Understanding strategies for planning, implementing, assessing, and modifying physical and psychological aspects of the learning environment to support language, physical, cognitive, and social, as well as emotional, well-being in children with a broad range of developmental levels, special needs, individual interests, and cultural backgrounds, including the ability to:

a. Utilize learning strategies that stimulate curiosity, promote thinking, and encourage participation in exploration and play;

b. Provide curriculum that facilitate learning goals in content areas of the [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds~~ *Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds*] and provide opportunities to acquire concepts and skills that are precursors to academic content taught in elementary school;

c. Adapt tasks [and interactions to maximize language development, conceptual understanding, and skill competences within each~~to the~~] child's zone of proximal development;

d. Nurture children's development through firsthand experiences and opportunities to explore, examine, and investigate real materials in authentic context and engage in social interactions with peers and adults;

e. Select materials and equipment, arrange physical space, and plan schedules and routines to stimulate and facilitate development; and

f. Collaborate with families, colleagues, and members of the broader community to construct learning environments that promote a spirit of unity, respect, and service in the interest of the common good.

7. Understanding strategies that create positive and nurturing relationships with each child based on respect, trust, and acceptance of individual differences in ability levels, temperament, and other characteristics, including the ability to:

a. Emphasize the importance of supportive verbal and nonverbal communication;

b. Establish classroom and behavior management practices that are respectful, meet children's emotional needs, clearly communicate expectations for appropriate behavior, promote [self-regulation and] pro-social behaviors, prevent or minimize behavioral problems through careful planning of the learning environment, teach conflict resolution strategies, and mitigate or redirect challenging behaviors; and

c. Build positive, collaborative relationships with children's families with regard to behavioral guidance.

[8. The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experience in a public or accredited nonpublic school with children from three years old to age five.]

8VAC20-543-110. Early/primary education preK-3.

The program for early/primary education preK-3 shall ensure that the candidate has demonstrated the following competencies:

1. Methods.

a. Understanding of the knowledge, skills, and [dispositions] processes to support learners in achievement of [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds]* and the [~~Virginia Standards of Learning~~*Virginia Standards of Learning]*, in English, mathematics, history and social science, science, and computer and technology;

b. The ability to integrate English, mathematics, science, health, history and social sciences, art, music, drama, movement, and technology in learning experiences;

c. The use of differentiated instruction and flexible groupings to meet the needs of learners at different stages of development, [approaches to learning] abilities, and achievement;

d. The use of appropriate methods including those in visual and performing arts, to help learners develop knowledge and basic skills, sustain intellectual curiosity, and problem-solve;

e. The ability to utilize effective classroom management skills through methods that build responsibility and self-discipline [promotes self-regulation] and maintain a positive learning environment;

f. The ability to modify and manage learning environments and experiences to meet the individual needs of children, including children with disabilities, gifted children, children [who are ~~with limited proficiency in~~ English learners], and children with diverse cultural needs;

g. The ability to use formal and informal assessments to diagnose needs, plan and modify instruction, and record student progress;

h. A commitment to professional growth and development through reflection, collaboration, and continuous learning;

i. The ability to analyze, evaluate, and apply quantitative and qualitative research; [~~and~~]

j. The ability to use technology as a tool for teaching, learning, research, and communication[~~.~~;and

k. Adapt task and interactions to maximize language development, conceptual understanding, and skill competence within each child's zone of proximal development.]

2. Knowledge and skills.

a. Reading and English. Understanding of the content, knowledge, skills, [dispositions] and processes for teaching [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds]* and the [~~Virginia Standards of Learning~~*Virginia Standards of Learning]* for English including oral language (speaking and listening), reading, and writing, and how these standards provide the core for teaching English in grades preK-3 (early/primary licensure).

(1) Assessment and diagnostic teaching. The individual shall:

(a) Be proficient in the use of both formal and informal assessment as screening, diagnostic, and progress monitoring measures for the component of reading: phoneme awareness, letter recognition, decoding, fluency, vocabulary, reading levels, and comprehension; and

(b) Be proficient in the ability to use diagnostic data to inform instruction for acceleration, intervention, remediation, and differentiation.

(2) Oral communication. The individual shall:

(a) Be proficient in the knowledge, skills, and processes necessary for teaching oral language (speaking and listening);

(b) Be proficient in developing students' phonological awareness skills;

(c) Demonstrate effective strategies for facilitating the learning of standard English by speakers of other languages and dialects; and

(d) Demonstrate the ability to promote creative thinking and expression, such as through storytelling, drama, and choral and oral reading, etc.

(3) Reading and literature. The individual shall [demonstrate the following competencies]:

(a) Be proficient in explicit phonics instruction, including an understanding of sound and symbol relationships, syllables, phonemes, morphemes, word analysis, and decoding skills;

(b) Be proficient in strategies to increase vocabulary and concept development;

(c) Be proficient in the structure of the English language, including an understanding of syntax;

(d) Be proficient in reading comprehension strategies for (i) fiction and nonfiction text predicting, retelling, and summarizing and (ii) guiding students to make connections beyond the text;

(e) Demonstrate the ability to develop comprehension skills in all content areas;

(f) Demonstrate the ability to foster the appreciation of a variety of literature;

(g) Understand the importance of promoting independent reading by selecting fiction and nonfiction texts of appropriate yet engaging topics and reading levels; and

(h) Demonstrate effective strategies for teaching students to view, interpret, analyze, and represent information and concepts in visual form with or without the spoken or written word.

(4) Writing. The individual shall:

(a) Be proficient in the knowledge, skills, and processes necessary for teaching writing, including the domains of composing, written expression, and usage and mechanics and the writing process of planning, drafting, revising, editing, and publishing;

(b) Understand the stages of spelling development, promoting the generalization of spelling study to writing, and be proficient in systematic spelling instruction, including awareness of the purpose and limitations of "invented spelling"; and

(c) Demonstrate the ability to teach students to write cohesively for a variety of purposes and to provide instruction on the writing process: planning, drafting, revising, editing, and publishing in the narrative, descriptive, persuasive, and explanative modes.

(5) Technology. The individual shall demonstrate the ability to guide students in their use of technology for both process and product as they work with reading and writing.

b. Mathematics.

(1) Understanding of the mathematics relevant to the content identified in [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds~~ *Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds]* and the [~~Virginia Standards of Learning~~*Virginia Standards of Learning]*, and how the standards provide the foundation for teaching mathematics in grades preK-3. Experiences with practical applications and the use of appropriate technology and manipulatives should be used within the following content:

(a) Number systems and their structure, basic operations, and properties;

(b) Elementary number theory, ratio, proportion, and percent;

(c) Algebra: fundamental idea of equality; operations with monomials and polynomials; algebraic fractions; linear and quadratic equations and inequalities and linear systems of equations and inequalities; radicals and exponents; arithmetic and geometric sequences and series; algebraic and trigonometric functions; and transformations among graphical, tabular, and symbolic forms of functions;

(d) Geometry: geometric figures, their properties, relationships, the Pythagorean Theorem; deductive and inductive reasoning; perimeter, area, and surface area of two-dimensional and three-dimensional figures; coordinate and transformational geometry; and constructions; and

(e) Probability and statistics: permutations and combinations; experimental and theoretical probability; prediction; data collection and graphical representations

including box-and-whisker plots; and measures of center, spread of data, variability, range, and normal distribution.

(2) Understanding of the sequential nature of mathematics and vertical progression of mathematical standards.

(3) Understanding of the multiple representations of mathematical concepts and procedures.

(4) Understanding of and the ability to use the five processes - reasoning mathematically, solving problems, communicating mathematics effectively, making mathematical connections, and using mathematical models and representations at different levels of complexity.

(5) Understanding of the contributions of different cultures toward the development of mathematics and the role of mathematics in culture and society.

(6) Understanding of the appropriate use of calculators and technology in the teaching and learning of mathematics, including virtual manipulatives.

(7) Understanding of and the ability to use strategies to teach mathematics to diverse learners.

c. History and social sciences.

(1) Understanding of the knowledge, skills, and processes of history and the social science disciplines as defined in [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds]* and the [~~Virginia Standards of Learning~~*Virginia Standards of Learning]* and how the standards provide the necessary foundation for teaching history and social sciences, including in:

(a) History.

(i) The contributions of ancient civilizations to American social and political institutions;

(ii) Major events in Virginia history from 1607 to the present;

(iii) Key individuals, documents, and events in United States history; and

(iv) The evolution of America's constitutional republic and its ideas, institutions, and practices.

(b) Geography.

(i) The use of maps and other geographic representations, tools, and technologies to acquire, process, and report information;

(ii) The relationship between human activity and the physical environment in the community and the world; and

(iii) Physical processes that shape the surface of the earth.

(c) Civics.

(i) The privileges and responsibilities of good citizenship and the importance of the rule of law for the protection of individual rights;

(ii) The process of making laws in the United States and the fundamental ideals and principles of a republican form of government;

(iii) The understanding that Americans are a people of diverse ethnic origins, customs, and traditions, who are united by the basic principles of a republican form of government and a common identity as Americans; and

(iv) Local government and civics instruction specific to Virginia.

(d) Economics.

(i) The basic economic principles that underlie the United States market economy;

(ii) The role of the individual and how economic decisions are made in the market place; and

(iii) The role of government in the structure of the United States economy.

(2) Understanding of the nature of history and the social sciences, and how the study of the disciplines assists students in developing [historical thinking, geographical analysis, economic decision making, and responsible citizenship by:~~critical thinking skills in helping them to understand:~~]

(a) [Using artifacts and primary and secondary sources to understand events in history ~~The relationship between past and present~~];

(b) [Using geographic skills to explain the interaction of people, places, and events to support an understanding of events in history~~The use of primary sources such as artifacts, letters, photographs, and newspapers~~];

(c) [Using charts, graphs, and pictures to determine characteristics of people, places, or events in history~~How events in history are shaped both by the ideas and actions of people~~];

(d) [Asking appropriate questions and summarizing points to answer a question~~Diverse cultures and shared humanity~~];

(e) [Comparing and contrasting people, places, and events in history~~Civic participation in a democracy~~];

(f) [Recognizing direct cause and effect relationships in history~~The relationship between history, literature, art, and music~~].

[(g) Explaining connections across time and place;

(h) Using a decision-making model to identify costs and benefits of a specific choice made;

(i) Practicing good citizenship skills and respect for rules and laws, and participating in classroom activities; and

(j) Developing fluency in content vocabulary and comprehension of verbal, written and visual sources.]

d. Science.

(1) Understanding of the knowledge, skills, and [practices~~processes~~] of the four core science disciplines [of Earth sciences, biology, chemistry, and physics] as defined in [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds*] and the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning]* and how these standards provide a sound foundation for teaching science in the early/primary grades.

(2) Understanding of the nature of [~~the~~science~~theory~~] and scientific inquiry, including the following:

(a) Function of research design and experimentation;

(b) Role and nature of [the theory~~science~~] in explaining and predicting events and phenomena;

(c) Practices required to provide empirical answers to research questions, including data collection and analysis, modeling, argumentation with evidence, and contracting explanations;

(d) Reliability of scientific knowledge and its constant scrutiny and refinement;

(e) Self-checking mechanisms used by science to increase objectivity, including peer review; and

(f) Assumptions, influencing conditions, and limits of empirical knowledge.

(3) Understanding of the knowledge, skills, and practices for conducting an active elementary science program, including the ability to:

(a) Design instruction reflecting the goals of the [~~Virginia Science Standards of Learning~~*~~Virginia~~ Science Standards of Learning]*;

(b) Implement classroom[, field,] and laboratory safety rules and procedures, and ensure that students take appropriate safety precautions;

(c) Conduct research projects and experiments, including applications of the design process and technology;

(d) Conduct systematic field investigations using the school grounds, the community, and regional resources;

(e) Organize key science content, skills, and practices into meaningful units of instruction that actively engage students in learning;

(f) Design instruction to meet the needs of diverse learners using a variety of techniques;

(g) Evaluate instructional materials, technologies, and teaching practices;

(h) Conduct formative and summative assessments of student learning;

(i) Incorporate instructional technology to enhance student performance in science; and

(j) Ensure student competence in science.

(4) Understanding of the content, [~~processes, and~~] skills [and practices] of the four core science areas, including Earth sciences, biology, chemistry, and physics supporting the teaching of [preK-3~~elementary school~~] science as defined by the [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds*] and [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning]* and equivalent to academic course work in each of these four core science areas.

(5) Understanding of the core scientific disciplines of Earth science, biology, chemistry, and physics to ensure:

(a) The placement of the four core scientific disciplines in an appropriate interdisciplinary context;

(b) The ability to teach the processes and crosscutting concepts common to the Earth, [biological,~~natural~~] and physical sciences;

(c) The application of key science principles to solve practical problems; and

(d) A "systems" understanding of the natural world.

(6) Understanding of the contributions and significance of science, including:

(a) Its social, cultural, and economic significance;

(b) The relationship of science to mathematics, the design process, and technology; and

(c) The historical development of scientific concepts and scientific reasoning.

8VAC20-543-120. Elementary education preK-6.

The program in elementary education preK-6 may require that the candidate has completed an undergraduate major in interdisciplinary studies (focusing on the areas of English, mathematics, history and social sciences, and science) or in Virginia's core academic areas of English, mathematics, history and social sciences (i.e., history, government, geography, and economics), or science and demonstrated the following competencies:

1. Methods.

a. Understanding of the needed knowledge, skills, [dispositions] and processes to support learners in achievement of [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds]* and the [~~Virginia Standards of Learning~~*Virginia Standards of Learning]* in English, mathematics, history and social science, science, and computer and technology;

b. Understanding of current research on the brain, its role in learning, and implications for instruction;

c. The ability to integrate English, mathematics, science, health, history and social sciences, art, music, drama, movement, and technology in learning experiences;

d. The use of differentiated instruction and flexible groupings to meet the needs of learners at different stages of development, [approaches to learning] abilities, and achievement;

e. The use of appropriate methods, including those in visual and performing arts, to help learners develop knowledge and basic skills, sustain intellectual curiosity, and problem-solve;

f. The ability to utilize effective classroom and behavior management skills through methods that build responsibility and self-discipline[, promotes self-regulation,] and maintain a positive learning environment;

g. The ability to modify and manage learning environments and experiences to meet the individual needs of children, including children with disabilities, gifted children, [~~and~~] children [who are ~~with limited proficiency in~~English learners], and children with diverse cultural needs;

h. The ability to use formal and informal assessments to diagnose needs, plan and modify instruction, and record student progress;

i. A commitment to professional growth and development through reflection, collaboration, and continuous learning;

j. The ability to analyze, evaluate, and apply quantitative and qualitative research; and

k. Understanding of the [~~Virginia Standards of Learning~~*Virginia Standards of Learning*] for Computer Technology and the ability to use technology as a tool for teaching, learning, research, and communication.

[l. Adapt task and interactions to maximize language development, conceptual understanding, and skill competence within each child's zone of proximal development.]

2. Knowledge and skills.

a. Reading and English. Understanding of the content, knowledge, skills, and processes for teaching [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds*] and the [~~Virginia Standards~~

~~of Learning~~*Virginia Standards of Learning]* for English including communication (speaking, listening, and media literacy), reading, writing, and research and how these standards provide the core for teaching English in grades preK-6 (elementary licensure).

(1) Assessment and diagnostic teaching. The individual shall:

(a) Be proficient in the use of both formal and informal assessment as screening diagnostic, and progress monitoring measures for the components of reading: phoneme awareness, letter recognition, decoding, fluency, vocabulary, reading level, and comprehension; and

(b) Be proficient in the ability to use diagnostic data to inform instruction for acceleration, intervention, remediation, and differentiation.

(2) Communication: speaking, listening, and media literacy. The individual shall:

(a) Be proficient in the knowledge, skills, and processes necessary for teaching communication (speaking, listening, and media literacy);

(b) Be proficient in developing students' phonological awareness skills;

(c) Demonstrate the ability to teach students to identify the characteristics of and apply critical thinking to media messages and to facilitate students' proficiency in using various forms of media to collaborate and communicate;

(d) Demonstrate effective strategies for facilitating the learning of standard English by speakers of other languages and dialects; and

(e) Demonstrate the ability to promote creative thinking and expression, such as through storytelling, drama, choral and oral reading, etc.

(3) Reading and literature. The individual shall:

(a) Be proficient in explicit and systematic phonics instruction, including an understanding of sound and symbol relationships, syllables, phonemes, morphemes, word analysis, and decoding skills;

(b) Be proficient in strategies to increase vocabulary and concept development;

(c) Be proficient in the structure of the English language, including an understanding of syntax and semantics;

(d) Be proficient in reading comprehension strategies for both fiction and nonfiction text, including questioning, predicting, inferencing, summarizing, clarifying, evaluating, and making connections;

(e) Demonstrate the ability to support students to read with fluency, accuracy, and meaningful expression (prosody);

(f) Demonstrate the ability to develop comprehension skills in all content areas;

(g) Demonstrate the ability to foster appreciation of a variety of literature;

(h) Understand the importance of promoting independent reading by selecting fiction and nonfiction texts of appropriate yet engaging topics and reading levels; and

(i) Demonstrate effective strategies for teaching students to view, interpret, analyze, and represent information and concepts in visual form with or without the spoken or written word.

(4) Writing. The individual shall:

(a) Be proficient in the knowledge, skills, and processes necessary for teaching writing, including the domains of composing and written expression, and usage and mechanics and the writing process of planning, drafting, revising, editing, and publishing;

(b) Understand the stages of spelling development, promoting the generalization of spelling study to writing, and be proficient in systematic spelling instruction, including awareness of the purpose and limitations of "invented spelling";

(c) Demonstrate the ability to teach students to write cohesively for a variety of purposes and to provide instruction on the writing process: planning, drafting, revising, editing, and publishing in the narrative, descriptive, persuasive, and explanative modes; and

(d) Demonstrate the ability to facilitate student research and related skills such as accessing information, evaluating the validity of sources, citing sources, and synthesizing information.

(5) Technology. The individual shall demonstrate the ability to guide students in their use of technology for both process and product as they work with reading, writing, and research.

b. Mathematics.

(1) Understanding of the mathematics relevant to the content identified in [~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds*~~ *Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds*] and the [~~Virginia Standards of Learning~~*Virginia Standards of Learning*] and how the standards provide the foundation for teaching mathematics in grades preK-6. Experiences with practical applications and the use of appropriate technology and concrete materials should be used within the following content:

(a) Number systems and their structure, basic operations, and properties;

(b) Elementary number theory, ratio, proportion, and percent;

(c) Algebra: [fundamental idea of equality;] operations with monomials and polynomials; algebraic fractions; linear and quadratic equations and inequalities and linear systems of equations and inequalities; radicals and exponents; arithmetic and geometric sequences and series; algebraic and trigonometric functions; and transformations among graphical, tabular, and symbolic forms of functions;

(d) Geometry: geometric figures, their properties, relationships, the Pythagorean Theorem; deductive and inductive reasoning; perimeter, area, and surface area of two-dimensional and three-dimensional figures; coordinate and transformational geometry; and constructions; [and]

(e) Probability and statistics: permutations and combinations; experimental and theoretical probability; [~~prediction;~~data collection and] graphical representations including box-and-whisker plots; [data analysis and interpretation for predictions; ~~and~~] measures of center, [spread of data, variability,] range, and normal distribution[.~~; and~~

~~(f) Computer science: terminology, simple programming, and software applications.~~]

(2) Understanding of the sequential [~~and developmental~~] nature of mathematics [and vertical progression of mathematical standards].

(3) Understanding of the multiple representations of mathematical concepts and procedures.

(4) Understanding of and the ability to use the five processes - reasoning mathematically, solving problems, communicating mathematics effectively, making mathematical connections, and using mathematical [models and] representations - at different levels of complexity.

(5) Understanding of the contributions of different cultures toward the development of mathematics and the role of mathematics in culture and society.

(6) Understanding of the [~~role of technology and the ability to~~appropriate] use [of] calculators and [~~computers~~technology] in the teaching and learning of mathematics[,including virtual manipulatives.

(7) Understanding of and the ability to use strategies to teach mathematics to diverse learners.]

c. History and social sciences.

(1) Understanding of the knowledge, skills, and processes of history and the social sciences disciplines as defined in [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds*] and the [~~Virginia Standards of Learning~~*Virginia Standards of Learning]* and how the standards provide the necessary foundation for teaching history and social sciences, including in:

(a) History.

(i) The contributions of ancient civilizations to modern social and political institutions;

(ii) Major events in Virginia history from 1607 to the present;

(iii) Key individuals, documents, and events in United States history; and

(iv) The evolution of America's constitutional republic and its ideas, institutions, and practices.

(b) Geography.

(i) The use of maps and other geographic representations, tools, and technologies to acquire, process, and report information;

(ii) The relationship between human activity and the physical environment in the community and the world; and

(iii) Physical processes that shape the surface of the earth.

(c) Civics.

(i) The privileges and responsibilities of good citizenship and the importance of the rule of law for the protection of individual rights;

(ii) The process of making laws in the United States and the fundamental ideals and principles of a republican form of government;

(iii) The understanding that Americans are a people of diverse ethnic origins, customs, and traditions, who are united by basic principles of a republican form of government and a common identity as Americans; and

(iv) Local government and civics instruction specific to Virginia.

(d) Economics.

(i) The basic economic principles that underlie the United States market economy;

(ii) The role of the individual and how economic decisions are made in the market place; and

(iii) The role of government in the structure of the United States economy.

(2) Understanding of the nature of history and social sciences and how the study of the disciplines assists students in developing historical thinking, geographical analysis, economic decision making and responsible citizenship by:~~critical thinking skills in helping them to understand~~

(a) Using artifacts and primary and secondary sources to understand events in history~~The relationship between past and present~~;

(b) Using geographic skills to explain the interaction of people, places, and events to support an understanding of events in history~~The use of primary sources such as artifacts, letters, photographs, and newspapers~~;

(c) Using charts, graphs, and pictures to determine characteristics of people, places, or events in history~~How events in history are shaped both by the ideas and actions of people~~;

(d) Asking appropriate questions and summarizing points to answer a question.~~Diverse cultures and shared humanity~~;

(e) Comparing and contrasting people, places, and events in history;

(f) Recognizing direct cause and effect relationships in history;

(g) Explaining connections across time and place;

(h) Using a decision-making model to identify costs and benefits of a specific choice made;

(i) Practicing good citizenship skills and respect for rules and laws, and participating in classroom activities; and

(j) Developing fluency in content vocabulary and comprehension of verbal, written and visual sources.

d. Science.

(1) Understanding of the knowledge, skills, and [practices~~processes~~] of the four core science disciplines [of Earth science, biology, chemistry, and physics] as defined in [~~Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds~~*Virginia's Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds*] and the [~~Virginia Science Standards of Learning~~*Virginia Science*

Standards of Learning] and how these standards provide a sound foundation for teaching science in the elementary grades.

(2) Understanding of the nature of science and scientific inquiry, including the:

(a) Function of research design and experimentation;

(b) Role and nature of the theory in explaining and predicting events and phenomena;

(c) Practices required to provide empirical answers to research questions, including data collection and analysis, modeling, argumentation with evidence, and constructing explanations;

(d) Reliability of scientific knowledge and its constant scrutiny and refinement;

(e) Self-checking mechanisms used by science to increase objectivity, including peer review; and

(f) Assumptions, influencing conditions, and limits of empirical knowledge.

(3) Understanding of the knowledge, skills, and [practices~~processes~~] for [conducting] an active elementary science program including the ability to:

(a) Design instruction reflecting the goals of the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning*];

(b) Implement classroom[, field,] and laboratory safety rules and procedures and ensure that students take appropriate safety precautions;

(c) Conduct research projects and experiments, including applications of the design process and technology;

(d) Conduct systematic field investigations using the school grounds, the community, and regional resources;

(e) Organize key science content, skills, and practices into meaningful units of instruction that actively engage students in learning;

(f) Design instruction to meet the needs of diverse learners using a variety of techniques;

(g) Evaluate instructional materials, technologies, and teaching practices;

(h) Conduct formative and summative assessments of student learning;

(i) Incorporate instructional technology to enhance student performance in science; and

(j) Ensure student competence in science.

(4) Understanding of the content,[~~processes, and~~] skills, [and practices] of the four [core] science areas, including Earth sciences, biology, chemistry, and physics supporting the teaching of preK-6 science as defined by the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning]* and equivalent course work reflecting each of the four core science areas.

(5) Understanding of the core scientific disciplines of Earth science, biology, chemistry, and physics to ensure:

(a) The placement of the four core scientific disciplines in an appropriate interdisciplinary context;

(b) The ability to teach the [skills, practices~~processes~~] and crosscutting concepts common to the natural and physical sciences;

(c) The application of key science principles to solve practical problems; and

(d) A "systems" understanding of the natural world.

(6) Understanding of the contributions and significance of science including:

(a) Its social, cultural, and economic significance;

(b) The relationship of science to mathematics, the design process, and technology; and

(c) The historical development of scientific concepts and scientific reasoning.

8VAC20-543-130. Middle education 6-8.

The program in middle education 6-8 with at least one area of academic preparation shall ensure that the candidate has demonstrated the following competencies:

1. Methods.

a. Understanding of the required knowledge, skills, and processes to support learners in achievement of the [~~Virginia Standards of Learning~~*Virginia Standards of Learning*] for grades 6-8;

b. The use of appropriate methods, including direct instruction and inquiry-based instructional methods, to help learners develop knowledge and skills, sustain intellectual curiosity, and solve problems;

c. The ability to plan and teach collaboratively to facilitate interdisciplinary learning;

d. The use of differentiated instruction and flexible groupings to meet the needs of preadolescents at different stages of development, abilities, and achievement;

e. The ability to utilize effective classroom and behavior management skills through methods that build responsibility and self-discipline and maintain a positive learning environment;

f. The ability to modify and manage learning environments and experiences to meet the individual needs of preadolescents, including children with disabilities, gifted

children, and children [who are ~~with limited proficiency in the~~ English learners~~language~~];

g. The ability to use formal and informal assessments to diagnose needs, plan and modify instruction, and record student progress;

h. A commitment to professional growth and development through reflection, collaboration, and continuous learning;

i. The ability to analyze, evaluate, apply, and conduct quantitative and qualitative research;

j. The ability to use technology as a tool for teaching, learning, research, and communication;

k. An understanding of how to apply a variety of school organizational structures, schedules, groupings, and classroom formats appropriately for middle level learners;

l. Skill in promoting the development of all students' abilities for academic achievement and continued learning; and

m. The ability to use reading in the content area strategies appropriate to text and student needs.

2. English.

a. [Be proficient in the knowledge, skills, and processes necessary for teaching writing, including the domains of composing and written expression, and usage and mechanics and the writing process of planning, drafting, revising, editing, and publishing;

b~~a~~]. Possession of the skills necessary to teach the writing process, to differentiate among the forms of writing (narrative, descriptive, informational, and persuasive), and to use computers and other available technology;

[c~~b~~]. Understanding of and knowledge in grammar, usage, and mechanics and its integration in writing;

[d~~c~~]. Understanding and the nature and development of language and its impact on vocabulary development and spelling;

[e~~d~~]. Understanding of and knowledge in techniques and strategies to enhance reading comprehension and fluency;

[f~~e~~]. Understanding of and knowledge in the instruction of speaking, listening, collaboration, and media literacy;

[g~~f~~]. Knowledge of varied works from current and classic young adult literature appropriate for English instruction of fiction, nonfiction, and poetry; and

[h~~g~~]. Skills necessary to teach research techniques, including evaluating, organizing, crediting, and synthesizing information.

3. History and social sciences.

a. Understanding of the knowledge, skills, and processes of history and the social science disciplines as defined by the [~~Virginia History and Social Sciences Standards of Learning~~*Virginia History and Social Sciences Standards of Learning*] and how the standards provide the foundation for teaching history and social sciences, including in:

(1) United States history.

(a) The evolution of the American constitutional republic and its ideas, institutions, and practices from the colonial period to the present; the American Revolution, including ideas and principles preserved in significant Virginia and United States historical documents as required by § 22.1-201 of the Code of Virginia (the Declaration of American Independence; the general principles of the Constitution of the United States; the Virginia Statute of Religious Freedom; the charters of The Virginia Company of April 10, 1606, May 23, 1609, and March 12, 1612; and the Virginia Declaration of Rights); and historical challenges to the American political system (i.e., slavery, the Civil War, emancipation, and civil rights);

(b) The influence of religious traditions on the American heritage and on contemporary American society;

(c) The changing role of America around the world; the relationship between domestic affairs and foreign policy; and the global political and economic interactions;

(d) The influence of immigration on American political, social, and economic life;

(e) Origins, effects, aftermath and significance of the two world wars, the Korean and Vietnam conflicts, and the post-Cold War era;

(f) Social, political, and economic transformations in American life during the 20th century; and

(g) Tensions between liberty and equality, liberty and order, region and nation, individualism and the common welfare, and cultural diversity and civic unity.

(2) World history.

(a) The political, philosophical, and cultural legacies of ancient, American, Asian, African, and European civilizations;

(b) Origins, ideas, and institutions of Judaism, Christianity, Hinduism, Confucianism and Taoism, and Shinto, Buddhist, and Islamic religious traditions;

(c) Medieval society and institutions, relations with Islam, feudalism, and the evolution of representative government;

(d) The social, political, and economic contributions of selected civilizations in Africa, Asia, Europe, and the Americas;

(e) The culture and ideas of the Renaissance and the Reformation, European exploration, and the origins of capitalism and colonization;

(f) The cultural ideas of the Enlightenment and the intellectual revolution of the 17th and 18th centuries;

(g) The sources, results, and influence of the American and French revolutions;

(h) The social consequences of the Industrial Revolution and its impact on politics and culture;

(i) The global influence of European ideologies of the 19th and 20th centuries (liberalism, republicanism, social democracy, Marxism, nationalism, Communism, Fascism, and Nazism); and

(j) The origins, effects, aftermath, and significance of the two world wars.

(3) Civics and economics.

(a) Essential characteristics of limited and unlimited governments;

(b) Importance of the rule of law for the protection of individual rights and the common good;

(c) Rights and responsibilities of American citizenship;

(d) Nature and purposes of constitutions and alternative ways of organizing constitutional governments;

(e) American political culture;

(f) Values and principles of the American constitutional republic;

(g) Structures, functions, and powers of local and state government;

(h) Importance of citizen participation in the political process in local and state government;

(i) Local government and civic instruction specific to Virginia;

(j) Structures, functions, and powers of the national government; and

(k) The structure and function of the United States market economy as compared with other economies.

b. Understanding of the nature of history and social sciences and how the study of these disciplines helps students go beyond critical thinking skills to help them appreciate:

(1) The significance of the past to their lives and to society;

(2) Diverse cultures and shared humanity;

(3) How things happen, how they change, and how human intervention matters;

(4) The interplay of change and continuity;

(5) Historical cause and effect;

(6) The importance of individuals who have made a difference in history and the significance of personal character to the future of society;

(7) The relationship among history, geography, civics, and economics; and

(8) The difference between fact and conjecture, evidence and assertion, and the importance of framing useful questions.

4. Mathematics.

a. Understanding of the knowledge and skills necessary to teach the [~~Virginia Mathematics Standards of Learning~~*Virginia Mathematics Standards of Learning*] and how curriculum may be organized to teach these standards to diverse learners;

b. Understanding of a core knowledge base of concepts and procedures within the discipline of mathematics, including the following strands: number and number sense; computation and estimation; geometry and measurement; statistics and probability; and patterns, functions, and algebra;

c. Understanding of the mathematics relevant to the content identified in the [~~Virginia Standards of Learning~~*Virginia Standards of Learning]* and how the standards provide the foundation for teaching mathematics in the middle grades. Experiences with practical applications and the use of appropriate technology and manipulatives should be used within the following content:

(1) Number systems and their structure, basic operations, and properties;

(2) Elementary number theory, ratio, proportion, and percent;

(3) Algebra: fundamental idea of equality; operations with monomials and polynomials; algebraic fractions; linear and quadratic equations and inequalities and linear systems of equations and inequalities; radicals and exponents; arithmetic and geometric sequences and series; algebraic and trigonometric functions; and transformations among graphical, tabular, and symbolic forms of functions;

(4) Geometry: geometric figures, their properties, relationships, the Pythagorean Theorem; deductive and inductive reasoning; perimeter, area, and surface area of

two-dimensional and three-dimensional figures; coordinate and transformational geometry; and constructions;

(5) Probability and statistics: permutations and combinations; experimental and theoretical probability; data collection and graphical representations, including box-and-whisker plots; data analysis and interpretation for predictions; measures of center; spread of data, variability, range, standard deviation, and normal distributions.

d. Understanding of the sequential nature of mathematics, the vertical progression of mathematical standards, [-]and the mathematical structures inherent in the content strands;

e. Understanding of and the ability to use the five processes - becoming mathematical problem solvers, reasoning mathematically, communicating mathematically, making mathematical connections, and representing, modeling and describing mathematical ideas, generalizations, and relationships using a variety of methods [-] at different levels of complexity;

f. Understanding of the contributions of various individuals and cultures toward the development of mathematics and the role of mathematics in culture and society;

g. Understanding of the major current curriculum studies and trends in mathematics;

h. Understanding of the appropriate use of calculators and technology and the ability to use graphing utilities in the teaching and learning of mathematics, including virtual manipulatives;

i. Understanding of and the ability to select, adapt, evaluate and use instructional materials and resources, including professional journals and technology;

j. Understanding of and the ability to use strategies for managing, assessing, and monitoring student learning, including diagnosing student errors; and

k. Understanding of and the ability to use strategies to teach mathematics to diverse adolescent learners.

5. Science.

a. Understanding of the knowledge, skills, and [practices~~processes~~] of the [four core science disciplines of] Earth [science, biology, chemistry, and physics~~life, and physical sciences~~] as defined in the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning]* and how these provide a sound foundation for teaching science in the middle grades.

b. Understanding of the nature of science and scientific inquiry, including:

(1) Function of research design and experimentation;

(2) Role [and nature] of the [theory~~science~~] in explaining and predicting events and phenomena; and

[~~(3) Science skills of data analysis, measurement, observation, prediction, and experimentation.~~

(3) Practices required to provide empirical answers to research questions, including data collection and analysis, modeling, argumentation with evidence, and constructing explanations;

(4) Reliability of scientific knowledge and its constant scrutiny and refinement;

(5) Self-checking mechanisms used by science to increase objectivity including peer review; and

(6) Assumptions, influencing conditions, and limits of empirical knowledge.]

c. Understanding of the knowledge, skills, and [practices~~processes~~] for an active middle school science program, including the ability to:

(1) Design instruction reflecting the goals of the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning*];

[~~(2) Conduct research projects and experiments~~;

(2~~3~~)] Implement [classroom, field, and laboratory] safety rules and procedures and ensure that students take appropriate safety precautions;

[(3) Conduct research projects and experiments including applications of the design process and technology;

(4) Conduct systematic field investigations using the school grounds, the community, and regional resources;

(5~~4~~]Organize key science content, [skills and practices] into meaningful units of instruction [that actively engages students in learning];

(6~~5~~) Adapt instruction to diverse learners using a variety of techniques;

(7~~6~~) Evaluate instructional materials, [technologies~~instruction~~], and [teaching practices~~student achievement; and~~

(8) Conduct formative and summative assessments of student learning;

(9~~7~~]) Incorporate instructional technology to enhance student performance [~~in science~~; and

(10) Ensure student competence in middle school science.]

d. Understanding of the content, processes, and skills of the Earth sciences, biology, chemistry, and physics supporting the teaching of middle school science as defined by the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of*

Learning] and equivalent to academic course work in each of these core science areas.

e. Understanding of the core scientific disciplines to ensure:

(1) The placement of science in an appropriate interdisciplinary context;

(2) The ability to teach the processes and [~~organize~~crosscutting] concepts common to the natural and physical sciences;[~~and~~

(3) The application of key principles in science to solve practical problems; and

~~(3) Student achievement in science~~.

(4) A "systems" understanding of the natural world.]

f. Understanding of the contributions and significance of science to include:

(1) Its social [,~~and~~] cultural[, and economic] significance;

(2) The relationship of science to [mathematics, the design process, and] technology; and

(3) The historical development of scientific concepts and scientific reasoning.

Article 3

PreK-12 Endorsements, Special Education, Secondary Grades 6-12 Endorsements, and Adult Education

8VAC20-543-140. Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.

Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education:

1. Human development and learning (birth through adolescence).

a. Skills in this area shall contribute to an understanding of the physical, social, emotional, speech and language, and intellectual development of children and the ability to use this understanding in guiding learning experiences and relating meaningfully to students.

b. The interaction of children with individual differences - economic, social, racial, ethnic, religious, physical, and [cognitive~~mental~~] - should be incorporated to include skills contributing to an understanding of developmental disabilities and developmental issues related[,] but not limited[,] to low socioeconomic status[~~,~~;] attention deficit disorders[~~,~~;] developmental disabilities[~~,~~;] gifted education including the use of multiple criteria to identify gifted students[~~,~~;] substance abuse[~~,~~; trauma, including] child abuse, [and neglect and other adverse childhood experiences;] and family disruptions.

2. Curriculum and instruction.

a. Skills in this area shall contribute to an understanding of the principles of learning; the application of skills in discipline-specific methodology; [varied and] effective [methods of] communication with and among students; selection and use of materials, including media and contemporary technologies; selection, development, and use of appropriate curricula, methodologies, and materials that support and enhance student learning and reflect the research on unique, age-appropriate, and culturally relevant curriculum and pedagogy.

b. Understanding of the principles of online learning and online instructional strategies and the application of skills to deliver online instruction must be included.

c. Instructional practices that are sensitive to culturally and linguistically diverse learners, including [English learners~~limited English proficient students~~], gifted and talented students, and students with disabilities, and appropriate for the level of endorsement sought shall be included.

d. Teaching methods shall be tailored to promote student academic progress and effective preparation for the Standards of Learning assessments.

e. Methods of improving communication between schools and families and ways of increasing family [engagement~~involvement~~] in student learning at home and in school and the [~~Virginia Standards of Learning~~*Virginia Standards of Learning*] shall be included.

f. Demonstrated proficiency in the use of educational technology for instruction shall be included.

g. Persons seeking initial licensure as teachers and persons seeking licensure renewal as teachers for the first time shall complete study in child abuse recognition and intervention in accordance with curriculum guidelines developed by the Virginia Board of Education in consultation with the Virginia Department of Social Services that are relevant to the specific teacher licensure routes.

h. Curriculum and instruction for secondary grades 6-12 endorsements shall include middle and secondary education. Pre-student teaching experiences (field experiences) should be evident within these skills. For preK-12, field experiences shall be at the elementary, middle, and secondary levels.

3. Assessment of and for learning.

a. Skills in this area shall be designed to develop an understanding and application of creating, selecting, and implementing valid and reliable classroom-based

assessments of student learning, including formative and summative assessments. Assessments designed and adapted to meet the needs of diverse learners must be addressed.

b. Analytical skills necessary to inform ongoing planning and instruction, as well as to understand and help students understand their own progress and growth must be included.

c. Skills also include the ability to understand the relationships among assessment, instruction, and monitoring student progress to include student performance measures in grading practices, the ability to interpret valid assessments using a variety of formats in order to measure student attainment of essential skills in a standards-based environment, and the ability to analyze assessment data to make decisions about how to improve instruction and student performance.

d. Understanding of state assessment programs and accountability systems, including assessments used for student achievement goal setting as related to teacher evaluation and determining student academic progress, including knowledge of legal and ethical aspects of assessment.

e. Skills include developing familiarity with assessments used in preK-12 education (e.g., diagnostic, college admission exams, industry certifications, placement assessments).

4. [Foundations of education and t~~T~~he] teaching profession.

a. Skills in this area shall be designed to develop an understanding of the historical, philosophical, and sociological foundations underlying the role, development, and organization of public education in the United States.

b. Attention must be given to the legal status of teachers and students, including federal and state laws and regulations; school as an organization and culture; and contemporary issues and current trends in education, including the impact of technology on education. Local, state, and federal governance of schools, including the roles of teachers and schools in communities, must be included.

c. Professionalism and ethical standards, as well as personal integrity must be addressed.

d. Knowledge and understanding of Virginia's Guidelines for Uniform Performance Standards and Evaluation Criteria for Teachers must be included.

5. Classroom and behavior management.

a. Skills in this area shall contribute to an understanding of and application of research-based classroom and behavior management techniques, classroom community building, positive behavior supports, and individual interventions, including techniques that promote emotional well-being and teach and maintain behavioral conduct and skills consistent with norms, standards, and rules of the educational environment.

b. This area shall address diverse approaches based upon [culturally responsive] behavioral, cognitive, affective, social, and ecological theory and practice.

c. Approaches should support professionally appropriate practices that promote positive redirection of behavior, development of social skills, and self-discipline.

d. Knowledge and an understanding of various school crisis management and safety plans and the ability to create a safe, orderly classroom environment must be included. The link between classroom management and the students' ages must be understood and demonstrated in techniques used in the classroom.

6. [Language and Literacy~~Reading~~].

a. Adult education, preK-12, and secondary grades 6-12 - literacy in the content areas. Skills in this area shall be designed to impart an understanding of vocabulary development and comprehension skills in English, mathematics, science, history and social sciences, and other content areas. Strategies include teaching students how to ask effective questions, summarize and retell both verbally and in writing, and listen effectively. Teaching strategies include literal, interpretive, critical, and evaluative comprehension, as well as the ability to foster appreciation of a variety of fiction and nonfiction texts and independent reading for adolescent learners.

b. Special education - language acquisition and reading and writing. Skills listed for these endorsement areas represent the minimum competencies that a beginning teacher must be able to demonstrate. These skills are not intended to limit the scope of a beginning teacher's program. Additional knowledge and skills that add to a beginning teacher's competencies to deliver instruction and improve student achievement should be included as part of a quality learning experience.

(1) Language acquisition: Skills in this area shall be designed to impart a thorough understanding of the [~~Virginia English Standards of Learning~~*Virginia English Standards of Learning*] as well as the complex nature of language acquisition as a precursor to literacy. Language acquisition shall follow the typical development of linguistic competence in the areas of phonetics, semantics, syntax, morphology, phonology, and pragmatics.

(2) Reading and writing: Skills in this area shall be designed to impart a thorough understanding of the [~~Virginia English Standards of Learning~~*Virginia English Standards of Learning*] as well as the reciprocal nature of reading and writing.. Reading shall include phonemic [and other phonological] awareness, concept of

print, phonics, fluency, vocabulary development, [~~and~~]comprehension strategies[, and the ability to foster appreciation of a variety of fiction and nonfiction text and independent reading]. Writing shall include writing strategies and conventions as supporting the composing and written expression and usage and mechanics domains. Additional skills shall include proficiency in understanding the stages of spelling development, the writing process, and the ability to foster appreciation of a variety of fiction and nonfiction texts and independent reading.

7. Supervised clinical experiences. The supervised clinical experiences shall be continuous and systematic and comprised of early field experiences with a minimum of 10 weeks of [successful]full-time student teaching under the supervision of a cooperating teacher with demonstrated effectiveness in the classroom. The summative supervised student teaching experience shall include at least 150 clock hours spent in direct teaching at the level of endorsement [in a public or accredited nonpublic school].

If a preK-12 endorsement is sought, teaching activities shall be at the elementary and middle or secondary levels. Individuals seeking the endorsement in library media shall complete the supervised school library media practicum in a school library media setting. Individuals seeking an endorsement in an area of special education shall complete the supervised student teaching experience requirement in the area of special education for which the endorsement is sought. One year of successful full-time teaching experience in the endorsement area in any public school or accredited nonpublic school may be accepted in lieu of the supervised student teaching experience. A fully licensed, experienced teacher shall be available in the school building to assist a beginning teacher employed through the alternate route.

8VAC20-543-150. Adult education.

The program in adult education shall ensure that the candidate has demonstrated the following competencies:

[1. Foundations of adult education]

[21]. Understanding of the nature or psychology of the adult learner or adult development;

[32]. Understanding of the knowledge, skills, and processes needed for the selection, evaluation, and instructional applications of the methods and materials for [adult basic skillsadults to become college and career ready] including:

a. Curriculum development in adult basic education or [high school equivalency (HSE)general educational development (GED)] instruction;

b. [Literacy skills for adultsBeginning reading for adults];

c. [Numeracy skills for adultsBeginning mathematics for adults]; [and]

d. [Workforce skills for adults. Reading comprehension for adult education];

e. Foundations of adult education; and

f. Other adult basic skills instruction.

43]. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing;

[54]. Understanding of and proficiency in [andragogypedagogy] to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes; and

[65]. One semester of supervised successful full-time, or an equivalent number of hours of part-time, experience teaching adults.

8VAC20-543-160. Adult English as a second language (add-on endorsement).

The program in adult English as a second language shall ensure that the candidate holds an active license with a teaching endorsement or endorsements issued by the Virginia Board of Education and has demonstrated the following competencies:

1. Knowledge in the growth and development of the adult learner;

2.[~~Knowledge of teaching methods and materials in adult English as a second language~~Knowledge in methods and materials in the teaching of English to adult speakers of other languages];

3. [~~Knowledge in adult language acquisition~~Skills in the teaching of reading and writing to include (i) the five areas of reading instruction: phonemic awareness, phonics, fluency, vocabulary, and text comprehension: (ii) similarities and differences between reading in a first language and reading in a second language; and (iii) a balanced literacy approach];

4. [~~Knowledge of assessment methods in adult English as a second language instruction~~Knowledge in adult second language acquisition];

[5. Knowledge of assessment methods in instruction of English to adult speakers of other languages;]

[6~~5~~]. Skills in teaching the adult learner;

[7~~6~~]. Understanding of the effects of sociocultural variables in the instructional setting;

[8~~7~~]. Skills in teaching a variety of adult learning styles;

[9~~8~~]. Proficiency in cross-cultural communication;

[10~~9~~]. Proficiency in speaking, listening, and reading;

[11~~10~~]. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing; and

[12~~11~~]. Understanding of and proficiency in [~~pedagogy~~andragogy] to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-170. Career and technical education – agricultural education.

The program in agricultural education shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the importance and relationship of and contribution to the agricultural industry to the community, state, nation, and global economy including:

a. Knowledge of the fundamental historical foundation of the state and national agricultural industry;

b. Knowledge of contemporary components of the United States food and fiber system; and

c. Knowledge of the career opportunities in agriculture and related fields.

2. Applying the knowledge, skills, and processes involved in plant and soil sciences, including:

a. Production, use, and marketing of row crops, specialty crops, forage crops, fruits, small grains, vegetables, and cereal crops; and

b. Soil and water management.

3. Applying the knowledge, skills, and processes involved in the production, management, and marketing of animals, including:

a. Production of cattle, swine, poultry, dairy cows, sheep, aquaculture species, goats, and horses; and

b. Care and management of horses and small companion animals.

4. Applying knowledge, skills, and processes involved in agricultural mechanics and technology, including:

a. Set up safe operation, repair, and maintenance of equipment, tools, and measuring devices used in agriculture;

b. Knowledge of energy transfer systems used in agriculture;

c. Knowledge of properties of metals used in tools and equipment; and

d. Knowledge of alternative energy sources, fuels, and lubricants from agricultural and natural resources.

5. Understanding of agricultural economics, including the various markets, international trade, government policies, and the operation and management of various agricultural businesses.

6. Applying the knowledge, skills, and processes involved in natural resources, including:

a. Care, management, and conservation of soil, air, water, energy, and wildlife; and

b. Production and management of the forest.

7. Understanding the relationship of agriculture to community resource and partnership development, including:

a. Local agricultural program advisory committees;

b. Adult education programs;

c. Agricultural enterprises;

d. Student work-based learning opportunities;

e. Public and private programs and resources; and

f. Civic organizations.

8. Implementing classroom management techniques and pedagogical knowledge necessary to:

a. Understand the biological, physical, chemical, and applied sciences to practical solutions of agricultural problems;

b. Teach agricultural competencies needed by secondary students to be successful in continuing their education and entering a related career pathway;

c. Develop effective leadership skills through the Future Farmers of America (FFA) student organization as an integral part of instruction; and

d. Apply knowledge and skills for the administration of the agricultural program, including managing budgets, maintaining student performance records and equipment inventories.

9. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

10. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

11. Understanding of and proficiency in the use of instructional technologies.

12. Demonstrating and integrating workplace readiness skills in the classroom and real-world activities.

13. Ability to plan, deliver, and manage work-based learning methods of instruction such as internship, job shadowing, cooperative education, mentorship, service learning, clinical, and youth apprenticeship.

8VAC20-543-180. Career and technical education – business and information technology.

The program in business and information technology shall ensure that the candidate has demonstrated the following competencies:

1. Knowledge, skills, and principles of manual and automated accounting, including:

a. Accounting concepts, terminology, and applications;

b. Accounting systems;

c. The basic accounting cycle of source documents, verifications, analyzing, recording, posting, trial balances, and preparing financial statements; and

d. Use of accounting computer software to automate accounting tasks.

2. Knowledge and skills in economics, including:

a. Basic economic concepts and structures;

b. The role of producers and consumers in a market economy;

c. The price system;

d. The many factors that may affect income;

e. A nation's economic goals, including full employment, stable prices, and economic growth;

f. The nation's finance system;

g. How monetary and fiscal policy influence employment, output, and prices;

h. The role of government in a market economy;

i. The global economy; and

j. Distinguishing between trade deficit and trade surplus.

3. Knowledge of the foundations of business selected from the following areas:

a. Business law.

(1) Ability to recognize the legal requirements affecting business organization; and

(2) Ability to apply legal principles to business situations.

b. Business principles.

(1) Ability to identify, explain, and apply contemporary business principles;

(2) Ability to identify and explain the advantages and disadvantages of various business organizational structures; and

(3) Knowledge of the foundations of international business, the global business environment, international business communications, and global business ethics.

c. Management. Understanding and analyzing of basic management functions, tools, theories, and leadership styles to explore and solve problems in business organizations, economics, international business, and human relations issues.

d. Marketing and entrepreneurship.

(1) Understanding of basic marketing concepts in sales techniques, advertising, display, buying, wholesale and retail, distribution, service occupations, market analysis, warehousing, and inventory control; and

(2) Understanding of the unique characteristics of an entrepreneur and the knowledge and skills necessary for an entrepreneurial venture.

e. Finance.

(1) Knowledge about and skills in the areas of managing personal finance and budgeting, saving and investing, buying goods and services, banking and financial institutions, and earning and reporting income needed for sound financial decision making; and

(2) Understanding of the basic concepts of economics, insurance, credit, consumer skills, and other related topics.

4. Knowledge and skills in all of the following communications and information technologies:

a. Communications.

(1) Ability to communicate in a clear, courteous, concise, and correct manner for personal and professional purposes through the foundations of listening, writing, reading, speaking, nonverbal cues, and following written and oral directions;

(2) Ability to use information systems and technology to expedite and enhance the effectiveness of communications and telecommunications; and

(3) Ability to gather, evaluate, use, and cite information from information technology sources.

b. Impact of technology on society and the individual (digital citizenship). Knowledge to assess the impact of information technology on society.

c. Computer architecture. Ability to describe current and emerging computer architecture; configure, install, and upgrade hardware; and diagnose and repair hardware problems.

d. Operating systems, environments, and utilities. Ability to identify, evaluate, select, install, use, upgrade, customize, and diagnose and solve problems with various types of operating systems, environments, and utilities.

e. Application software (e.g., word processing; database; spreadsheet; graphics; web design; desktop, presentation, multimedia, and imaging; and emerging technologies).

(1) Ability to identify, evaluate, select, install, use, upgrade, and customize application software; and

(2) Ability to diagnose and solve problems resulting from an application software's installation and use.

f. Input technologies. Ability to use input devices and technologies (e.g., touch keyboarding, speech recognition, handwriting recognition, hand-held devices, touch screen or mouse, scanning, and other emerging input technologies) to enter, manipulate, and format text and data.

g. Database management systems. Ability to use, plan, develop, and maintain database management systems. Ability to diagnose and solve problems using database management systems.

h. Programming and application development. Ability to help students design, develop, test, and implement multi-platform (e.g., mobile, different operating systems) programs that solve business problems.

i. Networking and communications infrastructures.

(1) Facilitate students' development in the skills to design, deploy, and administer networks and communications systems;

(2) Facilitate students' ability to use, evaluate, and deploy communications and networking applications; and

(3) Facilitate students' ability to analyze networks for security vulnerabilities and develop and deploy appropriate security plans and applications.

j. Information management.

(1) Ability to plan the selection and acquisition of information technologies (hardware and software);

(2) Ability to instruct students in the development of technical and interpersonal skills and knowledge to support the user community; and

(3) Ability to describe, analyze, develop, and follow policies for managing privacy and ethical issues in organizations and in a technology-based society.

k. Web development and multimedia;

(1) Ability to instruct students in the design and development of web applications based on industry standards and principles of good design;

(2) Ability to instruct students in the design and development of multimedia applications; and

(3) Ability to design and develop multimedia and web-based applications for multiple operating systems and environments (mobile, desktop, cloud).

l. Project management.

(1) Understand the components of project management and its importance to business and information technology.

(2) Use project management tools to coordinate information technology, business, or related projects and manage teamwork.

5. Knowledge and skills necessary to teach leadership skills, organize and manage an effective co-curricular student organization, and implement the organization's activities as an integral part of instruction.

6. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

7. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8. Knowledge and skills necessary to apply basic mathematical operations to solve business problems.

9. Demonstration and integration of workplace readiness skills in the classroom and real-world activities.

10. Ability to plan, deliver, evaluate, and manage work-based learning methods of instruction such as internship, job shadowing, cooperative education, mentorship, service learning, clinical, and youth apprenticeship.

8VAC20-543-190. Career and technical education – family and consumer sciences.

The program in family and consumer sciences shall ensure that the candidate has demonstrated the following competencies:

1. Knowledge of the human growth and developmental processes throughout the lifespan, including infancy, childhood, preadolescence, adolescence, adulthood and aging, and in creating and maintaining an environment in which family members develop and interact as individuals and as members of a group;

2. Knowledge of the decision-making processes related to housing, furnishings, and equipment for individuals and families with attention given to special needs and the diversity of individuals;

3. The ability to plan, purchase, and prepare food choices that promote nutrition and wellness and safety and sanitation;

4. Knowledge of the management of resources to achieve individual and family goals at different stages of the life span and the family life cycle;

5. Knowledge of the sociological, psychological, and physiological aspects of apparel and textiles for individuals and families;

6. Knowledge of the management of families, community, work, and their interrelationships;

7. Knowledge of occupational skill development and career planning;

8. Knowledge of the use of critical science and creative skills to address problems in diverse family, community, and work environments;

9. Knowledge and skills necessary to teach leadership, communication, interpersonal problem-solving, and ethical decision-making skills;

10. The ability to plan, develop, teach, supervise, and evaluate programs in occupational programs at the secondary, postsecondary, and adult levels;

11. The ability to organize and implement Family, Career, and Community Leaders of America (FCCLA) programs as an integral part of classroom instruction;

12. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing;

13. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes;

14. Demonstrate and integrate workplace readiness skills in the classroom and real-world activities; and

15. Ability to plan, deliver, and manage work-based learning methods of instruction such as internship, job shadowing, cooperative education, mentorship, service learning, clinical, and youth apprenticeship.

8VAC20-543-200. Career and technical education – health and medical sciences.

The program in health and medical sciences shall ensure that the candidate has demonstrated the following competencies:

1. Knowledge of teaching methods.

a. Instructional planning - ability to determine the needs and interests of students;

b. Organizing instruction - ability to prepare teacher-made instructional materials for clinical laboratory experience;

c. Instructional execution - ability to use techniques for simulating patient care and demonstrating manipulative skills;

d. Application of technology in the classroom; and

e. Instructional evaluation - ability to determine grades for students in classroom and clinical settings.

2. Knowledge of program management.

a. Planning - ability to organize an occupational advisory committee;

b. Curriculum development - ability to keep informed of current curriculum content and patient care practices;

c. Planning and organizing teaching and occupational laboratory for laboratory simulations and demonstrations;

d. Understanding of the process for issuing credentials for health workers;

e. Understanding of the health care industry; and

f. Evaluation - ability to conduct a student follow-up study.

3. Knowledge and skills necessary to teach leadership skills, organize and manage an effective co-curricular student organization, and implement the organization's activities as an integral part of instruction.

4. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

5. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

6. Demonstrate and integrate workplace readiness skills in the classroom and real-world activities.

7. Ability to plan, deliver, evaluate, and manage work-based learning methods of instruction such as internship, job shadowing, cooperative education, mentorship, service learning, clinical, and youth apprenticeship.

8VAC20-543-210. Career and technical education – marketing education.

The program in marketing shall ensure that the candidate has demonstrated the following competencies:

1. Knowledge of marketing processes and the environment; management and supervision; economics; merchandising and operations; advertising and promotion; sales and selling; communication theory and techniques; consumer behavior; international (global) marketing; finance; accounting or marketing mathematics; and technology applications through a variety of educational and work experiences;

2. Knowledge of skills and principles common across the marketing pathways: channel management; marketing-information management; market planning; pricing; product and service management promotion; and selling;

3. Ability to plan, develop, and administer a comprehensive marketing program for high school students and adults;

4. Ability to organize and use a variety of instructional methods and techniques for teaching youths and adults;

5. Ability to conduct learning programs that include a variety of career objectives and recognize and respond to individual differences in students;

6. Ability to assist learners of different abilities in developing skills needed to qualify for further education and employment;

7. Knowledge of occupational skill development and career planning for opportunities in marketing, merchandising, hospitality, and management;

8. Knowledge and skills necessary to teach leadership skills, organize and manage an effective co-curricular student organization (DECA) and implement the organization's activities as an integral part of instruction;

9. Application of and proficiency in grammar, usage, and mechanics and their integration in writing;

10. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes;

11. Application of and proficiency in instructional technology and current technological applications as these relate to marketing functions;

12. Demonstration and integration of workplace readiness skills in the classroom and real-world activities;

13. Ability to plan, deliver, and manage work-based learning methods of instruction, such as: internship, job shadowing, cooperative education, mentorship, service learning, clinical, and youth apprenticeship; and

14. Ability to apply mathematical operations to solve marketing problems.

8VAC20-543-220. Career and technical education – technology education.

The program in technology education shall ensure that the candidate has demonstrated the following competencies:

1. Understanding the nature of technology, including knowledge of the:

a. Characteristics and scope of technology;

b. Core concepts of physical, biological, and informational technologies; and

c. Relationships among technologies, including the natural intersects between science, technology, engineering, and mathematics (STEM) and other fields.

2. Understanding the relationships between technology and society, including the:

a. Sociocultural, political, and economic influences of technology;

b. Local and global effects of technological products and systems on the environment; and

c. Role that society plays in the use and development of technology; and

d. Influence of technology on human history.

3. Comprehension and utilization of engineering design, including the:

a. Attributes of technological design;

b. Role of constraints, optimization, and predictive analysis in engineering design;

c. Requirement of problem-solving, critical thinking, and technical writing skills; and

d. Intentional integration of mathematics and science concepts and practices.

4. Ability to succeed in a technological world, including a capacity to:

a. Employ the design process in the engineering of technological products and systems;

b. Determine and control the behavior of technological products and systems;

c. Use and maintain technological products and systems; and

d. Assess the impacts and consequences of technological products and systems.

5. Ability to select and use the major physical, biological, and informational technologies of the designed world, including the:

a. Principles and processes characteristic of contemporary and emerging transportation, manufacturing, and construction technologies, inclusive of research, engineering design and testing, planning, organization, resources, and modes of distribution;

b. Range of enabling technologies that utilize fundamental biological principles and cellular processes characteristic of traditional and modern biotechnical technologies, including research, design-based engineering and testing of agricultural products, biotechnical systems, and associated medical technologies;

c. Purpose, processes, and resources involved with creating, encoding, transmitting, receiving, decoding, storage, retrieval, and understanding of information data using communication systems in a global information society; and

d. Concept, laws, forms, and characteristics of energy as a fundamental requirement of the technological world, inclusive of the resultant power and work requisites, both renewable and nonrenewable, of the tools, machines, products, and systems within.

6. Knowledge, skills, and processes required for teaching in a STEM laboratory environment, including:

a. Laboratory safety rules, regulations, processes, and procedures;

b. Ability to organize content and practices into effective instructional units;

c. Ability to deliver instruction to diverse learners;

d. Ability to evaluate student achievement, curriculum materials, instructional strategies, and teaching practices;

e. Ability to incorporate new and emerging instructional technologies to enhance student performance across the varied domains of knowledge - cognitive, affective, and psychomotor; and

f. Ability to convey the concepts and procedures for developing a learner's technological literacy specifically and integrative STEM literacy in general.

7. Demonstration of the knowledge, abilities, and capacity necessary to teach leadership skills, organize and manage an effective co-curricular student organization, and implement the organization's activities as an integral part of instruction.

8. Understanding of and proficiency in grammar, usage, and mechanics and their integration in formal technical writing.

9. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

10. Demonstrate and integrate workplace readiness skills in the classroom and real-world activities.

11. Ability to plan, deliver, evaluate, and manage work-based learning methods of instruction such as internship, job shadowing, cooperative education, mentorship, service learning, clinical, and youth apprenticeship.

8VAC20-543-230. Career and technical education – trade and industrial education.

The program in trade and industrial education shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of industrial education and its role in the development of technically competent, socially responsible, and culturally sensitive individuals with potential for leadership in skilled technical work and professional studies;

2. Understanding of and the ability to relate experiences designed to develop skills in the interpretation and implementation of industrial education philosophy in accordance with changing demand;

3. The knowledge and experience of systematically planning, executing, and evaluating individual and group instruction;

4. Knowledge of the competencies necessary for effective organization and management of laboratory instruction;

5. Knowledge of the competencies necessary for making physical, social, and emotional adjustments in multicultural student-teacher relationships;

6. Knowledge of the competencies necessary for developing and utilizing systematic methods and instruments for appraising and recording student progress in the career and technical educational classroom;

7. Knowledge of the ability to provide technical work experience through cooperative education or provide a method of evaluating previous occupational experience commensurate with the minimum required standard;

8. Knowledge of the competencies and industry credentials necessary to assist students in job placement and in otherwise bridging the gap between education and work;

9. Understanding of the awareness of the human relations factor in industry, with emphasis on the area of cooperation among labor, management, and the schools;

10. Knowledge of the teacher's role in the school and community;

11. Understanding of the content, skills, and techniques necessary to teach a particular trade area;

12. Knowledge of the competencies necessary to organize and manage an effective student organization;

13. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing;

14. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes;

15. Demonstration and integration of work place readiness skills in the classroom and real-world activities; and

16. Understanding of the planning, delivery, and management of work-based learning methods of instruction such as internship, job shadowing, cooperative education, mentorship, service learning, clinical, and youth apprenticeship.

8VAC20-543-240. Career and technical education – transition and special needs (add-on endorsement).

The transition and special needs (add-on endorsement) shall ensure that the candidate holds an active license with a teaching endorsement or endorsements issued by the Virginia Board of Education and has demonstrated the following competencies:

1. Knowledge of special needs and transition programs and services, characteristics of students who are disadvantaged, disabled, gifted, and individuals with barriers to educational achievement and employment, including [~~individuals with limited~~] English [learners~~proficiency~~].

2. Knowledge of program development, implementation, and evaluation.

3. Basic understanding of cultural issues pertaining to employment and postsecondary education and training.

4. Understanding of the federal and state laws and regulations pertaining to special education, rehabilitation, and the American with Disabilities Act (42 USC § 12101 et seq.).

5. Understanding and demonstration of the integration of instructional methods, resources, and transition programs for targeted populations in career and technical education, including:

a. Use of learning and teaching styles to plan and deliver differentiated instruction and differentiated assessment;

b. Knowledge of age appropriate assessments;

c. Use of assessment results to plan individual instruction strategies and assist with long-range and short-term planning;

d. Understanding of required skills that demonstrate college and career readiness;

e. Ability to plan and manage a competency-based education system;

f. Ability to adapt and modify curriculum materials and utilize Universal Design for Learning Principles to meet special student needs;

g. Use of a variety of classroom and behavior management techniques to develop an enhanced learning environment, behavior change techniques, and individual and group instruction;

h. Use of different processes to improve collaboration and develop partnerships with colleagues, parents, and the community to include service agencies and businesses; and

i. Ability to plan learning experiences that prepare individuals for transition to more advanced education and career development options.

6. Ability to develop, plan, deliver, and manage work-based learning methods of instruction such as community-based instruction, internship, job shadowing, cooperative education, mentorship, service learning, clinical, and youth apprenticeship.

7. Understanding and application of strategies for enabling students to learn all aspects of particular industries - planning, management, finances, technical and production skills, labor and community issues, health and safety, environmental issues, and the technology associated with the specific industry.

8. Ability to articulate career and life planning procedures, transitioning processes and procedures, and career-search techniques.

9. Application of and proficiency in grammar, usage, and mechanics and their integration in writing.

10. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

11. Ability to use a variety of technologies to deliver instruction and media to students, parents, teachers, and community partners.

12. Demonstration and integration of workplace readiness skills in the classroom and real-world activities.

13. Demonstrate person-centered planning skills.

8VAC20-543-250. Computer science.

The program in computer science shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of mathematical principles that are the basis of many computer applications;

2. Knowledge of the functions, capabilities, and limitations of computers and computer systems;

3. Knowledge of the ethical, moral, and legal issues associated with applications in programming and computer science;

4. Knowledge of programming in at least two widely used programming languages, including definition, structure, and comparison;

[~~5. Knowledge of programming languages including definition, design, comparison, and evaluation;~~]

[5~~6~~]. Knowledge of computers and computer systems and their applications;

[6~~7~~]. Knowledge of data structures and algorithms;

[7~~8~~]. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing; and

[8~~9~~]. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-260. Dance arts preK-12.

The program in dance arts shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes of the dance arts discipline as defined in the [~~Virginia Standards of Learning~~*Virginia Standards of Learning*] and how they provide a foundation needed to teach dance arts.

2. Understanding of the knowledge, skills, and processes for teaching dance arts to meet the developmental levels and academic needs of students in preK-12, including the following:

a. Knowledge of and experience in planning, developing, administering, and evaluating a program of dance arts education;

b. Knowledge and understanding for teaching dance arts, including performance, creation, and production; dance history and cultural context; analysis, evaluation, and critique; and aesthetics;

c. Ballet, folk, jazz, and modern dance with an area of concentration in one of these areas;

d. Scientific foundations, including human anatomy, kinesiology, and injury prevention and care for dance arts;

e. The relationship of dance arts and culture and the influence of dance on past and present cultures;

f. Knowledge and understanding of technological and artistic copyright laws;

g. Knowledge and understanding of classroom management and safety, including performance and studio[;and use of toxic art materials in various aspects of dance arts production, performance, and the classroom];

h. Knowledge of a variety of instructional and assessment strategies to foster, support, and enhance student dance arts learning;

i. Knowledge and understanding of technology, with applications for instruction, resources, artistic expression, administration, assessment, and communication;

j. Knowledge and understanding of appropriate and sensitive attention to diversity and cultural understanding;

k. Knowledge of related areas of the fine arts, such as music, theatre arts, and the visual arts; and

l. Observation and student teaching experiences at the elementary, middle, and secondary levels.

3. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

4. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-270. Driver education (add-on endorsement).

The program in driver education shall ensure that the candidate holds an active license with a teaching endorsement or endorsements issued by the Virginia Board of Education and has demonstrated the following competencies:

1. Basic understanding of the administration of a driver education program as required by § 22.1-205 of the Code of Virginia and the Administrative Guide for Driver Education in Virginia 2010 (http://www.doe.virginia.gov/instruction/driver_education/curriculum_admin_guide/index.shtml) including:

a. Coordinati[~~onng~~] and scheduling of classroom and in-car instruction;

b. [Understanding t~~T~~]he Board of Education and the Department of Motor Vehicle's regulations governing driver education programs;

c. [Managing s~~S~~tudent safety ~~and other legal liability issues~~using route and lesson planning, appropriate training techniques, driving environments, speed, driving experiences, and constant monitoring];

d. [Administering t~~T~~]he juvenile licensing process;

e. Highway traffic safety and the driver licensing laws in the Code of Virginia;

f. Vehicle procurement maintenance and safety equipment requirements;

g. The Department of Education's and the Department of Motor Vehicle's juvenile licensing forms;

h. Monitoring and oversight procedures that ensure the approved program meets state curriculum objectives, goals, and learning outcomes; the classroom and in-car hour requirements; and teachers have valid Virginia driver's licenses, acceptable driving records, and meet teacher licensure and/or in-car instructor training requirements;

i. Promoting parent involvement;

j. Providing opportunities for ongoing professional development; and

k. Integrating classroom and in-car instruction when possible to maximize transfer of skills.

2. Understanding of knowledge, skills, and processes of classroom driver education instruction including:

a. Traffic laws, signs, signals, pavement markings, and right-of-way rules;

b. Licensing procedures and other legal responsibilities associated with the driving privilege and vehicle ownership;

c. [~~The~~Ability to explain the] effect of speed and steering on vehicle balance and control;

d. [Knowledge of performance characteristics of~~Communicating and interacting with~~] other highway users, [and ability to apply problem-solving skills to minimize risks

with] (pedestrians, animals, motorcycles, bicycles, trucks, buses, trains, trailers, motor homes, ATVs, and other recreational users) [~~in a positive manner~~];

e. [Facilitating students' ability to manage~~Managing of~~ time, space, and visibility, ~~and~~] using perceptual skills [and a ~~in the~~]risk management process;

f. [Ability to identify and analyze the physiological, psychological, cognitive, and economic consequences associated with a~~A~~lcohol] and other drug use;

g. [Understanding of proper use of vehicle occupant~~Passive~~] protective devices and [analyzing how they can reduce injury severity and increase collision survival~~active restraint systems~~];

h. [Recognizing how regular preventive maintenance reduces ~~Vehicle controls, vehicle maintenance, vehicle functions, and~~] vehicle malfunctions[, and the warning signs that indicate the need for maintenance, repair, or replacement];

i. [Recognizing the c~~C~~]onsequences of aggressive driving, [~~road rage~~,] fatigue, distracted driving, and other physical, social, and psychological influences that affect [~~the~~] driver [behavior and performance];

j. [Understand the effects of momentum, gravity, and inertia on vehicle control and balance, and the relationship between kinetic energy and force of impact~~Natural laws and environmental factors that influence the decision-making process~~];

k. [Ability to evaluate emergency-response strategies to avoid or reduce the severity of a collision in high-risk driving situations, and how technological advancements in intelligent handling and stability control systems affect driving practices~~Adverse driving conditions and handling emergencies~~];

l. [Knowledge about map-reading and trip p~~P~~lanning technologies and evaluating personal transportation needs and their impact on the environment~~a safe trip~~];

m. [Ability to d~~Differentiateing~~] instruction based on a continuous learning cycle;

n. [~~Using~~Knowledge of] assessments that foster student learning to inform decisions about instruction; and

o. Using new and emerging instructional technology and media effectively to enhance learning.

3. Understanding of knowledge, skills, and processes of the laboratory phase of instruction including:

a. [Utilizing s~~S~~imulation] and other instructional technologies;

b. [Managing a m~~M~~ultiple]-car range;

c. [~~Route planning and preparing for~~Designing]sequential instructional performances that lead to effective habit formation;

d. Providing clear, concise instructions when describing the critical elements of a driving skill;

e. Correctly using occupant restraints and protective devices;

f. [Understanding t~~T~~he] role of the driver and the observer;

g. Using commentary driving to determine visual search skills needed to identify and make risk-reducing decisions for safe speed and position;

h. Using reference points to gauge vehicle position and execute maneuvers with precision;

i. Selecting vehicle position to communicate or establish line of sight to targets;

j. Balancing vehicle movement through precise and timely steering, braking, and accelerating to manage vehicle weight transfer;

k. Applying visual search skills to manage risks in low, moderate, and high-risk driving environments;

l. Adjusting speed and space to communicate and reduce risks to avoid conflicts;

m. Preventing, detecting, and managing vehicle traction loss in simulated and adverse driving conditions;

n. Using vehicle braking, traction, and stability technologies;

o. Recognizing environmental factors that influence vehicle control;

p. Applying space management strategies to the front and sides and monitoring space to the rear;

q. Understanding the consequences of speed selection;

r. Dividing mental attention between intended path of travel and other tasks;

s. Demonstrating basic and evasive maneuvers and off-road recovery;

t. Recognizing understeer and oversteer, and the effects of traction, gravity, inertia and momentum on vehicle handling and control;

u. Controlling vehicle from instructor's seat;

v. Interacting with other roadway users in a positive manner;

w. Using manual transmission;

x. Developing precision in the use of skills, processes, and habits for approach to intersection, curves, turns, parking, turnabouts, backing, lane change, passing and being passed, getting on and off highways, and responding to emergencies;

y. Administering the driver's license road skills test and issuing the six-month temporary provisional license; and

z. Completing a debriefing with a parent or guardian that includes a reminder that the parent must ultimately determine readiness for a driver's license.

4. Guiding parents to provide meaningful guided practice including:

a. Understanding the juvenile licensing laws and the parents' role in the juvenile licensing process;

b. Determining the readiness of the child to begin learning how to drive in a car;

c. Planning and supervising the learner's permit experience;

d. Keeping a record of the meaningful supervised driving hours; and

e. Adopting a written agreement with the child that reflects expectations, defines rules and consequences, and allows the parents to progressively grant broader driving privileges.

5. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

6. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-280. Engineering.

The program in engineering shall ensure that the candidate [has demonstrate~~s~~d] the following competencies:

1. Understanding of the knowledge, skills, and processes of the engineering discipline as defined in Virginia's high school engineering courses and how these provide a sound foundation for teaching engineering.

2. Understanding the nature of engineering design and analysis, including the:

a. Function of the engineering design process;

b. Methods used by engineers to generate, develop, and test ideas to meet design requirements;

c. Role of failure in the engineering design process.

3. Understanding of the knowledge, skills, and processes for teaching engineering, including the ability to:

a. Formulate instruction reflecting the goals of the engineering courses that are taught in Virginia high schools;

b. Design, prototype, test, analyze, and operate solutions to engineering challenges;

c. Implement laboratory and field safety rules and procedures and ensure that students take appropriate safety precautions;

d. Organize key engineering content and skills into meaningful units of instruction;

e. Adapt instruction to diverse learners using a variety of techniques;

f. Evaluate student achievement, instructional materials, and teaching materials; and

g. Incorporate instructional technology to enhance student performance.

4. Understanding of content, processes, and skills of engineering, equivalent to an undergraduate degree in engineering, with course work in principles of engineering, engineering design, statics and dynamics, circuits, fluid mechanics, thermodynamics, materials, ordinary differential equations, and linear algebra.

5. Understanding of basic chemistry, biology, Earth and space sciences, physics, and mathematics, including statistics and calculus, to ensure:

a. The placement of engineering in an appropriate science, technology, engineering, and mathematics (STEM) and interdisciplinary context;

b. The ability to teach the processes and organizing concepts of the natural and physical sciences to analyze successful and failed engineering designs; and

c. Student achievement in engineering.

6. Understanding of the contributions and significance of engineering, including:

a. Its social and cultural significance;

b. The relationship of engineering and its sub-fields (e.g., electrical engineering, mechanical engineering, bio-engineering, etc.) to the sciences, mathematics and technology; and

c. The historical development of engineering concepts and reasoning.

7. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing, oral, and multi-media presentations.

8. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-290. English.

The program in English shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes of English as defined in the [~~Virginia Standards of Learning~~*Virginia Standards of Learning*];

2. Skills necessary to teach the writing process and the different modes of writing (narrative, descriptive, expository, persuasive, and analytical) and to employ available technology;

3. Knowledge of grammar, usage, and mechanics and their integration in writing;

4. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes;

5. Understanding of the nature and development of language including vocabulary appropriate to the topic, audience, and purpose;

6. Knowledge of reading strategies and techniques used to enhance reading comprehension skills in both fiction and nonfiction texts;

7. Knowledge of communication skills including speaking and listening skills and media literacy;

8. Knowledge of varied fiction and nonfiction from young adult, British, American, world, and ethnic and minority texts appropriate for English instruction;

9. The ability to provide experiences in communication arts, such as journalism, dramatics, debate, forensics, radio, television, films, and other media production;

10. Skills necessary to teach the analysis and production of media literacy;

11. Skills necessary to teach research including ethical accessing, evaluating, organizing, crediting, and synthesizing information; and

12. Knowledge of the [~~Computer Technology~~ ~~Virginia Standards of *Learning*~~ *Virginia Computer Technology Standards of Learning*] and their integration into English Language Arts.

8VAC20-543-300. English as a second language preK-12.

The program in English as a second language shall ensure that the candidate has demonstrated the following competencies:

1. Skills in methods of teaching English as a second language to include [instruction based on]the [understanding of the]World-Class Instructional[and] Design and Assessment (WIDA) English Language Development (ELD) Standards;

2. Skills in [designing and administering formative or classroom-based assessments and interpreting results of both formative and summative assessments, including the WIDA Access test. Using the results of a variety of formative assessments, including performance-based assessments of oral language and writing, to direct instruction. Ensuring that formative assessments reflect high validity and reliability for the purposes for which they are used and are appropriate for the targeted students. Teaching test-taking skills in preparation for standardized tests.student assessment for English as a second language to include the Assessing Comprehension and Communication in English State-to-State for English Language Learners (Access for ELLs®) test];

3. Skills in the teaching of reading [and writing]to include [(i) the five areas of reading instruction]: phonemic awareness[,;pre-reading, during-reading, and post-reading strategies; vocabulary development; and guided reading. Ability to structure interactive tasks that engage students in using oral language to develop reading skills. Ability to determine students' reading levels and design instruction for multi-level classrooms by incorporating appropriate scaffolding or language supportsphonics, fluency, vocabulary and text comprehension; (ii) similarities and differences between reading in a first language and reading in a second language; and (iii) a balanced literacy approach;

4. Skills in teaching grammar and syntax in the context of writing. Ability to model and teach editing skills and organization of writing using predominant text structures in the content areas.]

[54]. Knowledge of the effects of sociocultural variables in the instructional setting;

[6~~5~~]. Proficiency in spoken and written English;

[7~~6~~. Skills in providing language and cognitive support or scaffolding bases on the various stages of the second language acquisition process~~Understanding of second language acquisition~~];

[8~~7~~]. Knowledge of another language and its structure;

[9~~8~~]. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing; [and

~~9. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes; and~~]

10. Knowledge of [both general linguistics] and English linguistics.

8VAC20-543-310. Foreign language preK-12.

A. The specific language of the endorsement shall be noted on the license.

B. Foreign language preK-12 - languages other than Latin [and American Sign Language]. The program in the foreign language shall ensure that the candidate has:

1. Demonstrated the following competencies:

a. Understanding of authentic speech at a normal tempo;

b. Ability to speak with a command of vocabulary, pronunciation, and syntax adequate for expressing thoughts to a native speaker not used to dealing with foreigners;

c. Ability to read and comprehend authentic texts of average difficulty and of mature content;

d. Ability to write a variety of texts including description and narration with clarity and correctness in vocabulary and syntax;

e. Knowledge of geography, history, social structure, and artistic and literary contributions of the target societies;

f. Ability to interpret contemporary lifestyles, customs, and cultural patterns of the target societies;

g. Understanding of the application of basic concepts of phonology, syntax, and morphology to the teaching of the foreign language;

h. Knowledge of the national standards for foreign language learning, current proficiency-based and performance-based objectives of the teaching of foreign languages at the elementary and secondary levels, elementary and secondary methods and techniques for attaining these objectives, the use of technology and media in teaching languages, current curricular developments, the relationship of language study to other areas of the curriculum, and the professional literature of foreign language teaching;

i. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing;

j. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes;

k. Knowledge of the assessment of foreign language skills in listening, speaking, reading, and writing, and the differing types of assessments and their uses, including portfolio-based assessments, integrated performance assessments, and oral proficiency interviews; and

l. Knowledge of the characteristics of effective foreign language teaching, including the standards and key elements related to foreign language teaching as outlined in the Virginia Standards for the Professional Practice of Teachers.

2. Participated in opportunities for significant foreign language study or living experiences in this country or abroad, or both.

C. Foreign language preK-12 - Latin. The program in Latin shall ensure that the candidate has demonstrated the following competencies:

1. Ability to read and comprehend Latin in the original;

2. Ability to pronounce Latin with consistent classical, or ecclesiastical, pronunciation;

3. Knowledge of the vocabulary, phonetics, morphology, and syntax of Latin and the etymological impact of Latin;

4. Ability to discuss the culture and civilization of Greco-Roman society, including history, daily life, art, architecture, and geography;

5. Ability to explain the relationship of Greco-Roman culture and civilization to subsequent cultures and civilizations;

6. Knowledge of major literary masterpieces and their relationship to the historical and social context of the society;

7. Competency in current methodologies for teaching Latin at the elementary and secondary levels; lesson planning; scope and sequencing of material; instructional strategies and assessment under the guidance of an experienced Latin teacher;

8. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing;

9. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes; and

10. Knowledge of the characteristics of effective foreign language teaching, including the standards and key elements related to foreign language teaching as outlined in the Virginia Standards for the Professional Practice of Teachers.

D. Foreign language preK-12 - American Sign Language. The program in American Sign Language shall ensure that the candidate has:

1. Demonstrated the following competencies:

a. Understanding of native users of American Sign Language at a normal tempo;

b. Ability to sign with a command of vocabulary, nominal behaviors, and syntax adequate for expressing thoughts to an American Sign Language user not accustomed to dealing with individuals who do not use American Sign Language;

c. Knowledge of history, social structure, and artistic and literary contributions of the deaf culture;

d. Ability to interpret contemporary lifestyles, customs, and cultural patterns of the deaf culture;

e. Understanding of the application of basic concepts of phonology (e.g., hand shapes, location, palm orientation, and sign movements), syntax, and morphology to the teaching of the American Sign Language;

f. Knowledge of the national standards for foreign language learning, current proficiency-based and performance-based objectives of the teaching of foreign languages at the elementary and secondary levels, elementary and secondary

methods and techniques for attaining these objectives, the assessment of foreign language skills, the use of technology and media in teaching languages, current curricular developments, the relationship of language study to other areas of the curriculum, and the professional literature of foreign language teaching;

g. Understanding of and proficiency in English grammar, usage, and mechanics and their integration in writing;

h. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes; and

i. Knowledge of the characteristics of effective foreign language teaching, including the standards and key elements related to foreign language teaching as outlined in the Virginia Standards for the Professional Practice of Teachers.

2. Participated in opportunities for significant study of the linguistics of American Sign Language and immersion experiences in the deaf culture.

8VAC20-543-320. Gifted education (add-on endorsement).

The program in gifted education shall ensure that the candidate holds an active license with a teaching endorsement or endorsements issued by the Virginia Board of Education and has demonstrated the following competencies:

1. Understanding of principles of the integration of gifted education and general education, including:

a. Strategies to facilitate the interaction of gifted students with students of similar and differing intellectual and academic abilities;

b. Development of activities to encourage parental and community involvement in the education of the gifted;

c. Strategies to encourage collaboration among professional colleagues, especially in the areas of curriculum and professional development; and

d. Strategies to collaborate and consult with general education teachers and other resource specialists on behalf of gifted students.

2. Understanding of the characteristics of gifted students, including:

a. Varied expressions of advanced aptitudes, skills, creativity, and conceptual understandings;

b. Varied expressions of the affective (social-emotional) needs of gifted students; and

c. Gifted behaviors in special populations (i.e., those who are culturally and linguistically diverse, economically disadvantaged, highly gifted, or have special needs or disabilities, including twice-exceptional students).

3. Understanding of specific techniques to identify gifted students using diagnostic and prescriptive approaches to assessment, including:

a. The selection, use, and interpretation of multiple standardized, norm-referenced aptitude and achievement assessment instruments;

b. The selection, use, and evaluation of multiple identification criteria and strategies;

c. The use of both formal and informal nonbiased measures to provide relevant information regarding the aptitude and ability or achievement of potentially gifted students;

d. The use of authentic assessment tools such as portfolios to determine performance, motivation, interest, and other characteristics of potentially gifted students;

e. The use and interpretation of reliable rating scales, checklists, and questionnaires by parents, teachers, and others;

f. The evaluation of data collected from student records such as grades, honors, and awards;

g. The use of case study reports providing information [regarding~~concerning~~] exceptional conditions; and

h. The roles and responsibilities of the identification and placement committee.

4. Understanding and application of a variety of curricular and instructional models, methodologies, and strategies that ensure:

a. The use of the [~~Virginia Standards of Learning~~*Virginia Standards of Learning*] as a foundation to develop a high level of proficiency, academic rigor, and complexity for gifted learners in all curricular academic areas;

b. The acquisition of knowledge and development of products that demonstrate creative and critical thinking as applied to student learning both in and out of the classroom, including inquiry-based instruction, questioning strategies, and problem-solving skills;

c. The development of learning environments that guide students to become self-directed, reflective, independent learners;

d. The acquisition of tools to enable students to contribute to a multicultural, diverse society, including preparation for college and careers; and

e. The development of learning environments that recognize and support the affective needs of the gifted students.

5. Understanding and application of theories and principles of appropriately differentiating curriculum specifically designed to accommodate the accelerated learning aptitudes of gifted students, including:

a. Accelerated and enrichment opportunities that recognize gifted students' needs for advanced content and pacing of instruction, original research or production, problem-finding and problem-solving, higher level thinking that leads to the generation of products, and a focus on issues, themes, and ideas integrated within and across disciplines;

b. Opportunities for students to explore, develop, and research their areas of interest, talent, or strength using varied modes of expression;

c. Emphasis on advanced and complex content that is paced and sequenced to respond to gifted students' persistent intellectual, artistic, or technical curiosity; exceptional problem-solving abilities; rapid acquisition and mastery of information; conceptual thinking processes; and imaginative expression across a broad range of disciplines;

d. Evaluation of student academic growth and learner outcomes through appropriate multiple criteria, including a variety of pre-assessments and post-assessments; and

e. Use of current and advanced technologies to enhance student performance and academic growth.

[6. Understanding the fundamental principles of differentiated curricula for effective program planning and evaluation, including:

a. Program design and development for gifted learners;

b. Research and topics for effective administrative arrangements, supervision, and program implementation;

c. Activities to encourage parental and community involvement in gifted education; and

d. Strategies for building an effective advisory committee.

7~~6~~]. Understanding of contemporary issues and research in gifted education, including:

a. The systematic gathering, analyzing, and reporting of formative and summative data from local, state, and national perspectives; and

b. Current local, state, and national policies, trends, and issues.

[8~~7~~]. Understanding of and proficiency in grammar, usage, and mechanics and their integration in all forms of communication.

[9~~8~~]. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

[10~~9~~]. The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experiences with gifted students [in a public or accredited nonpublic school.]

8VAC20-543-330. Health and physical education preK-12.

The program in health and physical education preK-12 shall ensure that the candidate has demonstrated the following competencies:

[1.~~1~~] Understanding of the knowledge, skills, and processes of health and physical education as defined in the [~~Virginia Standards of Learning~~*Virginia Standards of Learning* including;~~.~~

a. Competence in motor skills and movement patterns needed to perform a variety of physical activities;

b. Knowledge of structures and functions of the body and how they relate to and are affected by human movement to learning and developing motor skills and specialized movement forms;

c. Demonstrate the aptitude, attitude, and skills to lead responsible, fulfilling, and respectful lives; and

d. Understand the importance of energy balance and nutritional needs of the body to maintain optimal health and prevent chronic disease.]

2. Understanding basic human anatomy, physiology, [~~and~~]kinesiology[, and exercise physiology] needed to apply discipline-specific biomechanical concepts critical to the development of physically educated individuals.

3. Understanding of the basic scientific principles of human movement as they apply to:

a. Health-related fitness (flexibility, muscular strength and endurance, cardio respiratory endurance, and body composition);

b. Skill-related fitness (coordination, agility, power, balance, speed, and reaction time); and

c. Analyzing and correcting critical elements of motor skills and performance concepts related to skillful movement and fitness.

4. Basic understanding of the administration and planning for a health and physical education program, including:

a. Differentiated instruction based on a continuous learning cycle;

b. Student safety, classroom management, injury prevention, and liability issues;

c. Standards-based curriculum and assessments that foster student learning and inform decisions about instruction;

d. The role of coordinated school and community health.

e. Utilizing school health advisory boards, local health departments, and other representative stakeholders for support for best practice; and

f. Increasing physical activity behaviors before, during, and after school.

[5. Understanding of the knowledge, skills, and processes of health education as defined in the *Virginia Standards of Learning*, including:

a. Demonstrate the knowledge and skills to make healthy decisions that reduce health risks and enhance the health of self and others;

b. Demonstrate the ability to access, evaluate, and use health information, products, and services that influence health and wellness in a positive manner; and

c. Demonstrate the use of appropriate health practices and behaviors to promote a safe and healthy community when alone, with family, at school, and in other group settings.

65]. Understanding of the essential health knowledge, skills, and processes for teaching developmentally and culturally appropriate health education content standards, including:

a. Health promotion and chronic disease prevention;

b. Mental, social, and emotional health;

c. Nutrition, body image, eating disorders, energy balance, and weight management;

d. Tobacco, alcohol, and other drug use prevention;

e. Safety and emergency care (first aid, CPR, AED, universal precautions);

f. Injury and violence prevention;

g. Consumer health and information access;

h. Communicable and noncommunicable diseases prevention and treatment;

i. Environmental health;

j. Personal, family, and community health;

k. Bullying prevention, resistance skills, and conflict mediation; and

l. Theories and models of behavior change and goal-setting.

[7~~6~~]. Understanding of the knowledge, skills, and processes for teaching physical education, including:

a. Articulated, sequential preK-12 instruction in a variety of movement forms that include:

(1) Functional fitness;

(2) Developmentally appropriate movement skills; and

(3) Movement principles and concepts.

b. Activities that meet the needs of the diverse learner;

c. Design learning activities to help students understand, develop, value and achieve personal fitness;

d. Knowledge of human growth, development, and motor learning;

e. The relationship between a physically active lifestyle and health;

f. Knowledge of the cognitive, social, and emotional development through physical activity;

g. Incorporate strategies that promote effective physical activity learning environments;

h. Use of authentic, traditional, psychomotor, and fitness assessment methods;

i. The cultural significance of dance, leisure, competition, and sportsmanship; and

j. Demonstrate personal competence in motor skill performance for a variety of movement patterns, modeling healthy behaviors, and maintaining health-enhancing level of fitness.

[8~~7~~]. Understanding of and ability to design developmentally appropriate curriculum, instruction, and performance-based assessment that is aligned with the [~~Virginia Standards of Learning~~*Virginia Standards of Learning]* for Health and Physical Education:

a. Develop a developmentally appropriate scope and sequence plan of essential health and physical education concepts, information, and skills based on the *[~~Virginia Standards of Learning~~Virginia Standards of Learning]*;

b. Use the scope and sequence plan to develop performance indicators that describe the essential concepts and skills;

c. Use new and emerging instructional technology and media effectively to enhance learning;

d. Use research-based educational strategies to meet diverse learning styles and needs;

e. Adapt and create strategies best suited for delivering instruction in diverse settings;

f. Employ individual and cooperative group learning strategies;

g. Connect instruction to prior student learning, and to other curricular areas; and

h. Use evaluation to plan a continuous cycle of learning strategies that reinforce mastery of performance indicators.

[9~~8~~]. Obtaining, analyzing and applying health-related and fitness-related data to meet the cultural, social, growth, and development needs of the students and community:

a. Select valid and current sources of information and data;

b. Use computerized sources of information and appropriate data-gathering instruments; and

c. Analyze and interpret data and determine priority areas of focused instruction.

[10~~9~~]. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

[11~~10~~]. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-340. History and social sciences.

The program in history and social sciences shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes of history and the social science disciplines as defined by the [~~Virginia History and Social Sciences Standards of Learning~~*Virginia History and Social Sciences Standards of Learning*] and how the standards provide the foundation for teaching history and the social sciences, including in:

a. United States history.

(1) The evolution of the American constitutional republic and its ideas, institutions, and practices from the philosophical origins in the Enlightenment through the debates of the colonial period to the present; the American Revolution, including ideas and principles preserved in significant Virginia and United States historical documents as required by § 22.1-201 of the Code of Virginia (the Declaration of American Independence; the general principles of the Constitution of the United States; the Virginia Statute of Religious Freedom; the charters of The Virginia Company of April 10, 1606, May 23, 1609, and March 12, 1612; and the Virginia Declaration of Rights); Articles of Confederation; and historical challenges to the American political system;

(2) The influence of religious traditions on American heritage and contemporary American society;

(3) The influence of immigration on American political, social, cultural, and economic life;

(4) The origins, effects, aftermath, and significance of the two world wars, the Korean and Vietnam conflicts, and the post-Cold War era;

(5) The social, political, and economic transformations in American life during the 20th century;

(6) The tensions between liberty and equality, liberty and order, region and nation, individualism and the common welfare, and cultural diversity and national unity; and

(7) The difference between a democracy and a republic and other types of economic and political systems.

b. World history.

(1) The political, philosophical, and cultural legacies of ancient American, Asian, African, and European civilizations;

(2) The origins, ideas, and institutions of Judaism, Christianity, Hinduism, Confucianism and Taoism, and Shinto, Buddhist, and Islamic religious traditions;

(3) Medieval society, institutions, and civilizations; feudalism; and the evolution of representative government;

(4) The social, political, cultural, and economic innovations of selected civilizations in Africa, Asia, Europe, and the Americas;

(5) The ideas of the Renaissance and the Reformation, European exploration, and the origins of capitalism and colonization;

(6) The cultural ideas of the Enlightenment and the intellectual and political revolution of the 17th and 18th centuries;

(7) The sources, results, and influences of the American, French, and Latin American revolutions;

(8) The social and economic consequences of the Industrial Revolution and its impact on politics, culture, and the lives of everyday people;

(9) The influence of global ideologies of the 19th and 20th centuries (liberalism, republicanism, social democracy, Marxism, nationalism, Communism, Fascism, Nazism, and post-colonialism);

(10) The origins, effects, aftermath, and significance of the two world wars, the Korean and Vietnam conflicts, and the post-Cold War era; and

(11) The development of globalization and the growing interdependence and inter-relationship among countries and cultures in the world.

c. Civics, government, and economics.

(1) The essential characteristics of governments;

(2) The importance of the rule of law for the protection of individual rights and the common good;

(3) The rights and responsibilities of American citizenship;

(4) The nature and purposes of constitutions and alternative ways of organizing constitutional governments;

(5) American political culture;

(6) Principles of the American constitutional republic;

(7) The idea of federalism and states' rights;

(8) The structures, functions, and powers of local and state government;

(9) Importance of citizen participation in the political process in local and state government;

(10) Local government and civics instruction specific to Virginia;

(11) The structures, functions, and powers of the national government;

(12) The role of the United States government in foreign policy and national security;

(13) The structure of the federal judiciary;

(14) The structure and function of the United States market economy as compared with other economies;

(15) Knowledge of the impact of the government role in the economy and individual economic and political freedoms;

(16) Knowledge of economic systems in the areas of productivity and key economic indicators;

(17) The analysis of global economic trends; and

(18) Knowledge of international organizations, both political and economic, such as the United Nations, International Court in the Hague, and the International Monetary Fund.

d. Geography.

(1) Relationship between human activity and the physical environment, the ways in which geography governs human activity, and the effects of human activity on geographic features;

(2) Use of maps and other geographic representations, tools, and technologies to acquire, process, and report information;

(3) Physical and human characteristics of places;

(4) Physical processes that shape the surface of the earth;

(5) Characteristics, distribution, and migration of human populations;

(6) Patterns and networks of economic interdependence;

(7) Processes, patterns, and functions of human settlement;

(8) How the forces of conflict and cooperation influence the division and control of the earth's surface;

(9) Changes that occur in the meaning, use, distribution, and importance of resources;

(10) Applying geography to interpret the past and the present and to plan for the future; and

(11) Impact of geospatial technologies on the study of geography, physical and human.

2. Understanding of history and social sciences to appreciate the significance of:

a. Diverse cultures and shared humanity;

b. How things happen, how they change, and how human intervention matters;

c. The interplay of change and continuity;

d. How people in other times and places have struggled with fundamental questions of truth, justice, and personal responsibility;

e. The importance of individuals and groups who have made a difference in history and the significance of personal character to the future of society;

f. The relationship among history, geography, civics, and economics;

g. The difference between fact and conjecture, evidence and assertion, and the importance of framing useful questions;

h. How ideas have real consequences; and

i. The importance of primary documents and the potential problems with second-hand accounts.

3. Understanding of the use of the content and processes of history and social sciences instruction, including:

a. Fluency in historical thinking and geographic analysis skills;

b. Skill in debate, discussion, and persuasive writing;

c. The ability to organize key social science content into meaningful units of instruction based on historical thinking skills;

d. The ability to provide instruction using a variety of instructional techniques;

e. The ability to evaluate primary and secondary instructional resources, instruction, and student achievement;

f. The ability to incorporate appropriate technologies into social science instruction; and

g. The development of digital literacy skills while recognizing the influence of the media.

4. Understanding of the content, processes, and skills of one of the social sciences disciplines at a level equivalent to an undergraduate major, along with proficient understanding of the three supporting disciplines to ensure:

a. The ability to teach the processes and organizing concepts of social science;

b. An understanding of the significance of the social sciences; and

c. Student achievement in the social sciences.

5. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing and communications.

6. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

7. Skills necessary to teach research including use of primary and secondary sources, ethical accessing, evaluating, organizing, crediting, and synthesizing information.

8VAC20-543-350. Journalism (add-on endorsement).

The program in journalism (add-on endorsement) shall ensure that the candidate holds an active license with a teaching endorsement or endorsements issued by the Virginia Board of Education and has demonstrated the following competencies:

1. Understanding the history and functions of journalism in American culture including the value of freedom of speech and of the press and the complexity of legal and ethical issues;

2. Understanding press law and ethics as it applies to scholastic media, including First Amendment-related rights and responsibilities;

3. Understanding of and experience in theory and practice of both print and nonprint media including design and layout production and the use of technology;

4. Possession of skills in teaching journalistic writing, interviewing, and editing for a variety of purposes, audiences, and formats;

5. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing and communications;

6. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes; and

7. Skills to lead student media and production, including an understanding of fiscal responsibility, conflict resolution, and time management.

8VAC20-543-360. Keyboarding (add-on endorsement).

The program in keyboarding (add-on endorsement) shall ensure that the candidate holds an active license with a teaching endorsement or endorsements issued by the Virginia Board of Education and has demonstrated the following competencies:

1. Possession of skills in fingering and keyboard manipulation techniques to model and provide touch keyboarding instruction;

2. Ability to provide instruction that allows students to develop touch fingering techniques in a kinesthetic response to the keyboard required for rapid, accurate entry of data and information;

3. Ability to provide instruction for current procedures in formatting documents;

4. Ability to provide instruction that allows students to develop proper keyboarding techniques based on ergonomics research to minimize future repetitive strain injuries;

5. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing and communications; and

6. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-370. Library media preK-12.

The program in library media preK-12 shall ensure that the candidate has demonstrated the following competencies:

1. Proficiency in teaching for learning, including knowledge of learners and learning; effective and knowledgeable teaching; collaborative instructional partners; integration of 21st century skills, learning standards, and technologies; assessment of and for student

learning; and the design and implementation of instruction that engages students' interests and develops their ability to inquire, think critically, and gain and share knowledge.

2. Proficiency in literacy and reading, including familiarity with children's, young adult, and professional literature in multiple formats; use of a variety of strategies to promote reading for enjoyment and information; collection development to support diverse learning needs; and collaboration to reinforce reading instructional strategies.

3. Proficiency in information and knowledge, including efficient and ethical information-seeking behavior, ethical and equitable access to information, design and delivery of authentic learning through current and emerging technology, and the use of evidence-based action research to create and share knowledge.

4. Proficiency in advocacy and leadership, including networking with the library community, commitment to professional development, leadership in articulating the role of the school library program in the educational community and in student learning, and advocacy for school library programs, resources, and services.

5. Proficiency in program management and administration, including planning, developing, implementing, and evaluating library programs, collections, and facilities; personnel; funding; organization of materials; professional ethics; and strategic planning and program assessment.

6. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing in multiple formats.

7. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-380. Mathematics.

The program in mathematics shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes of the [~~Virginia Mathematics Standards of Learning~~*Virginia Mathematics Standards of Learning]* and how curriculum may be organized to teach these standards to diverse learners;

2. Understanding of a core knowledge base of concepts and procedures within the discipline of mathematics, including the following strands: number systems and number theory, geometry and measurement, analytic geometry, statistics and probability, functions and algebra, multivariate calculus, discrete mathematics, and linear and abstract algebra;

3. Understanding of the sequential and interrelated nature of mathematics, the vertical progression of mathematical standards, and the mathematical structures inherent in the content strands;

4. Understanding of the connections among mathematical concepts and procedures and their practical applications;

5. Understanding of and the ability to use the five processes - becoming mathematical problem-solvers, reasoning mathematically, communicating mathematically, making mathematical connections, and using mathematical models and representations - at different levels of complexity;

6. Understanding [~~of the history of mathematics, including~~]the contributions of different individuals and cultures toward the development of mathematics and the role of mathematics in culture and society;

7. Understanding of major current curriculum studies and trends in mathematics;

8. Understanding how to utilize appropriate technologies for teaching and learning mathematics, including graphing utilities, dynamic software, spreadsheets, and virtual manipulatives;

9. Understanding of and the ability to select, adapt, differentiate, evaluate, and use instructional materials and resources, including professional journals and technology;

10. Understanding of and the ability to use strategies for managing, assessing, and monitoring student learning, including diagnosing student errors;

11. Understanding of and the ability to use strategies to teach mathematics to diverse learners;

12. [Knowledge of programming in at least two widely used programming languages, including definition, structure, and comparison;

13. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing; and~~ Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.~~;and

14.Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes. ~~Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing~~. ~~and]~~

8VAC20-543-390. Mathematics – [~~A~~a]lgebra I (add-on endorsement).

The program in Algebra I shall ensure that the candidate holds an active license with a teaching endorsement or endorsements issued by the Virginia Board of Education and has demonstrated the following competencies:

1. Understanding of the mathematics relevant to the content identified in the Mathematics [~~Standards of Learning~~*Standards of Learning*] and how the standards provide the foundation for teaching middle level mathematics through Algebra I, including:

a. The structure of real numbers and subsets, basic operations, and properties;

b. Elementary number theory, ratio, proportion, and percent;

c. Algebra, trigonometry, and analytic geometry: operations with monomials and polynomials; rational expressions; linear, quadratic, and higher degree equations and inequalities; linear systems of equations and inequalities; nonlinear systems of equations; radicals and exponents; complex numbers; arithmetic and geometric sequences and series; algebraic, trigonometric, logarithmic, exponential, absolute value, and step functions; domain and range of functions; composite and inverse functions; one-to-one mapping; transformations between graphical, tabular, and symbolic forms of functions; direct and inverse variation; line and curve of best fit; conics; and recognition and application of trigonometric identities;

d. Calculus: applications of limits, differentiation, and integration;

e. Linear algebra: matrices, vectors, and linear transformations;

f. Geometry: geometric figures, their properties, relationships, and application of the Pythagorean Theorem; using deductive axiomatic methods of proof and inductive reasoning; perimeter, area, and surface area of two-dimensional and three-dimensional figures; coordinate and transformational geometry; constructions and applications of algebra in geometry;

g. Probability and statistics: experimental and theoretical probability; prediction; graphical representations, including box-and-whisker plots; and measures of center, range, standard deviation, z-scores, and simple and normal distributions; and

h. Discrete mathematics: symbolic logic, sets, permutations and combinations, functions that are defined recursively, and linear programming.

2. Understanding of varied pedagogical approaches to teaching algebraic concepts and their connected procedures.

3. Understanding of the connections among algebraic concepts, procedures, models, and practical applications.

4. Understanding of the sequential and interrelated nature of mathematics and the mathematical structures inherent in algebra.

5. Understanding of and the ability to use the five processes - becoming mathematical problem-solvers, reasoning mathematically, communicating mathematically, making mathematical connections, and using mathematical models and representations - at different levels of complexity.

6. Understanding how to utilize appropriate technologies for teaching and learning algebra, including graphing utilities, dynamic software, spreadsheets, and virtual manipulatives.

7. Understanding of and the ability to use strategies for managing, assessing, and monitoring student learning, including diagnosing student errors.

8. Understanding of and the ability to use strategies to teach algebra to diverse learners.

9. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

10. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-400. Music education – instrumental preK-12.

The program in music education - instrumental preK-12 shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes of the music discipline as defined in the [~~Virginia Standards of Learning~~*Virginia Standards of Learning]* and how they provide a necessary foundation integral to teaching instrumental music.

2. Understanding of the common elements of music - rhythm, melody, harmony, timbre, texture, dynamics, and form - and their relationship with each other and student academic needs and employing this understanding in the analysis of music.

3. Effective musicianship through the development of:

a. Basic skills in conducting, score reading, teaching musical courses, and rehearsal techniques for choral and instrumental music;

b. Skills in composing, arranging, and adapting music to meet the classroom needs and ability levels of school performing groups;

c. Skills in providing and directing creative experiences and improvising when necessary;

d. Proficiency, sufficient for classroom instruction, on keyboard or other accompanying instrument; and

e. The ability to perform in ensembles.

4. Knowledge and understanding of teaching music, including music theory; performance; music history and cultural context; analysis, evaluation, and critique; and aesthetics.

5. Knowledge of music history and literature with emphasis on the relationship of music to culture and the ability to place compositions in historical and stylistic perspective.

6. Knowledge of a comprehensive program of music education based upon sound philosophy, content, and methodology for teaching in elementary, middle, and secondary schools.

7. Specialization on a musical instrument and functional teaching knowledge on each of the string, brass, woodwind, and percussion instruments.

8. Competency in teaching rehearsing and conducting combined instrumental and vocal groups. In addition, the program shall provide instruction in business procedures, organization, and management of large and small instrumental ensembles.

9. Knowledge of vocal techniques in teaching, rehearsing, and conducting combined instrumental and vocal groups.

10. Knowledge and understanding of technological and artistic copyright laws.

11. Knowledge and understanding of classroom management and safety, including performance and studio.

12. Knowledge of a variety of instructional and assessment strategies to foster, support, and enhance student music learning.

13. Knowledge and understanding of technology, with applications for instruction, resources, artistic expression, administration, business procedures, assessment, and communication.

14. Knowledge and understanding of appropriate and sensitive attention to diversity and cultural understanding.

15. Knowledge of related areas of the fine arts, such as dance arts, theatre arts, and the visual arts.

16. Observation and professional laboratory experiences with pupils in elementary, middle, and secondary schools, including instruction of instrumental groups.

17. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

18. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-410. Music education – vocal/choral preK-12.

A. The program in music education - vocal/choral preK-12 shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes of the music discipline as defined in the [~~Virginia Standards of Learning~~*Virginia Standards of Learning*] and how they provide a necessary foundation integral to teaching instrumental music.

2. Understanding of the common elements of music - rhythm, melody, harmony, timbre, texture, dynamics, and form - and their relationship with each other and student academic needs and to employ this understanding in the analysis of music.

3. Effective musicianship through the development of:

a. Basic skills in conducting, score reading, teaching musical courses, and rehearsal techniques for choral and instrumental music;

b. Skills in composing, arranging, and adapting music to meet the classroom needs and ability levels of school performing groups;

c. Skills in providing and directing creative experiences and improvising when necessary;

d. Proficiency, sufficient for classroom instruction, on keyboard or other accompanying instrument; and

e. The ability to perform in ensembles.

4. Knowledge and understanding of teaching music, including music theory; performance; music history and cultural context; analysis, evaluation, and critique; and aesthetics.

5. Knowledge of music history and literature with emphasis on the relationship of music to culture and the ability to place compositions in historical and stylistic perspective.

6. Knowledge of a comprehensive program of music education based upon sound philosophy, content, and methodology for teaching in elementary, middle, and secondary schools.

7. Specialization in the methods, materials, and media appropriate to the teaching of vocal/choral and general music at elementary, middle, and secondary levels.

8. Competency in teaching, rehearsing, and conducting choral ensembles and combined vocal and instrumental school groups. In addition, the program shall provide instruction in business procedures, organization, and management of large and small choral ensembles.

9. Knowledge of instrumental techniques in teaching, rehearsing, and conducting combined vocal and instrumental school groups.

10. Knowledge and understanding of technological and artistic copyright laws.

11. Knowledge and understanding of classroom management and safety, including performance and studio.

12. Knowledge of a variety of instructional and assessment strategies to foster, support, and enhance student music learning.

13. Knowledge and understanding of technology, with applications for instruction, resources, artistic expression, administration, business procedures, assessment, and communication.

14. Knowledge and understanding of appropriate and sensitive attention to diversity and cultural understanding.

15. Knowledge of related areas of the fine arts, such as dance arts, theatre arts, and the visual arts.

16. Observation and professional laboratory experiences with pupils at elementary, middle, and secondary levels, including instruction of choral groups.

17. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

18. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-420. Science – biology.

The program in biology shall ensure that the candidate [has demonstrates~~d~~] the following competencies:

1. Understanding of the knowledge, skills, and [practices~~processes~~] of the four core science disciplines as [Earth science, biology, chemistry, and physics] defined in the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning*] and how these provide a sound foundation for teaching biology.

2. Understanding of the nature of science and scientific inquiry, including the:

a. Function of research design and experimentation;

b. Role and nature of the theory in explaining and predicting events and phenomena;

c. Practices required to provide empirical answers to research questions, including data collection and analysis, modeling, augmentation with evidence, and constructing explanations;

d. Reliability of scientific knowledge and its constant scrutiny and refinement;

e. Self-checking mechanisms used by science to increase objectivity including peer review; and

f. Assumptions, influencing conditions, and limits of empirical knowledge.

3. Understanding of the knowledge, skills, and processes for teaching laboratory science, including the ability to:

a. Design instruction reflecting the goals of the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning*];

b. Implement [classroom, field, and] laboratory safety rules and procedures and ensure that students take appropriate safety precautions;

c. Conduct research projects and experiments including applications of the design process and technology;

d. Conduct systematic field investigations using the school grounds, the community, and regional resources;

e. Organize key biological content, skills, and practices into meaningful units of instruction that actively engage students in learning;

f. Design instruction to meet the needs of diverse learners using a variety of techniques;

g. Evaluate instructional materials[, technologies,] and teaching practices;

h. Conduct formative and summative assessments of student learning;

i. Incorporate instructional technology to enhance student performance; and

j. Ensure student competence in biology.

4. Understanding of the content, [~~processes, and~~] skills [practices]of biology, equivalent to an undergraduate degree in biology, with course work in genetics, biochemistry/molecular biology, cell biology, botany, zoology, anatomy/physiology, ecology, and evolutionary biology.

5. Understanding of basic physics, chemistry (including organic chemistry), the Earth sciences, and mathematics (including statistics) to ensure:

a. The placement of biology in an appropriate interdisciplinary context;

b. The ability to teach the [skills, practices~~processes~~] and crosscutting concepts common to the [Earth, biological,~~natural~~] and physical sciences;

c. The application of key principles in biology to solve practical problems; and

d. A "systems" understanding of the natural world.

6. Understanding of the contributions and significance of biology, including:

a. Its social, cultural, and economic significance;

b. The relationship of biology and other sciences to mathematics, the design process, and technology; and

c. The historical development of scientific concepts and scientific reasoning.

7. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-430. Science – chemistry.

The program in chemistry shall ensure that the candidate [has demonstrate~~s~~d] the following competencies:

1. Understanding of the knowledge, skills, and [practices~~processes~~] of the four core science disciplines [of Earth and space sciences, biology, chemistry, and physics] as defined in the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning*] and how they provide a sound foundation for teaching chemistry.

2. Understanding of the nature of science and scientific inquiry including the:

a. Function of research design and experimentation;

b. Role and nature of the theory in explaining and predicting events and phenomena;

c. Practices required to provide empirical answers to research questions, including data collection and analysis, modeling, a[r~~u~~]g[u]mentation with evidence, and constructing explanations;

d. Reliability of scientific knowledge and its constant scrutiny and refinement;

e. Self-checking mechanisms used by science to increase objectivity including peer review; and

f. Assumptions, influencing conditions, and limits of empirical knowledge.

3. Understanding of the knowledge, skills, and [practices~~processes~~] for teaching laboratory science, including the ability to:

a. Design instruction reflecting the goals of the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning*];

b. Implement [classroom, field, and] laboratory safety rules and procedures and ensure that students take appropriate safety precautions;

c. Conduct research projects and experiments including applications of the design process and technology;

d. Conduct systematic field investigations using the school grounds, the community, and regional resources;

e. Organize key chemistry content, skills, and practices into meaningful units of instruction that actively engage students in learning;

f. Design instruction to meet the needs of diverse learners using a variety of techniques;

g. Evaluate instructional materials[, technologies,] and teaching practices;

h. Conduct formative and summative assessments of student learning;

i. Incorporate instructional technology to enhance student performance; and

j. Ensure student competence in chemistry.

4. Understanding of content, [~~processes, and~~] skills[, and practices] of chemistry, equivalent to an undergraduate degree in chemistry, with course work in biochemistry, inorganic chemistry, organic chemistry, physical chemistry, and analytical chemistry.

5. Understanding of basic physics, Earth science, biology, and mathematics to ensure:

a. The placement of chemistry in an appropriate interdisciplinary context;

b. The ability to teach the [skills, practices, ~~processes~~] and crosscutting concepts common to the [Earth, biological,~~natural~~] and physical sciences;

c. The application of key principles in chemistry to solve practical problems; and

d. A "systems" understanding of the natural world.

6. Understanding of the contributions and significance of chemistry, including:

a. Its social, cultural, and economic significance;

b. The relationship of chemistry and other sciences to mathematics, the design process and technology; and

c. The historical development of scientific concepts and scientific reasoning.

7. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-440. Science – Earth science.

The program in Earth science shall ensure that the candidate [has demonstrate~~s~~d] the following competencies:

1. Understanding of the knowledge, skills, and [practices~~processes~~] of the four core science disciplines [of Earth and space sciences, biology, chemistry, and physics] as defined in the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning*] and how these provide a sound foundation for teaching Earth science.

2. Understanding of the nature of science and scientific inquiry, including the:

a. Function of research design and experimentation;

b. Role and nature of the theory in explaining and predicting events and phenomena;

c. Practices required to provide empirical answers to research questions, including data collection and analysis, modeling, a[r~~u~~gu]mentation with evidence, and constructing explanations;

d. Reliability of scientific knowledge and its constant scrutiny and refinement;

e. Self-checking mechanisms used by science to increase objectivity including peer review; and

f. Assumptions, influencing conditions, and limits of empirical knowledge.

3. Understanding of the knowledge, skills, and practices for teaching laboratory science, including the ability to:

a. Design instruction reflecting the goals of the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning*];

b. Implement [classroom, field, and] laboratory safety rules and procedures and ensure that students take appropriate safety precautions;

c. Conduct research projects and experiments including applications of the design process and technology;

d. Conduct systematic field investigations using the school grounds, the community, and regional resources;

e. Organize key Earth science content, skills, and practices into meaningful units of instruction that actively engage students in learning;

f. Design instruction to meet the needs of diverse learners using a variety of techniques;

g. Evaluate instructional materials[,technologies,] and teaching practices;

h. Conduct formative and summative assessments of student learning;

i. Incorporate instructional technology to enhance student performance; and

j. Ensure student competence in Earth science.

4. Understanding of the content, [~~processes, and~~] skills [and practices] of Earth science, equivalent to an undergraduate degree in geology, or a related area, with course work in structural geology, paleontology, petrology, oceanography, meteorology, and astronomy/space science.

5. Understanding of basic physics, chemistry (including organic chemistry), biology, and mathematics to ensure:

a. The placement of Earth science in an appropriate interdisciplinary context;

b. The ability to teach the [skills, practices,~~processes~~] and crosscutting concepts common to the [Earth, biological,~~natural~~] and physical sciences;

c. The application of key principles in Earth science to solve practical problems; and

d. A "systems" understanding of the natural world.

6. Understanding of the contributions and significance of Earth science, including:

a. Its social, cultural, and economic significance;

b. The relationship of Earth science and other sciences to mathematics, the design process, and technology; and

c. The historical development of scientific concepts and scientific reasoning.

7. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-450. Science – physics.

The program in physics shall ensure that the candidate [has demonstrate~~s~~d] the following competencies:

1. Understanding of the knowledge, skills, and [practices~~processes~~] of the four core science disciplines [of Earth sciences, biology, chemistry, and physics] as defined in the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning*] and how these provide a sound foundation for teaching physics.

2. Understanding of the nature of science and scientific inquiry, including the

a. Function of research design and experimentation;

b. Role and nature of the theory in explaining and predicting events and phenomena;

c. Practices required to provide empirical answers to research questions, including data collection and analysis, modeling, a[ru~~e~~gu]mentation with evidence, and constructing explanations;

d. Reliability of scientific knowledge and its constant scrutiny and refinement;

e. Self-checking mechanisms used by science to increase objectivity including peer review; and

f. Assumptions, influencing conditions, and limits of empirical knowledge.

3. Understanding of the knowledge, skills, and processes for teaching laboratory science, including the ability to:

a. Design instruction reflecting the goals of the [~~Virginia Science Standards of Learning~~*Virginia Science Standards of Learning*];

b. Implement [classroom, field, and] laboratory safety rules and procedures and ensure that students take appropriate safety precautions;

c. Conduct research projects and experiments including applications of the design process and technology;

d. Conduct systematic field investigations using the school grounds, the community, and regional resources;

e. Organize key physics content, skills, and practices into meaningful units of instruction that actively engage students in learning;

f. Design instruction to meet the needs of diverse learners using a variety of techniques;

g. Evaluate instructional materials[, technologies,] and teaching practices;

h. Conduct formative and summative assessments of student learning;

i. Incorporate instructional technology to enhance student performance; and

j. Ensure student competence in physics.

4. Understanding of content, processes, and skills of physics, equivalent to an undergraduate degree in physics, with course work in mechanics, electricity and magnetism, optics, and modern physics.

5. Understanding of basic Earth science, chemistry (including organic chemistry), biology, and mathematics to ensure:

a. The placement of physics in an appropriate interdisciplinary context;

b. The ability to teach the [~~processes~~skills, practices] and crosscutting concepts common to the [~~natural~~Earth, biological,] and physical sciences; [~~and~~

c. The application of key principles in physics to solve practical problems; and

d~~c~~]. A "systems" understanding of the natural world.

6. Understanding of the contributions and significance of physics, including:

a. Its social, cultural, and economic significance;

b. The relationship of physics and other sciences to mathematics, the design process, and technology; and

c. The historical development of scientific concepts and scientific reasoning.

7. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-460. Special education adapted curriculum K-12.

A. The program in special education is designed to ensure through coursework and field experiences in a variety of settings that the candidate has demonstrated the core competencies in this section to prepare children and youth for participation in the general education curriculum and within the community to the maximum extent possible. The candidate also shall complete the competencies in at least one of the endorsement areas of Special Education Adapted Curriculum K-12, in addition to those required under professional studies, including reading and language acquisition.

1. Foundations. Characteristics, legal, and medical aspects.

a. Knowledge of the foundation for educating students with disabilities, including:

(1) Historical perspectives, models, theories, philosophies, and trends that provide the basis for special education practice;

(2) Characteristics of children and youth with disabilities relative to age, varying levels of severity, and developmental differences manifested in cognitive, linguistic, physical, psychomotor, social, or emotional functioning;

(3) Normal patterns of development (i.e., physical, psychomotor, cognitive, linguistic, social, and emotional development) and their relationship to the various disabilities;

(4) Medical aspects of disabilities;

(5) The dynamic influence of the family system and cultural and environmental milieu and related issues pertinent to the education of students with disabilities;

(6) Educational implications of the various disabilities; and

(7) Understanding of ethical issues and the practice of accepted standards of professional behavior.

b. An understanding and application of the legal aspects, regulatory requirements, and expectations associated with identification, education, and evaluation of students with disabilities, including:

(1) Legislative and judicial mandates related to education and special education (e.g., the Individuals with Disabilities Education Act, § 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act, the No Child Left Behind Act of 2001, etc.);

(2) Current regulations governing special education (e.g., individualized education program (IEP) development; disciplinary practices, policies, and procedures; and alternative placements and programs in schools); and

(3) Rights and responsibilities of parents, students, teachers, and schools as they relate to individuals with disabilities and disability issues.

2. Assessments and evaluation.

An understanding and application of the foundation of assessment and evaluation related to best special education practice, including:

a. Ethical issues and responsibilities in the assessment of individuals with disabilities;

b. Procedures for screening, prereferral, referral, and eligibility determinations;

c. Factors that may influence assessment findings such as cultural, behavioral, and learning diversity;

d. A general knowledge of measurement theory and practice, including validity, reliability, norming, bias, sensitivity, and specificity;

e. Administration, scoring, and interpretation of commonly used individual and group instruments, including norm-referenced, criterion-referenced, and curriculum-based

measures as well as task analysis, observation, portfolio, and environmental assessments;

f. Synthesis and interpretation of assessment findings for eligibility, program planning, and program evaluation decisions; and

g. Knowledge of the Virginia Accountability System, assessment options, and procedures for participation for students with disabilities.

3. Management of instruction and behavior.

An understanding and application of classroom and behavior management techniques and individual interventions, including techniques that:

a. Promote emotional well-being and teach and maintain behavioral conduct and skills consistent with norms, standards, and rules of the educational environment;

b. Address diverse approaches and classroom organization based upon[culturally responsive] behavioral, cognitive, affective, social, and ecological theory and practice;

c. Provide positive behavioral supports; and

d. Are based on functional assessment of behavior.

4. Collaboration.

a. Skills in consultation, case management, and collaboration, including:

Coordination of service delivery with related service providers, general educators, and other professions in collaborative work environments to include:

(1) Understanding the [*Virginia Standards of Learning*~~Standards of Learning (SOL)~~], structure of the curriculum, and accountability systems across K-12;

(2) Understanding and assessing the organization and environment of general education classrooms across the K-12 setting;

(3) Implementation of collaborative models, including collaborative consultation, co-teaching with co-planning, and student intervention teams;

(4) Procedures to collaboratively develop, provide, and evaluate instructional and behavioral plans consistent with students' individual needs;

(5) Understanding of the roles and responsibilities of each member of the collaborative team; and

(6) Knowledge and application of effective communication strategies and culturally responsive strategies with a variety of stakeholders in the collaborative environment;

b. Training, managing, and monitoring paraprofessionals;

c. Involving of families in the education of their children with disabilities;

d. Understanding the standards of professionalism;

e. Cooperating with community agencies and other resource providers; and

f. Models and strategies for promoting students' self-advocacy skills.

B. The program in special education adapted curriculum K-12 shall ensure through coursework and field experiences in a variety of settings that the candidate seeking endorsement in special education adapted curriculum has the special education core competencies and the specific competency requirements specified in this section. The candidate shall demonstrate the following competencies to prepare children and youth to acquire the functional, academic, and community living skills necessary to reach an appropriate level of independence and be assessed in progress toward an aligned curriculum while participating in programs with nondisabled peers to the fullest extent possible:

1. Characteristics.

a. Demonstrate knowledge of the definitions; characteristics, including medical and health conditions; and learning and behavioral support needs of students with disabilities (K-12) whose cognitive impairments or adaptive skills require adaptations to the general curriculum and whose functional skills are significantly different from typically developing peers, and therefore require adaptations to the general curriculum for an appropriate education, including, but not limited to, students with:

(1) Autism spectrum disorders;

(2) Developmental delay;

(3) Intellectual disability;

(4) Traumatic brain injury; and

(5) Multiple disabilities, including sensory, deaf-blindness, speech-language, orthopedic and/or [other]health impairments as an additional disability to those referenced in subdivision 1 a of this subsection.

b. Knowledge of characteristics shall include:

(1) Medical needs, sensory needs, and position and handling needs of children with multiple disabilities;

(2) Speech and language development and communication and impact on educational, behavioral, and social interactions;

(3) Impact of disability on self-determination and self-advocacy skills; and

(4) Historical and legal perspectives, models, theories, philosophies, and trends related to specific student populations.

2. Individualized education program (IEP) development and implementation.

a. Demonstrate knowledge of the eligibility process and legal and regulatory requirements for IEP development including timelines, components, team composition, roles, and responsibilities.

b. Apply knowledge of content standards, assessment, and evaluation throughout the K-12 grade levels to:

(1) Construct, use, and interpret a variety of standardized and nonstandardized data collection techniques, such as task analysis, observation, portfolio assessment, and other curriculum-based measures;

(2) Make decisions about student progress, instruction, program, modifications, adaptations, placement, teaching methodology, and transitional services and activities for students with disabilities who are accessing the general education curriculum and the [~~standards of learning~~*Virginia Standards of Learning*] through an aligned curriculum;

(3) Be able to write educationally relevant IEP goals and objectives that address self-care and self-management of student physical, sensory, and medical needs that also enhance academic success in the adapted curriculum.

3. Instructional methods and strategies for the adapted curriculum.

An understanding and application of service delivery, curriculum, and instruction of students with disabilities, including:

a. Curriculum development that includes a scope and sequence, lesson plans, instructional methods, and assessments that are based on grade level content standards;

b. Foundational knowledge of reading and writing that includes an understanding of the complex nature of language acquisition and reading (reading competencies in

professional studies requirements in 8VAC40-543-140). Skills in this area include phonemic awareness, an understanding of sound and symbol relationships, explicit phonics instruction, syllables, phonemes, morphemes, decoding skills, word attack skills, and knowledge of how phonics, syntax, and semantics interact. Additional skills shall include proficiency in a wide variety of comprehension strategies and writing, as well as the ability to foster appreciation of a variety of literature and independent reading; and reading and writing across the content areas;

c. Foundational knowledge of the complex nature of numeracy acquisition and the sequential nature of mathematics including mathematical concepts, mathematical thinking, calculation, and problem-solving;

d. Alternative ways to teach content material including curriculum adaptation and curriculum modifications;

e. Procedures to develop, provide, and evaluate instruction consistent with students' individual needs;

f. Strategies to promote successful integration of students with disabilities with their nondisabled peers;

g. Use of technology to promote student learning;

h. Structure and organization of general education classrooms and other instructional settings representing the continuum of special education services, to include field experiences;

i. Demonstrate the ability to implement individual educational planning and group instruction with students with disabilities who are accessing the general education curriculum and [~~Standards of Learning~~*Virginia Standards of Learning]* through an aligned curriculum across the K-12 grade levels, including the ability to:

(1) Identify and apply differentiated instructional methodologies including systematic instruction, multisensory approaches, learning cognitive strategies, diverse learning styles, and technology use;

(2) Implement a blended curriculum that includes teaching academic skills using the aligned [standards of learning*Virginia Standards of Learning*] and incorporating functional and essential life skills into instruction;

(3) Provide explicit instruction of reading, writing and mathematics at appropriate developmental and grade level in a cumulative manner to students with disabilities accessing the general education curriculum through an aligned curriculum;

(4) Conduct and analyze results of functional behavior assessment;

(5) Implement behavioral intervention plans incorporating positive behavioral supports;

(6) Promote the potential and capacity of individual students to meet high functional, academic, behavioral, and social expectations;

(7) Design alternative ways to teach content material including modifying and adapting the general education curriculum;

(8) Develop appropriate transition between grade levels, setting, and environments;

(9) Use assistive and instructional technology, including augmentative and alternative communication methods and systems;

(10) Implement and evaluate group management technique and individual interventions that teach and maintain emotional, behavioral, and social skills;

(11) Implement and monitor IEP specified modifications and adaptations within the general education classroom; and

(12) Integrate students in the community through collaboration with community service systems.

4. Individualized supports and specialized care of students with significant disabilities.

a. An understanding and application of service delivery for students with significant disabilities and their unique care needs, including the ability to identify the physical, sensory, and health and medical needs of students with significant disabilities and understand how these needs impact the educational program including:

(1) Understanding of typical physical development of children and application of this knowledge in developing learning experiences for students with significant disabilities;

(2) Basic understanding of the most common medical diagnoses associated with students with significant disabilities and the impact on their functioning in school and community settings;

(3) Understanding of the role muscle tone plays in the positioning and handling of students and familiarity with common positioning equipment used in the classroom; and

(4) Understanding of alternative and augmentative communication systems and the ability to identify an appropriate communication system based on the needs of the student.

b. Understanding of the roles and responsibilities of related and support staff working in a collaborative setting and the process and procedures related to initiating a related service request.

c. Ability to develop lesson plans that blend and incorporate the academic, functional, and behavioral goals and objectives, while integrating positioning, self-

help, feeding, grooming, sensory, and toileting programs into the instructional delivery.

5. Transitioning.

Demonstrate the ability to prepare students and work with families to provide successful student transitions throughout the educational experience to include postsecondary education, training, employment, and independent living that addresses an understanding of long-term planning, age-appropriate transition assessments, career development, life skills, community experiences and resources, and self-determination to include goal setting, decision-making, problem-solving, self-awareness and self-advocacy, guardianship, and other legal considerations.

a. Skills in consultation, case management, and collaboration for students with varying degrees of disability severity.

(1) Coordinate service delivery with general educators including career and technical educators and school counselors, related services providers, and other providers;

(2) Awareness of community resources agencies and strategies to interface with community agencies when developing and planning IEPs;

(3) Knowledge of related services and accommodations that pertain to postsecondary transitions that increase student access to postsecondary education and community resources; and

(4) Ability to coordinate and facilitate meetings involving parents, students, outside agencies, and administrators to include the understanding of consent to share information, including confidentiality and disability disclosure.

b. Understand the difference between entitlement and eligibility for agency services as students move to the adult world, including a basic understanding of Social

Security Income benefits planning, work incentive, Medicaid, community independent living, and waivers.

c. Recognize uses of technology and seek out technology at postsecondary settings that shall aid the student in their education, work, and independent living.

d. Recognize and plan for individual student potential and their capacity to meet high academic, behavioral, and social expectations and the impact of academic and social success on personal development.

e. Knowledge of person-centered planning strategies to promote student involvement in planning.

f. Knowledge of generic skills that lead to success in school, work, and community, including time management, preparedness, social interactions, and communication skills.

g. Understand social skill development and the unique social skills deficits and challenges associated with disabilities:

(1) Assesses social skill strengths and needs; and

(2) Plans and uses specialized social skills strategies.

h. Knowledge of use and implementation of vocational assessments to encourage and support students' advocacy and self-determination skills.

i. Knowledge of legal issues surrounding age of majority and guardianship.

j. Knowledge of graduation requirements, diploma options and legal issues surrounding age of majority, and guardianship.

6. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

7. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

C. Completion of supervised classroom experiences with students with disabilities and an adapted curriculum K-12.

8VAC20-543-470. Special education blindness and visual impairments preK-12.

The program in special education visual impairments preK-12 is designed to ensure through course work and field experiences in a variety of settings that the candidate has demonstrated the following competencies:

1. Understanding of the characteristics of individuals with disabilities, including:

a. Developmental and cognitive characteristics of children and youth with disabilities, particularly blindness or visual impairment;

b. Language development and the effects of blindness, visual impairment, and other disabling conditions and cultural and linguistic diversity on language development;

c. Characteristics of individuals with visual impairments, including impact of visual impairment on children's social and emotional development, and family interaction patterns; and

d. Understanding of psychosocial aspects of visual impairment and cultural identity.

2. Understanding of the foundation of the legal aspects associated with students with disabilities and students with visual impairments, including:

a. Legislative and judicial mandates related to education and special education;

b. The Individuals with Disabilities Education Act (IDEA), § 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act;

c. Legal decisions related to persons with disabilities;

d. Current regulations and procedures governing special education, including individualized education program (IEP) development, individualized family service plan (IFSP), and transition services; and

e. Disciplinary practices, policies, and procedures and alternative placements[ ]and programs in schools.

3. Understanding of the foundation of assessment and evaluation with an emphasis on individuals with visual impairments, including:

a. Administering, scoring, and interpreting assessments, including norm-referenced, criterion-referenced, and curriculum-based individual and group assessments;

b. Administration and interpretation of a functional vision assessment (FVA), learning media assessment (LMA), and assistive technology assessment and assessment in the areas of the expanded core curriculum (ECC);

c. Interpreting assessments for eligibility, placement, and program decisions and to inform instruction;

d. Techniques to collect, record, and analyze information;

e. Diagnostic instruction using ongoing assessment data;

f. Techniques for recognizing capacity and diversity and its influence on student assessment and evaluation;

g. Using data from student program evaluation to inform curriculum development, instructional practice, and accommodations; and

h. Low vision practices and procedures, including assessment and instructional programming for functional vision.

4. Understanding of service delivery, classroom and behavior management, and instruction for students who are blind and visually impaired, including:

a. The application of current research and evidence-based practice;

b. Classroom organization and curriculum development;

c. Curriculum adaptations and accommodations;

d. The development of language and literacy skills;

e. The use of technology in teaching and instructing students to use assistive technologies to promote learning and provide access to the general education curriculum;

f. Classroom management, including behavior support systems and individual planning;

g. Methods and procedures for teaching students with visual impairments;

h. Instructional programming and modifications of curriculum to facilitate inclusion of students with blindness and visual impairment in programs and services with sighted and typically developing peers;

i. Individual and group behavior management techniques;

j. Career and vocational aspects of individuals with disabilities, including persons with visual impairments, including knowledge of careers, vocational opportunities, and transition from school to work; and

k. Social and recreational skills and resources for individuals with visual impairments, including methods and materials for assessing and teaching activities of daily living.

5. Understanding of consultation, case management, and collaboration including:

a. Coordinating service delivery with other professionals in collaborative work environments;

b. Training, managing, and monitoring paraprofessionals;

c. Involving families in the education of their children with blindness or visual impairment;

d. Implementation of collaborative models, including collaborative consultation, co-teaching, and student intervention teams; and

e. Interfacing with community agencies and resources.

6. Understanding of the foundations of Braille reading and writing, including:

a. Teaching reading and writing of [~~grade 2 Braille~~uncontracted and contracted Unified English Braille] on both a Braille writer and a "slate and stylus"; and

b. Knowledge of other codes, including Nemeth, foreign language code, [and]music code[~~,.and computer Braille~~.]

7. Understanding of anatomy, physiology, and diseases of the eye and the educational implications.

8. Understanding principles and how to instruct in human guide techniques and pre-cane orientation and mobility instruction.

9. Understanding of the standards of professionalism, including ethical and professional practice.

10. Completion of supervised classroom experiences at the elementary and secondary levels with students who have visual impairments, to include those with blindness and low vision, and with individuals who may have additional disabilities.

11. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

12. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-480. Special education deaf and hard of hearing preK-12.

The program in special education deaf and hard of hearing preK-12 is designed to ensure through course work and field experiences in a variety of settings that the candidate has demonstrated the following competencies:

1. Understanding of the characteristics of individuals with disabilities, including the following:

a. Developmental and cognitive characteristics of children and youth with disabilities;

b. Characteristics of individuals who are deaf or hard of hearing, including sociocultural influences and possible health-related or genetically-related problems; and

c. Foundations of the education and culture of persons who are deaf or hard of hearing.

2. Understanding of the foundation of the legal aspects associated with students with disabilities and students who are deaf or hard of hearing including:

a. Legislative and judicial mandates related to education and special education;

b. The Individuals with Disabilities Education Act (IDEA), § 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act;

c. Legal decisions related to persons with disabilities;

d. Current regulations and procedures governing special education, including individualized education program (IEP) development, individualized family service plan (IFSP), and transition services; and

e. Disciplinary practices, policies, and procedures and alternative placements or programs in schools.

3. Understanding of the foundation of assessment and evaluation with an emphasis on individuals who are deaf or hard of hearing, including:

a. Administering, scoring, and interpreting assessments, including norm-referenced, criterion-referenced, and curriculum-based individual and group assessments;

b. Interpreting assessment results for eligibility, placement, and to inform instruction (i.e., linking assessment results to classroom interventions);

c. Techniques to collect, record, and analyze information from observing students;

d. Data-based decision-making skills using assessment data to inform diagnostic instruction;

e. Techniques for recognizing capacity and diversity and its influence on student assessment and evaluation.

4. Understanding of service delivery, classroom and behavior management, and instruction, including:

a. The application of current research in practice;

b. Classroom organization and curriculum development;

c. Curriculum adaptations and accommodations;

d. The development of language and literacy skills;

e. The use of technology to promote student learning;

f. Classroom and behavior management, including behavior support systems and individual planning;

g. Evidence-based strategies and procedures for teaching persons who are deaf or hard of hearing;

h. Instructional programming and modifications of curriculum to facilitate inclusion of students with disabilities into the continuum of programs and services with peers without disabilities;

i. Strategies to promote successful socialization of students who are deaf or hard of hearing with their hearing peers; and

j. Career and vocational skill development of individuals with disabilities, including persons who are deaf or hard of hearing and who may have additional needs.

5. Skills in consultation, case management, and collaboration, including:

a. Coordinating service delivery with other professionals in collaborative work environments;

b. Training, managing, and monitoring paraprofessionals;

c. Implementation of collaborative models, including collaborative consultation, co-teaching, and student intervention teams;

d. Involving families in the education of their children with disabilities; and

e. Cooperating with community agencies and resources.

6. Understanding of speech, hearing, and language development, including:

a. Speech, hearing, and language development and the effects of sensory loss and cultural diversity on typical language development;

b. How to promote development of listening and spoken language skills in children who are deaf or hard of hearing: how to promote development of American Sign Language skills in children who are deaf or hard of hearing;

c. Anatomy of speech structures, auditory and visual mechanisms, production, transmission, and psychophysical characteristics of sound; and

d. General and specific effects of having partial or no hearing on production and reception of speech and on English language development.

7. Understanding of audiology, including:

a. Diagnostic evaluation, testing procedures, and interpreting audiology reports to inform instruction in and expectations for development of listening and spoken language skills; and

b. Characteristics of individual, group amplification and assistive listening devices (e.g., cochlear implant systems, hearing aids, FM systems, sound field systems, etc.) with emphasis on utilization in educational environments.

8. Understanding of communication modalities to include various modalities of communication, including cued speech, speech reading, listening, signed language, and spoken language.

9. Demonstrated proficiency in expressive and receptive sign language, to include American Sign Language and contact varieties.

10. Understanding of the standards for professionalism.

11. Completion of supervised classroom experiences at the elementary and secondary levels with students who are deaf or hard of hearing, including those with additional disabilities.

12. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

13. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-490. Special education early childhood (birth through age five).

The program in special education early childhood (birth through age five) is designed to ensure through course work and field experiences in a variety of settings that the candidate has demonstrated the following competencies:

1. Understanding of the nature and characteristics of major disabling and at-risk conditions, including:

a. [PathwaysTrends] for service delivery to the birth-through-age-five population;

b. An overview of early intervention and early childhood special education;

c. Historical perspective of special education; and

d. Awareness of [the issues surrounding] cultural and linguistic diversity.

2. Understanding of the foundation of the legal aspects associated with students with disabilities, including:

a. Legislative and judicial mandates related to education and special education;

b. The Individuals with Disabilities Education Act (IDEA), § 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act;

c. Legal decisions related to persons with disabilities;

d. Current regulations and procedures governing special education to include individualized education program (IEP) development and individualized family service plan (IFSP); and

e. Disciplinary practices, policies, and procedures and alternative placements and programs in schools.

3. Knowledge of the selection, administration, and interpretation of formal and informal assessment techniques for young children with disabling and at-risk conditions and their families, including:

a. Eligibility and diagnosis of disabling and at-risk conditions;

b. Progress monitoring for growth compared to same age, typically developing peers and functioning in environments where same age peers would normally attend (to include, but not be limited to, settings that the families choose);

c. Program development and improvement; and

d. Curriculum-based assessments for instructional planning.

4. Understanding of the methods for providing instructional programs for early intervention, including:

a. Service delivery options;

b. Development of individualized education programs (IEPs) and individualized family service plans (IFSPs);

c. Curriculum development and implementation to ensure developmentally appropriate intervention techniques in the areas of self-help, motor, cognitive, social and emotional, and language; [~~and~~]

d. Service delivery to support success and functionality in all settings where same age, typically developing peers would be located[; and]

[e. Response and recognition of tiered instruction.]

5. Understanding of teaching social and emotional skills to assist with behavior management and the application of principles of learning and child development to individual and group management using a variety of techniques that are appropriate to the age of that child.

6. Understanding of speech and language development and intervention methods, including the effects of disabling and at-risk conditions on young children, including:

a. Developmental stages of language acquisition[and communication];

b. Cultural and linguistic diversity;

c. English [language] learner language acquisition; and

d. Use of language to get needs and wants met and [use of functional communication] for social interaction.

7. Understanding of and experiences with the medical aspects of young children with disabling and at-risk conditions and the management of neuro-developmental and motor disabilities, including:

a. Emergency care and the role of health care professionals in the lives of individuals with disabilities; and

b. Use and effects of medications[and treatments].

8. Skills in consultation, case management, collaboration, coaching, mentoring, and co-teaching, including techniques in working with children, families, educators, related service providers, and other human service professionals that include:

a. Service coordination;

b. Interagency coordination;

c. Inclusive practices[and least restrictive environments];

d. Transition facilitation; and

e. Training, managing, and monitoring paraprofessionals.

9. Understanding of the theories and techniques of family-centered intervention, including:

a. Cultural and linguistic [~~differences~~] influences; and

b. Family [dynamics~~issues~~].

10. Understanding of the standards of professionalism.

11. Completion of supervised experiences at the early childhood level in a variety of settings, including but not limited to early intervention, home-based, school-based, and community-based settings.

12. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

13. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-500. Special education general curriculum K-12.

A. The program in special education is designed to ensure through course work and field experiences in a variety of settings that the candidate has demonstrated the core competencies in this section to prepare children and youth for participation in the general education curriculum

and within the community to the maximum extent possible. The candidate also shall complete the competencies [~~in at least one of the endorsement areas of Special Education General Curriculum K-12, in addition to those~~] required under professional studies in 8VAC40-543-140, including reading and language acquisition.

1. Foundations - Characteristics, legal, and medical aspects.

a. Knowledge of the foundation for educating students with disabilities, including:

(1) Historical perspectives, models, theories, philosophies, and trends that provide the basis for special education practice;

(2) Characteristics of children and youth with disabilities relative to age, varying levels of severity, and developmental differences manifested in cognitive, linguistic, physical, psychomotor, social, or emotional functioning;

(3) Normal patterns of development (i.e., physical, psychomotor, cognitive, linguistic, social, or emotional development) and their relationship to the various disabilities;

(4) Medical aspects of disabilities;

(5) The dynamic influence of the family system and cultural and environmental milieu and related issues pertinent to the education of students with disabilities;

(6) Educational implications of the various disabilities; and

(7) Understanding of ethical issues and the practice of accepted standards of professional behavior.

b. An understanding and application of the legal aspects, regulatory requirements, and expectations associated with identification, education, and evaluation of students with disabilities, including:

(1) Legislative and judicial mandates related to education and special education (e.g., the Individuals with Disabilities Education Act, § 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act, the No Child Left Behind Act of 2001, etc.);

(2) Current regulations governing special education (e.g., individualized education program (IEP) development; disciplinary practices, policies, and procedures; and alternative placements and programs in schools); and

(3) Rights and responsibilities of parents, students, teachers, and schools as they relate to individuals with disabilities and disability issues.

2. Assessments and evaluation.

An understanding and application of the foundation of assessment and evaluation related to best special education practice, including:

a. Ethical issues and responsibilities in the assessment of individuals with disabilities;

b. Procedures for screening, pre-referral, referral, and eligibility determinations;

c. Factors that may influence assessment findings such as cultural, behavioral, and learning diversity;

d. A general knowledge of measurement theory and practice, including validity, reliability, norming, bias, sensitivity, and specificity;

e. Administration, scoring, and interpretation of commonly used individual and group instruments, including norm-referenced, criterion-referenced, and curriculum-based measures as well as task analysis, observation, portfolio, and environmental assessments;

f. Synthesis and interpretation of assessment findings for eligibility, program planning, and program evaluation decisions; and

g. Knowledge of the Virginia Accountability System, assessment options, and procedures for participation for students with disabilities.

3. Management of instruction and behavior.

An understanding and application of classroom and behavior management techniques and individual interventions, including techniques that:

a. Promote emotional well-being and teach and maintain behavioral conduct and skills consistent with norms, standards, and rules of the educational environment;

b. Address diverse approaches to classroom organization and set-up based upon [culturally responsive] behavioral, cognitive, affective, social, and ecological theory and practice;

c. Provide positive behavioral supports; and

d. Are based on functional assessment of behavior.

4. Collaboration.

a. Skills in consultation, case management, and collaboration, including coordination of service delivery with related service providers, general educators, and other professions in collaborative work environments to include:

(1) Understanding the [~~Standards of Learning~~ *Standards of Learning*], the structure of the curriculum, and accountability systems across K-12;

(2) Understanding and assessing the organization and environment of general education classrooms across the K-12 setting;

(3) Implementation of collaborative models, including collaborative consultation, co-teaching with co-planning, and student intervention teams;

(4) Procedures to collaboratively develop, provide, and evaluate instructional and behavioral plans consistent with students' individual needs;

(5) Understanding the roles and responsibilities of each member of the collaborative team; and

(6) Knowledge and application of effective communication strategies and culturally responsive strategies with a variety of stakeholders in the collaborative environment;

b. Training, managing, and monitoring paraprofessionals;

c. Involvement of families in the education of their children with disabilities;

d. Understanding the standards of professionalism;

e. Cooperating with community agencies and other resource providers; and

f. Models and strategies for promoting students' self-advocacy skills.

B. The program in special education general curriculum K-12 shall ensure through coursework and field experiences in a variety of settings that the candidate seeking endorsement in special education general curriculum K-12 has the special education core competencies and the specific competency requirements specified in this section.

1. Characteristics.

a. Demonstrate knowledge of definitions, characteristics, and learning and behavioral support needs of students with disabilities whose cognitive and functional skills are not significantly different from typically developing peers and therefore require access to the general education curriculum for an appropriate education, including but not limited to, students with:

(1) Autism spectrum disorder;

(2) Deaf-blindness;

(3) Developmental delay;

(4) Emotional disability;

(5) Hearing impairment (or deaf and hard of hearing);

(6) Intellectual disability;

(7) Learning disability;

(8) Multiple disabilities;

(9) Orthopedic impairment;

(10) Other health impairment;

(11) Speech-language impairment;

(12) Traumatic brain injury; and/or

(13) Visual impairment (including blindness).

b. Knowledge of characteristics shall include:

(1) Age-span and developmental issues;

(2) Levels of severity;

(3) Cognitive functioning;

(4) Language development;

(5) Emotional and behavioral adjustment;

(6) Social development;

(7) Medical aspects; and

(8) Cultural, ethnic, and socioeconomic factors.

2. Individualized education program development and implementation.

a. Demonstrate knowledge of the eligibility process and legal and regulatory requirements for IEP development, including timelines, components, team composition, roles, and responsibilities.

b. Apply knowledge of content standards, assessment, and evaluation throughout the K-12 grade levels to:

(1) Construct, use, and interpret a variety of standardized and nonstandardized data collection techniques, such as task analysis, observation, portfolio assessment, and other curriculum-based measures;

(2) Make decisions about student progress, instruction, program, accommodations, placement, teaching methodology, and transition services and activities for students with disabilities who are accessing the general education curriculum and the [~~Virginia Standards of Learning~~*Virginia Standards of Learning]*; and

(3) Develop an individualized education program (IEP) that addresses the academic and functional needs of the student with disabilities in the general education curriculum and meets regulatory requirements.

3. Instructional strategies for reading and writing.

An understanding and application of service delivery, curriculum, and instruction of students with disabilities, including:

a. Curriculum development that includes a scope and sequence, lesson plans, instructional methods, and assessments that are based on the general education curriculum [~~standards of learning~~*Virginia Standards of Learning*] at the elementary, middle, and secondary levels;

b. Foundational knowledge of reading and writing that includes an understanding of the complex nature of language acquisition and reading (reading competencies in

professional studies requirements). Skills in this area include: phonemic awareness, an understanding of sound and symbol relationships, explicit phonics instruction, syllables, phonemes, morphemes, decoding skills, word attack skills, and knowledge of how phonics, syntax, and semantics interact. Additional skills shall include proficiency in a wide variety of comprehension, vocabulary, and writing strategies, as well as the ability to foster appreciation of a variety of literature, independent reading, and reading and writing across content areas;

c. Alternative ways to teach content material including curriculum adaptation and curriculum modifications;

d. Procedures to develop, provide, and evaluate instruction consistent with students' individual needs;

e. Strategies to promote successful integration of students with disabilities with their nondisabled peers;

f. Use of technology to promote student learning;

g. Structure and organization of general education classrooms and other instructional settings representing the continuum of special education services, to include field experiences; and

h. Demonstrate the ability to implement individual educational planning and group instruction with students with disabilities who are accessing the general education curriculum across the K-12 grade levels, including the ability to:

(1) Identify and apply differentiated instructional methodologies including systematic instruction, multisensory approaches, learning cognitive strategies, study skills, diverse learning styles, and technology use;

(2) Teach skills and remediate deficits in academic areas at the elementary, middle, and secondary levels;

(3) Provide explicit instruction of reading and writing at appropriate developmental and grade level in a systematic and cumulative manner to students with disabilities who are accessing the general education curriculum;

(4) Promote the potential and capacity of individual students to meet high academic, behavioral, and social expectations;

(5) Design alternative ways to teach content material including modifying curriculum in both directive and nondirective methodologies;

(6) Use assistive and instructional technology in order to access the general education curriculum;

(7) Implement and evaluate group management techniques and individual interventions that teach and maintain emotional, behavioral, and social skills; and

(8) Implement and monitor IEP specified accommodations within the general education classroom.

4. Instructional strategies for mathematics.

An understanding and application of service delivery, curriculum, and instruction of students with disabilities, including:

a. Curriculum development that includes a scope and sequence, lesson plans, instructional methods, and assessments that are based on the general education curriculum [~~standards of learning~~*Virginia Standards of Learning*] at the elementary, middle, and secondary levels;

b. Foundational knowledge of the complex nature of numeracy acquisition and nature of mathematics including mathematical concepts, mathematical thinking, mathematics vocabulary, calculation, and problem-solving;

c. Alternative ways to teach content material including curriculum adaptation and curriculum modifications;

d. Procedures to develop, provide, and evaluate instruction consistent with students' individual needs;

e. Strategies to promote successful integration of students with disabilities with their nondisabled peers;

f. Use of technology to promote student learning;

g. Structure and organization of general education classrooms and other instructional settings representing the continuum of special education services, to include field experiences;

h. Demonstrate the ability to implement individual educational planning and group instruction with students with disabilities who are accessing the general education curriculum across the K-12 grade levels, including the ability to:

(1) Identify and apply differentiated instructional methodologies including systematic instruction, multisensory approaches, learning cognitive strategies, study skills, diverse learning styles, and technology use;

(2) Teach skills and remediate deficits in academic areas at the elementary, middle, and secondary levels;

(3) Provide explicit instruction in mathematics at appropriate developmental and grade level in a systematic and cumulative manner to students with disabilities who are accessing the general education curriculum;

(4) Promote the potential and capacity of individual students to meet high academic, behavioral, and social expectations;

(5) Design alternative ways to teach content material including modifying curriculum in both directive and nondirective methodologies;

(6) Use assistive and instructional technology in order to access the general education curriculum;

(7) Implement and evaluate group management techniques and individual interventions that teach and maintain emotional, behavioral, and social skills; and

(8) Implement and monitor IEP specified accommodations within the general education classroom.

5. Transitioning.

Demonstrate the ability to prepare students and work with families to provide successful student transitions throughout the educational experience to include postsecondary education, training, employment, and independent living that addresses an understanding of long-term planning, transition assessments, career development, life skills, community experiences and resources, self-advocacy, and self-determination, guardianship, and legal considerations.

a. Skills in consultation, case management, and collaboration for students with varying degrees of disability severity;

(1) Coordinate service delivery with general educators, related service providers, and other providers;

(2) Awareness of community resources agencies and strategies to interface with community agencies when developing and planning IEPs;

(3) Knowledge of related services and accommodations that pertain to postsecondary transitions that increase student access to postsecondary education and community resources;

(4) Ability to coordinate and facilitate meetings involving parents, students, outside agencies, and administrators.

b. Understand the difference between entitlement and eligibility for agency services as students move to the adult world including a basic understanding of Social Security Income benefits planning, work incentive, Medicaid, and community independent living.

c. Recognize uses of technology and seek out technology at postsecondary settings that shall aid the student in their education, work, and independent living.

d. Recognize and plan for individual student potential and their capacity to meet high academic, behavioral, and social expectations and the impact of academic and social success on personal development:

(1) Knowledge of person-centered planning strategies to promote student involvement in planning; and

(2) Knowledge of generic skills that lead to success in school, work, and community, including time management, preparedness, social interactions, and communication skills.

e. Understand social skill development and the unique social skills deficits and challenges associated with disabilities:

(1) Assess social skill strengths and needs; and

(2) Plan and use specialized social skills strategies.

f. Knowledge of use and implementation of vocational assessments to encourage and support students' self-advocacy and self-determination skills.

g. Knowledge of graduation requirements, diploma options, and legal issues surrounding age of majority and guardianship.

6. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

7. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

C. Completion of supervised classroom experiences with students with disabilities and the general curriculum K-12.

8VAC20-543-510. Special education – general curriculum elementary education K-6 (add-on endorsement).

The program in special education - general curriculum elementary education K-6 (add-on endorsement) shall ensure that the candidate holds an active license with an endorsement in elementary education (early/primary education preK-3/elementary education preK-6) issued by the Virginia Board of Education and has demonstrated the following competencies. The candidate must:

1. Hold a license issued by the Virginia Board of Education with an endorsement in elementary education (early/primary education preK-3/elementary education preK-6);

2. Have completed competencies in the education of students with disabilities distributed in each of the following areas:

a. Foundations. Characteristics that include knowledge of the foundation for educating students with disabilities; historical, ethical, and legal aspects that include an understanding and application of the federal and state regulatory requirements; and expectations associated with identification, education, and evaluation of students with disabilities.

b. Individualized education program (IEP) development and implementation.

(1) Knowledge of the eligibility process, legal, and regulatory requirements of IEP development including timelines, components, team composition, roles, and responsibilities.

(2) Skills in this area include the ability to apply knowledge of assessment and evaluation throughout the K-12 grade levels to construct, use, and interpret a variety of standardized and nonstandardized data collection techniques; to make decisions about student progress, instructional, program, goal development, accommodations, placement, and teaching methodology for students with disabilities who are accessing the general education curriculum and the [~~standards of learning~~*Virginia Standards of Learning*]; and to demonstrate the use of assessment, evaluation, and other information to develop and implement individual educational planning and group instruction with students with disabilities who are accessing the general education curriculum across the K-12 grade levels.

c. Assessment and evaluation.

(1) Understanding and application of the foundation of assessment and evaluation related to best practice in special education; including types and characteristics of assessment, introduction to formal and informal assessment, and use of assessments and other information to determine special education eligibility, service delivery, curriculum, and instruction of students with disabilities.

(2) Understanding of the current legal and ethical issues related to assessment selection and use, including comprehensive evaluation requirements, students with disabilities participation in the state and local accountability systems, assessment options, appropriate grading and testing accommodations, and assessment of students from diverse backgrounds.

d. Instructional strategies in reading and writing.

(1) An understanding and application of service delivery, curriculum, and instruction of students with disabilities in reading and writing.

(2) Knowledge of the general curriculum, English requirements, and expectations, and how to provide access to the curriculum based on student characteristics and needs.

(3) Ability to assess, interpret data, and implement instructional practices to address the identified reading needs of the students. Skills in this area include the ability to identify, understand, and implement a range of specialized instructional strategies and research-based interventions that reflect best practice in reading and writing instruction for students with disabilities.

(4) Ability to align the instructional practices and intervention with the [~~Standards of Learning~~*Virginia Standards of Learning*] and state assessments.

(5) Knowledge and ability to utilize current assistive and instructional reading and writing technologies to promote learning and independence for students with disabilities in the general curriculum and the ability to evaluate the effectiveness of the use of the technologies.

(6) Ability to develop and use curriculum-based and standardized reading and writing assessments to conduct ongoing evaluations of instructional materials and practices to determine effectiveness and assess student needs as it relates to the curriculum design and delivery.

(7) Ability to model and directly teach reading and writing instructional strategies in a variety of settings and collaborate and co-teach with general educators to develop and implement instructional practices that meet the needs of students with disabilities in the general curriculum and monitor student progress.

e. Instructional strategies in mathematics.

(1) An understanding and application of service delivery, curriculum, and instruction of students with disabilities in mathematics.

(2) Knowledge of the general curriculum mathematics requirements and expectations and how to provide access to the curriculum based on student characteristics and needs.

(3) Ability to assess, interpret data, and implement instructional practices to address calculations, reasoning, and problem-solving skills. Skills in this area include the ability to understand and use a range of specialized mathematics instructional strategies and research-based interventions that reflect best practice in mathematics instruction for students with disabilities.

(4) Ability to align the instructional practices and intervention with the [~~Standards of Learning~~*Virginia Standards of Learning*] and state assessments.

(5) Knowledge of and ability to utilize current mathematics related assistive and instructional technologies to promote learning and independence for students with disabilities in the general curriculum and the ability to evaluate the effectiveness of the use of the technologies.

(6) Ability to develop and use curriculum-based and standardized mathematics assessments to conduct ongoing evaluations of instructional materials and practices to determine effectiveness and assess student needs as related to the mathematics curriculum design and delivery.

(7) Ability to model and directly teach mathematics instructional strategies in a variety of settings and collaborate and co-teach with general educators to develop and implement instructional practices that meet the needs of students with disabilities in the mathematics general curriculum and monitor student progress.

3. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

4. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

[5. The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experiences with students with disabilities accessing the general curriculum in a public or accredited nonpublic school.]

8VAC20-543-520. Special education – general curriculum middle education grades 6-8 (add-on endorsement).

The program in special education - general curriculum middle education grades 6-8 (add-on endorsement) shall ensure that the candidate holds an active license with an endorsement in middle education (middle education 6-8 English, middle education 6-8 history and social sciences, middle education 6-8 mathematics, or middle education 6-8 sciences) issued by the Virginia Board of Education and has demonstrated the following competencies. The candidate must:

1. Hold a license issued by the Virginia Board of Education with an endorsement in middle education (middle education 6-8 English, middle education 6-8 history and social sciences, middle education 6-8 mathematics, or middle education 6-8 sciences).

2. Have completed competencies in the education of students with disabilities distributed in each of the following areas:

a. Foundations. Characteristics that include knowledge of the foundation for educating students with disabilities; historical, ethical, and legal aspects that include an understanding and application of the federal and state regulatory requirements; and expectations associated with identification, education, and evaluation of students with disabilities.

b. Individualized education program (IEP) development and implementation. Knowledge of the eligibility process and legal and regulatory requirements of IEP development including timelines, components, team composition, roles, and responsibilities. Skills in this area include the ability to apply knowledge of assessment and evaluation throughout the K-12 grade levels to construct, use, and interpret a variety of standardized and nonstandardized data collection techniques; to

make decisions about student progress, instructional, program, goal development, accommodations, placement, and teaching methodology for students with disabilities who are accessing the general education curriculum and the [~~standards of learning~~*Virginia Standards of Learning*]; and to demonstrate the use of assessment, evaluation, and other information to develop and implement individual educational planning and group instruction with students with disabilities who are accessing the general education curriculum across the K-12 grade levels.

c. Transitioning. Skills in this area include the ability to prepare students and work with families and community agencies to provide successful student transitions throughout the educational experience to include postsecondary education training, employment, and independent living which addresses an understanding of long-term planning, career development, life skills, community experiences and resources, self-advocacy, and self-determination, guardianship, and legal considerations.

d. Instructional strategies in reading and writing.

(1) An understanding and application of service delivery, curriculum, and instruction of students with disabilities in reading and writing.

(2) Knowledge of the general curriculum, English requirements and expectations, and how to provide access to the curriculum based on student characteristics and needs.

(3) Ability to assess, interpret data, and implement instructional practices to address the identified reading needs of the students. Skills in this area include the ability to identify, understand, and implement a range of specialized instructional strategies and research-based interventions that reflect best practice in reading and writing instruction for students with disabilities.

(4) Ability to align the instructional practices and intervention with the [~~Standards of Learning~~*Virginia Standards of Learning*] and state assessments.

(5) Knowledge and ability to utilize current assistive and instructional reading and writing technologies to promote learning and independence for students with disabilities in the general curriculum and the ability to evaluate the effectiveness of the use of the technologies.

(6) Ability to develop and use curriculum-based and standardized reading and writing assessments to conduct ongoing evaluations of instructional materials and practices to determine effectiveness and assess student needs as related to the curriculum design and delivery.

(7) Ability to model and directly teach reading and writing instructional strategies in a variety of settings, collaborate and co-teach with general educators to develop and implement instructional practices that meet the needs of students with disabilities in the general curriculum, and monitor student progress.

e. Instructional strategies in mathematics.

(1) An understanding and application of service delivery, curriculum, and instruction of students with disabilities in mathematics.

(2) Knowledge of the general curriculum mathematics requirements and expectations and how to provide access to the curriculum based on student characteristics and needs.

(3) Ability to assess, interpret data, and implement instructional practices to address calculations, reasoning, and problem-solving skills. Skills in this area include the ability to understand and use a range of specialized mathematics instructional

strategies and research-based interventions that reflect best practice in mathematics instruction for students with disabilities.

(4) Ability to align the instructional practices and intervention with the [~~Standards of Learning~~*Virginia Standards of Learning*] and state assessments.

(5) Knowledge of and ability to utilize current mathematics related assistive and instructional technologies to promote learning and independence for students with disabilities in the general curriculum and the ability to evaluate the effectiveness of the use of the technologies.

(6) Ability to develop and use curriculum-based and standardized mathematics assessments to conduct ongoing evaluations of instructional materials and practices to determine effectiveness and assess student needs as it relates to the mathematics curriculum design and delivery.

(7) Ability to model and directly teach mathematics instructional strategies in a variety of settings, collaborate and co-teach with general educators to develop and implement instructional practices that meet the needs of students with disabilities in the mathematics general curriculum, and monitor student progress.

3. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

4. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

[5. The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experiences with students with disabilities accessing the general curriculum in a public or accredited nonpublic school.]

8VAC20-543-530. Special education – general curriculum secondary education grades 6-12 (add-on endorsement).

The program in special education - general curriculum secondary education grades 6-12 (add-on endorsement) shall ensure that the candidate holds an active license with an endorsement in English, history and social sciences, mathematics, biology, chemistry, Earth science, or physics issued by the Virginia Board of Education and has demonstrated the following competencies. The candidate must:

1. Hold a license issued by the Virginia Board of Education with an endorsement in English, history and social sciences, mathematics, biology, chemistry, Earth science, or physics.

2. Have completed competencies in the education of students with disabilities distributed in each of the following areas:

a. Foundations. Characteristics that include knowledge of the foundation for educating students with disabilities; historical, ethical, and legal aspects that include an understanding and application of the federal and state regulatory requirements; and expectations associated with identification, education, and evaluation of students with disabilities.

b. Individualized education program development and implementation. Knowledge of the eligibility process and legal and regulatory requirements of IEP development including timelines, components, team composition, roles, and responsibilities. Skills in this area include the ability to apply knowledge of assessment and evaluation throughout the K-12 grade levels to construct, use, and interpret a variety of standardized and nonstandardized data collection techniques; to make decisions about student progress, instructional, program, goal development, accommodations,

placement, and teaching methodology for students with disabilities who are accessing the general education curriculum and the [~~standards of learning~~*Virginia Standards of Learning*]; and to demonstrate the use of assessment, evaluation, and other information to develop and implement individual educational planning and group instruction with students with disabilities who are accessing the general education curriculum across the K-12 grade levels.

c. Transitioning. Skills in this area include the ability to prepare students and work with families and community agencies to provide successful student transitions throughout the educational experience to include postsecondary education training, employment, and independent living which addresses an understanding of long-term planning, career development, life skills, community experiences and resources, self-advocacy, and self-determination, guardianship, and legal considerations.

d. Instructional strategies in reading and writing.

(1) An understanding and application of service delivery, curriculum, and instruction of students with disabilities in reading and writing.

(2) Knowledge of the general curriculum, English requirements and expectations, and how to provide access to the curriculum based on student characteristics and needs.

(3) Ability to assess, interpret data, and implement instructional practices to address the identified reading needs of the students. Skills in this area include the ability to identify, understand, and implement a range of specialized instructional strategies and research-based interventions that reflect best practice in reading and writing instruction for students with disabilities.

(4) Ability to align the instructional practices and intervention with the [~~Standards of Learning~~*Virginia Standards of Learning*] and state assessments.

(5) Knowledge and ability to utilize current assistive and instructional reading and writing technologies to promote learning and independence for students with disabilities in the general curriculum and the ability to evaluate the effectiveness of the use of the technologies.

(6) Ability to develop and use curriculum-based and standardized reading and writing assessments to conduct ongoing evaluations of instructional materials and practices to determine effectiveness and assess student needs as related to the curriculum design and delivery.

(7) Ability to model and directly teach reading and writing instructional strategies in a variety of settings, collaborate and co-teach with general educators to develop and implement instructional practices that meet the needs of students with disabilities in the general curriculum, and monitor student progress.

e. Instructional strategies in mathematics.

(1) An understanding and application of service delivery, curriculum, and instruction of students with disabilities in mathematics.

(2) Knowledge of the general curriculum mathematics requirements and expectations and how to provide access to the curriculum based on student characteristics and needs.

(3) Ability to assess, interpret data, and implement instructional practices to address calculations, reasoning, and problem-solving skills. Skills in this area include the ability to understand and use a range of specialized mathematics instructional

strategies and research-based interventions that reflect best practice in mathematics instruction for students with disabilities.

(4) Ability to align the instructional practices and intervention with the [~~Standards of Learning~~*Virginia Standards of Learning*] and state assessments.

(5) Knowledge of and ability to utilize current mathematics related assistive and instructional technologies to promote learning and independence for students with disabilities in the general curriculum and the ability to evaluate the effectiveness of the use of the technologies.

(6) Ability to develop and use curriculum-based and standardized mathematics assessments to conduct ongoing evaluations of instructional materials and practices to determine effectiveness and assess student needs as it relates to the mathematics curriculum design and delivery.

(7) Ability to model and directly teach mathematics instructional strategies in a variety of settings, collaborate and co-teach with general educators to develop and implement instructional practices that meet the needs of students with disabilities in the mathematics general curriculum, and monitor student progress.

3. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

4. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

[5. The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experiences with students with disabilities accessing the general curriculum in a public or accredited nonpublic school.]

8VAC20-543-540. Speech communication (add-on endorsement).

The program in speech communication shall ensure that the candidate holds an active license with a teaching endorsement or endorsements issued by the Virginia Board of Education and has demonstrated the following competencies:

1. Understanding and knowledge of oral communication, including language acquisition involving the processes of expressive and receptive language and voice production involving the aesthetics of speech;

2. Understanding and knowledge of common speech production patterns, including articulation, pronunciation, and dialectical variances as these relate to standard English patterns;

3. Understanding the components of effective messages, including appropriate use of language, voice and diction, and nonverbal elements;

4. Understanding of and proficiency in effective communication, including interpersonal communication, small group communication, skills contributing to effective listening, the art of persuasion, oral interpretation, group discussion, mass communication, public speaking, and debate, verbal and nonverbal messages, and the ability to critique such communication interactions;

5. Understanding media, digital, and visual literacy and the skills to evaluate and utilize these literacies in presentations;

6. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing;

7. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes;

8. Skills necessary to teach research including ethical accessing, evaluating, organizing, crediting, and synthesizing information as needed for speech communication; and

9. Knowledge of the [~~Computer Technology Standards of Learning~~*Virginia Computer Technology Standards of Learning*] and their integration into Speech Communication.

8VAC20-543-550. Theatre arts preK-12.

The program in theatre arts preK-12 shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes of the theatre arts discipline as defined in the [~~Virginia Standards of Learning~~*Virginia Standards of Learning*] and how these provide a necessary foundation integral to teaching theatre arts.

2. Understanding of the knowledge, skills, and processes for teaching theatre arts to the developmental levels and academic needs of students in preK-12, including the following:

a. Experience in planning, developing, administering, and evaluating a program of theatre arts education;

b. Knowledge and understanding for teaching theatre arts, including performance and production; theatre history and cultural context; analysis, evaluation, and critique; and aesthetics;

c. Directing;

d. Technical theatre, including lighting, set design, stage craft, costuming, makeup, and safety;

e. Performance, including acting and acting styles;

f. Dramatic literature;

g. The relationship of theatre and culture and the influence of theatre on past and present culture;

h. Knowledge and understanding of technological and artistic copyright laws;

i. Knowledge and understanding of classroom management and safety, including performance and studio [and use of toxic art materials in various aspects of theatre arts production, performance, and the classroom];

k. Knowledge of instructional and assessment strategies to foster, support, and enhance student theatre arts learning;

l. Knowledge of related areas of theatre arts, such as art, dance arts, music, and the visual arts;

m. Knowledge and understanding of technology, with applications for instruction, resources, artistic expression, administration, assessment, and communication;

n. Knowledge and understanding of appropriate and sensitive attention to diversity and cultural understanding; and

o. Observation and student teaching experiences at the elementary, middle, and secondary levels.

3. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

4. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-560. Visual arts preK-12.

The program in visual arts preK-12 shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes of the visual arts discipline as defined in the [~~Virginia Standards of Learning~~*Virginia Standards of Learning*], and how they provide a necessary foundation for teaching the visual arts;

2. Understanding of the knowledge, skills, and processes for teaching art appropriate to the developmental levels and academic needs of students in preK-12 including the following[~~areas~~]:

a. Knowledge and experience in planning, developing, administering, and evaluating a program of visual arts education;

b. Two-dimensional media and concepts: basic and complex techniques and concepts in two-dimensional design, drawing, painting, printmaking, computer graphics, and other electronic imagery;

c. Three-dimensional media and concepts: basic and complex techniques and concepts in three-dimensional design, sculpture, ceramics, fiber arts, crafts, and computer and other electronic imagery;

d. Knowledge and understanding for teaching the visual arts, including visual communication and production, art history and cultural context, analysis, evaluation and critique, and aesthetics;

e. The relationship of visual arts and culture and the influence of visual arts on past and present cultures;

f. Related areas of visual arts, such as architecture, dance arts, music, theatre arts, photography, and other expressive arts;

g. Knowledge and understanding of technological and artistic copyright laws;

h. Knowledge and understanding of classroom management and safety, including use of toxic art material in various aspects of studio and classroom work;

i. Knowledge of a variety of instructional and assessment strategies to foster, support, and enhance student visual arts learning;

j. Knowledge and understanding of technology, with applications for instruction, resources, artistic expression, administration, assessment, and communication;

k. Knowledge and understanding of appropriate and sensitive attention to diversity and cultural understanding; and

l. Observation and student teaching experiences at the elementary, middle, and secondary levels.

3. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

4. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

Article 4

Administration and Supervision and Support Personnel

8VAC20-543-570. Administration and supervision preK-12.

A. The program in administration and supervision preK-12 shall ensure that the candidate has [completed three years of successful, full-time experience in a public school or accredited

nonpublic school in an instructional personnel position that requires licensure in Virginia and] demonstrated the following competencies:

1. Knowledge, understanding, and application of planning, assessment, and instructional leadership that builds collective professional capacity, including;

a. Principles of student motivation, growth, and development as a foundation for age-appropriate and grade-appropriate curriculum, instruction, and assessment;

b. Collaborative leadership in gathering and analyzing data to identify needs to develop and implement a school improvement plan that results in increased student learning;

c. Planning, implementation, and refinement of standards-based curriculum aligned with instruction and assessment;

d. Collaborative planning and implementation of a variety of assessment techniques, including examination of student work, that yield individual, class, grade level, and school level data as a foundation for identifying existing competencies and targeting areas in need of further attention;

e. Incorporation of differentiated and effective instruction that responds to individual learner needs including appropriate response to cultural, ethnic, and linguistic diversity;

f. Knowledge, understanding, and application of the federal and state regulatory requirements, and expectations associated with identification, education, and evaluation of students with disabilities;

g. Collaboratively working with parents and school personnel to ensure that students with disabilities are included as a valued part of the school community, and that they receive effective and appropriately intensive instruction to assist them in meeting the

standards set for all students as well as individual goals outlined in their individualized education plans (IEPs);

h. Integration of technology in curriculum and instruction to enhance learner understanding;

i. Identification, analysis, and resolution of problems using effective problem-solving techniques; and

j. Development, articulation, implementation, and stewardship of a vision of excellence linked to mission and core beliefs that promote continuous improvement consistent with the goals of the school division.

2. Knowledge, understanding, and application of leadership and organizations, including;

a. The change process of systems, organizations, and individuals using appropriate and effective adult learning models;

b. Aligning organizational practice, division mission, and core beliefs for developing and implementing strategic plans;

c. Information sources and processing, including data collection and data analysis strategies;

d. Using data as a part of ongoing program evaluation to inform and lead change;

e. Developing a change management strategy for improved student outcomes;

f. Developing distributed leadership strategies to create personalized learning environments for diverse schools; and

g. Effective two-way communication skills including consensus building, negotiation, and mediation skills.

3. Knowledge, understanding, and application of management and leadership skills that achieve effective and efficient organizational operations and sustain an instructional program conducive to student academic progress, including;

a. Alignment of curriculum and instruction and assessment of the educational program to achieve high academic success at the school and division or district level;

b. Principles and issues of supervising and leading others to ensure a working and learning climate that is safe, secure, and respectful of a diverse school community;

c. Management decisions that ensure successful teaching and learning including human resources management and development, theories of motivation, change in school culture, innovation and creativity, conflict resolution, adult learning, and professional development models;

d. Knowledge, understanding, and application of Virginia's Guidelines for Uniform Performance Standards and Evaluation Criteria for Teachers and the Guidelines for Uniform Performance Standards and Evaluation Criteria for Principals;

e. Principles and issues related to fiscal operations of school management;

f. Principles and issues related to school facilities and use of space and time for supporting high-quality school instruction and student learning;

g. Legal issues impacting school operations and management;

h. Technologies that support management functions; and

i. Application of data-driven decision-making to initiate and continue improvement in school and classroom practices and student achievement.

4. Knowledge, understanding, and application of the conditions and dynamics impacting a diverse school community, including:

a. Emerging issues and trends within school and community relations;

b. Working collaboratively with staff, families, and community members to secure resources and to support the success of a diverse population;

c. Developing appropriate public relations and public engagement strategies and processes for building and sustaining positive relationships with families, caregivers, and community partners; and

d. Integration of technology to support communication efforts.

5. Knowledge, understanding, and application of the purpose of education and the role of professionalism in advancing educational goals, including:

a. Philosophy of education that reflects commitment to principles of honesty, fairness, caring, and equity in day-to-day professional behavior;

b. Integration of high quality, content rich, job-embedded professional learning that respects the contribution of all faculty and staff members in building a diverse professional learning community;

c. Reflective understanding of potential moral and legal consequences of decision-making in the school setting;

d. Intentional and purposeful effort to model professional, moral, and ethical standards as well as personal integrity in all interactions; and

e. Intentional and purposeful effort to model continuous professional learning and to work collegially and collaboratively with all members of the school community to support the school's goals and enhance its collective capacity.

6. Knowledge, understanding, and application of basic leadership theories and influences that impact schools including:

a. Concepts of leadership including systems theory, change theory, learning organizations, and current leadership theory;

b. Identify and respond to internal and external forces and influences on a school;

c. Identify and apply the processes of educational policy development at the state, local, and school level; and

d. Identify and demonstrate ways to influence educational policy development at the state, local, and school level.

B. Complete a deliberately structured and supervised internship that is focused on student academic progress for all students and

1. Provides significant experiences within a school environment for candidates to synthesize and apply the content knowledge and develop professional skills through school-based leadership experiences;

2. Shall occur in a public or accredited nonpublic school;

3. Provides exposure to five different multiple sites (elementary, middle, high, central office, and agency) with diverse student populations; and

4. Documents a minimum of 320 clock hours, of which at least 120 clock hours are embedded as experiential field-based opportunities experienced during coursework.

C. Satisfy the requirements for the school leaders licensure assessment prescribed by the Board of Education. Individuals seeking an initial administration and supervision endorsement who are interested in serving as central office instructional personnel are not required to take and pass the school leaders assessment prescribed by the Board of Education.

8VAC20-543-580. Mathematics specialist for elementary education.

A. A mathematics specialist is a teacher in the elementary grades who has interest and special preparation in mathematics content, scientifically based research in the teaching and learning of mathematics, diagnostic and assessment methods, and leadership skills. The school-based mathematics specialist shall serve as a resource in professional development, instructing children who have learning difficulties in mathematics, curriculum development and implementation, mentoring new teachers, and parent and community education.

B. The mathematics specialist program shall ensure that the candidate has completed at least three years of successful classroom teaching experience in which the teaching of mathematics was an important responsibility and demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes of the [~~Virginia Mathematics Standards of Learning~~*Virginia Mathematics Standards of Learning*] and how curriculum may be organized to teach these standards to diverse learners;

2. Understanding of a core knowledge base of concepts and procedures within the discipline of mathematics, including the following strands: number systems and number theory; geometry and measurement; statistics and probability; and functions and algebra;

3. Understanding of the sequential nature of mathematics, the vertical progression of mathematical standards, and the mathematical structures inherent in the content strands;

4. Understanding of the connections among mathematical concepts and procedures and their practical applications;

5. Understanding of and the ability to use the five processes - becoming mathematical problem-solvers, reasoning mathematically, communicating mathematically, making

mathematical connections, and using mathematical models and representations - at different levels of complexity;

6. Understanding of major current curriculum studies and trends in mathematics;

7. Understanding how to utilize appropriate technologies for teaching and learning mathematics including virtual manipulatives;

8. Understanding of and the ability to select, adapt, evaluate, and use instructional materials and resources, including professional journals and technology;

9. Understanding of and the ability to use strategies for managing, assessing, and monitoring student learning, including diagnosing student errors;

10. Understanding of and the ability to use strategies to teach mathematics to diverse learners;

11. Understanding of leadership skills needed to improve mathematics programs at the school and division levels, including the needs of high-achieving and low-achieving students and of strategies to challenge them at appropriate levels; child psychology, including personality and learning behaviors; educational measurement and evaluation; and effective professional development approaches;

12. Understanding of how to develop and lead appropriate professional development based on the needs of students and the school community;

13. Understanding of how to work with school-based administration for the improvement of mathematics teaching and learning;

14. Understanding of how to effectively mentor teachers for the improvement of mathematics teaching and learning;

15. Understanding of how to effectively work with parents and the at-large community to improve mathematics teaching and learning;

16. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing; and

17. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-590. Mathematics specialist for [elementary and] middle education.

A. A mathematics specialist is a teacher in the [elementary and/or] middle grades who has interest and special preparation in mathematics content, scientifically-based research in the teaching and learning of mathematics, diagnostic and assessment methods, and leadership skills. The school-based mathematics specialist shall serve as a resource in professional development, instructing children who have learning difficulties in mathematics, curriculum development and implementation, mentoring new teachers, and parent and community education.

B. The mathematics specialist program shall ensure that the candidate has completed at least three years of successful classroom teaching experience [in a public or accredited nonpublic school] in which the teaching of mathematics was an important responsibility and demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes of the [~~Virginia Mathematics Standards of Learning~~*Virginia Mathematics Standards of Learning*] and how curriculum may be organized to teach these standards to diverse learners;

2. Understanding of a core knowledge base of concepts and procedures within the discipline of mathematics, including the following strands: number systems and number

theory; geometry and measurement; statistics and probability; and functions and algebra;

3. Understanding of the sequential nature of mathematics, the vertical progression of mathematical standards, and the mathematical structures inherent in the content strands;

4. Understanding of the connections among mathematical concepts and procedures and their practical applications;

5. Understanding of and the ability to use the five processes - becoming mathematical problem-solvers, reasoning mathematically, communicating mathematically, making mathematical connections, and using mathematical models and representations - at different levels of complexity;

6. Understanding of major current curriculum studies and trends in mathematics;

7. Understanding how to utilize appropriate technologies for teaching and learning mathematics, including graphing utilities, dynamic software, spreadsheets, and virtual manipulatives;

8. Understanding of and the ability to select, adapt, evaluate, and use instructional materials and resources, including professional journals and technology;

9. Understanding of and the ability to use strategies for managing, assessing, and monitoring student learning, including diagnosing student errors;

10. Understanding of and the ability to use strategies to teach mathematics to diverse learners;

11. Understanding of leadership skills needed to improve mathematics programs at the school and division levels, including the needs of high-achieving and low-achieving

students and of strategies to challenge them at appropriate levels; child psychology, including personality and learning behaviors; educational measurement and evaluation; and effective professional development approaches;

12. Understanding of how to develop and lead appropriate professional development based on the needs of students and the school community;

13. Understanding of how to work with school-based administration for the improvement of mathematics teaching and learning;

14. Understanding of how to effectively mentor teachers for the improvement of mathematics teaching and learning;

15. Understanding of how to effectively work with parents and the at-large community to improve mathematics teaching and learning;

16. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing; and

17. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

8VAC20-543-600. Reading specialist.

The reading specialist program shall ensure that the candidate [has completed at least three years of successful classroom teaching experience in a public or accredited nonpublic school and] has demonstrated the following competencies:

1. Assessment and diagnostic teaching. The candidate shall:

a. Demonstrate expertise in the use of formal and informal screening, diagnostic, and progress monitoring assessment for language proficiency, concepts of print,

phonemic awareness, letter recognition, decoding, fluency, vocabulary, reading levels, and comprehension; and

b. Demonstrate expertise in the ability to use diagnostic data to inform instruction for acceleration, intervention, remediation, and differentiation.

2. Communication: speaking, listening, media literacy. The candidate shall:

a. Demonstrate expertise in the knowledge, skills, and processes necessary for teaching communication, (speaking, listening, and media literacy);

b. Demonstrate expertise in developing students' phonological awareness skills;

c. Demonstrate effective strategies for facilitating the learning of standard English by speakers of other languages and dialects;

d. Demonstrate an understanding of the unique needs of students with language differences and delays;

e. Demonstrate the ability to promote creative thinking and expression, such as through storytelling, drama, and choral and oral reading, etc.; and

f. Demonstrate the ability to teach students to identify the characteristics of, and apply critical thinking to, media messages and to facilitate their proficiency in using various forms of media to collaborate and communicate.

3. Reading. The candidate shall:

a. Demonstrate expertise in explicit and systematic phonics instruction, including an understanding of sound and symbol relationships, syllables, phonemes, morphemes, decoding skills, word analysis, and word attack skills;

b. Demonstrate expertise in the morphology of English including inflections, prefixes, suffixes, roots, and word relationships;

c. Demonstrate expertise in strategies to increase vocabulary;

d. Demonstrate expertise in the structure of the English language, including and understanding of syntax, semantics, and vocabulary development;

e. Demonstrate expertise in reading comprehension strategies, including a repertoire of questioning strategies, understanding the dimensions of word meanings, teaching predicting, inferencing, summarizing, clarifying, evaluating, and making connections;

f. Demonstrate expertise in the ability to teach strategies in literal, interpretive, critical, and evaluative comprehension;

g. Demonstrate the ability to develop comprehension skills in all content areas;

h. Demonstrate the ability to foster appreciation of a variety of literature; and

i. Understand the importance of promoting independent reading and reading strategically through a variety of means including by selecting fiction and nonfiction texts of appropriate yet engaging topics and reading levels; and

j. Demonstrate effective strategies for teaching students to view, interpret, analyze, and represent information and concepts in visual form with or without the spoken or written word.

4. Writing. The candidate shall:

a. Demonstrate expertise in the knowledge, skills, and processes necessary for teaching writing, including the domains of composing and written expression and usage and mechanics and the writing process of planning, drafting, revising, editing, and sharing;

b. Demonstrate expertise in systematic spelling instruction, including awareness of the purpose and limitations of "invented spelling," orthographic patterns, and strategies for promoting generalization of spelling study to writing; and

c. Demonstrate expertise to teach the writing process: plan, draft, revise, edit, and share in the narrative, descriptive, and explanative modes.

5. Technology. The candidate shall demonstrate expertise in their use of technology for both process and product as they work to guide students with reading, writing, and research.

6. Leadership, coaching, and specialization. The candidate shall:

a. Demonstrate an understanding of developmental psychology, including personality and learning behaviors;

b. Demonstrate an understanding of the needs of high achieving students and of strategies to challenge them at appropriate levels;

c. Demonstrate an understanding of the significance of cultural contexts upon language;

d. Demonstrate an understanding of varying degrees of learning disabilities;

e. Demonstrate expertise with educational measurement and evaluation[,] including validity, reliability, and normative comparisons in test design and selections;

f. Demonstrate expertise to interpret grade equivalents, percentile ranks, normal curve equivalents, and standards scores;

g. Demonstrate the ability to instruct and advise teachers in the skills necessary to differentiate reading instruction for both low and high achieving readers;

h. Demonstrate the ability to coach and support teachers through classroom observations, demonstrations, co-teaching, and other forms of job-embedded professional development;

i. Demonstrate the ability to organize and supervise the reading program within the classroom, school, or division;

j. Demonstrate effective communication skills in working with a variety of groups, including parents, teachers, administrators, community leaders, etc.;

k. Demonstrate knowledge of current research and exemplary practices in English and reading;

l. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing; and

m. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

[n. The candidate shall complete a supervised practicum or field experience in the diagnosis and remediation of reading difficulties in a public or accredited nonpublic school.]

8VAC20-543-610. School counselor preK-12.

The school counselor preK-12 program shall ensure that the candidate has [completed two years of successful, full-time teaching experience or two years of successful full-time experience in school counseling in a public or an accredited nonpublic school (two years of successful, full-time experience in school counseling in a public or an accredited nonpublic school under a nonrenewable Provisional License may be accepted to meet this requirement), and] demonstrated the following competencies:

1. The ability to support students by cooperatively working with parents and guardians and teachers.

2. Understanding of the principles and theories of human growth and development throughout the lifespan and their implications for school counseling.

3. Understanding of the social and cultural foundations of education and their implications for school counseling programs.

4. Understanding of lifespan career development.

5. Understanding of the skills and processes for counseling students to include:

a. Individual and group counseling for academic development;

b. Individual and group counseling for career development; and

c. Individual and group counseling for personal and social development.

6. Understanding of the knowledge, skills, and processes for providing developmental group [counseling~~guidance~~], including:

a. Academic development;

b. Career development; and

c. Personal and social development.

7. Understanding of the skills and processes related to the school counseling program at the elementary, middle, and secondary levels, including:

a. Characteristics of learners at the elementary, middle, and secondary levels;

b. Program planning;

c. Coordination; and

d. Consultation.

8. Understanding of the knowledge, skills, and processes of student appraisal and assessment relative to school [~~guidance and~~] counseling programs, including:

a. Individual assessment; and

b. Group assessment.

9. Understanding of the school counseling professional, including:

a. Legal considerations;

b. Ethical considerations; and

c. Professional issues and standards.

10. Understanding of the skills and processes of research and evaluation aimed at improving school counseling programs.

11. Understanding work-based learning methods of instruction such as internship, job shadowing, cooperative education, mentorship, service learning, clinical, and youth apprenticeship,

12. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

13. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

14. The program shall include at least 100 clock hours of [a school counselor] internship and practicum experience in the preK-6 setting and 100 clock hours of internship and practicum experience in the grades 7-12 setting.

8VAC20-543-620. School psychology.

The school psychology program shall ensure that the candidate has demonstrated the following competencies:

1. Knowledge of basic teaching and learning principles and the conditions under which they operate maximally (academic environment and instructional match).

2. Knowledge and application of psychological foundations of human functioning including biological bases of behavior; cultural diversity; infant, child, and adolescent development; effects of poverty and lack of opportunity on learning; interplay between behavior, learning and motivation; personality theory; human learning; and social bases of behavior and mental health, to ensure student academic achievement, student growth and development, and mental health.

3. Knowledge of and skill at applying educational foundations of schooling, including education of exceptional learners; evidence-based instructional and remedial interventions, techniques, and strategies; formative and summative evaluation; evidence-based behavioral interventions; and organization and operations of schools, to ensure effective collaboration with other school professionals toward implementing school practices that promote learning and mental health.

4. Knowledge of various methods for assessing students' cognitive processes and abilities and skill in administering a variety of such methods; knowledge of various methods for assessing student academic strengths and weaknesses and skill in administering a variety of such methods; knowledge of various methods for assessing student interpersonal emotional and social and behavioral functioning and skill in administering a variety of such methods; and knowledge of universal screening measures designed for early and tiered academic and behavioral intervention.

Knowledge of a variety of progress monitoring tools, especially student growth percentiles and skill in implementing at least two such tools.

5. Understanding and knowledge of direct and indirect methods of academic and behavioral intervention, and proficiency in delivering such interventions including:

a. Counseling on an individual, group, and family basis;

b. Consulting with administrators, teachers, parents, and other professionals about student problems and appropriate change strategies;

c. Designing and implementing individual and group behavior change programs; designing, implementing, and evaluating crisis intervention and threat (self-directed and other-directed) assessment programs; and

d. Designing and implementing academic and instructional interventions.

6. Statistics and research design, measurement, and program evaluation.

7. The profession of psychology applied to schools, including:

a. Basic knowledge of the standards of practice promoted by the National Association of School Psychologists (NASP);

b. Knowledge of and skill with several basic problem-solving schemes;

c. Knowledge of and ability to identify the variety of mental health problems exhibited by infants, children, and adolescents through age 21, including the ability to collaborate with other community-based professionals and private practitioners in providing wraparound services to the extent possible (systems of care philosophy);

d. History and foundations of school psychology;

e. Legal and ethical issues of practicing in schools;

f. Professional issues and standards related to practicing as a psychologist in a public school setting; and

g. Knowledge of the roles of all individuals practicing and working in a public school setting.

8. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

9. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

10. The candidate shall have earned a baccalaureate degree from a regionally accredited college or university and completed 60 graduate hours, 54 of which are academic coursework, exclusive of field-based experiences, that culminate in at least a master's degree.

11. The candidate shall complete an internship [in school psychology] that is documented by the degree granting institution. The internship experience shall occur on a full-time basis over a period of one year or on a half-time basis over a period of two consecutive years. The internship shall occur under conditions of appropriate supervision (i.e., the school-based supervisor shall be licensed as either a school or clinical psychologist). The internship shall include experiences at multiple age levels, at least one half of which shall be in an accredited schooling setting.

8VAC20-543-630. School social worker.

The school social worker program shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes for direct and indirect intervention, including:

a. Facilitating integrated intervention efforts that emphasize primary prevention, early screening, and multi-tiered interventions that target multiple risk factors in various settings;

b. Identifying approaches that seek to improve individual and system factors contributing to academic success and data-informed decision making and intervention fidelity;

c. Counseling on an individual, group, or family basis;

d. Consulting with administrators, teachers, parents, and other professionals about student problems and appropriate change strategies;

e. Networking and brokering with school programs and community agencies to provide essential services for families and children; and

f. Skills in collaborating with and facilitating collaboration among students, parents, members, administrators, teachers, and staff to identify ways to intervene early, reduce barriers to learning, and improve student outcomes.

2. Understanding of child development, psychopathology, social and environmental conditioning, cultural diversity, and family systems including:

a. Acknowledgment of the interrelatedness of various ecological systems such as education, juvenile justice, family and children's health, mental health, and child protective services; and

b. Knowledge of social problem impact on student performance and behaviors.

3. Understanding of the knowledge, skills, and processes for effective casework practice:

a. Examine factors in home, school, and community that impact students' educational performance and success; and

b. Assist in reducing identified barriers to learning.

4. Specialized knowledge and understanding of the organization and operations of school systems including:

a. Historical and current perspectives of public school education at the local, state, and national levels, including educational reform and legislation; and

b. Identifying and conveying the impact social problems, within ecological systems of home, school, and community, have on student performance in the educational setting.

5. Understanding of the knowledge, skills, and processes involved with assessing and programming for exceptional students including:

a. Skills in implementing systematic assessment, data gathering and interpretation at multiple levels, and developing action plans to address the areas of need;

b. Identifying and utilizing research-based interventions to enhance the educational opportunities and school performance of vulnerable and at-risk populations;

c. Providing leadership in developing prevention programs and policies with administrators that impact school climate, student learning, and academic success; and

d. Ability to facilitate team decision-making and problem-solving strategies.

6. Understanding of the school social work profession, including:

a. History and foundations of school social work;

b. Legal and ethical issues;

c. Professional issues and standards; and

d. The role and function of the school social worker to include contextual variables influencing school social work roles and functions (e.g., political, legal, ethical, and value-based issues) that confront schools.

7. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

9. The candidate shall have earned a master's of social work degree from a regionally accredited college or university school of social work with a minimum of 60 graduate semester hours [or earned an advanced standing master's of social work degree from a regionally accredited college or university with a minimum of 30 graduate-level semester hours.]

10. The candidate shall complete a minimum of six graduate semester hours in education to include six semester hours from two of the following courses:

a. [Foundations of education and t~~T~~eaching] profession (3 semester hours);

b. Characteristics of special education (3 semester hours);

c. Human development and learning (3 semester hours); or

d. Classroom and behavior management (3 semester hours).

11. The candidate shall complete a [school social worker] supervised practicum or field experience of a minimum of 400 clock hours in a public or accredited nonpublic school[.] [~~discharging the duties of a school social worker~~.] One year of successful, full-time

experience as a school social worker in a public or accredited nonpublic school may be accepted in lieu of the school social work practicum.

8VAC20-543-640. Vocational evaluator.

The vocational evaluator program shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the foundations of vocational evaluation and career assessment, including philosophy and process of vocational evaluation and assessment, use of occupational and labor market information, and functional aspects of physical, mental and intellectual disabilities.

2. Understanding of the basic concepts and skills of planning for and delivering vocational evaluation and career assessment services, including the use of vocational interviewing, individualized service planning, report development and communication, and use of modifications and accommodations.

3. Ability to modify standard instruments and to develop new instruments to respond to labor markets or individual needs.

4. Understanding of the federal and state laws and regulations pertaining to special education (Individuals with Disabilities Education Act), rehabilitation (Rehabilitation Act and the Americans with Disabilities Act.)

5. Understanding of the content, processes, and skills necessary to administer and report findings of standardized testing, including knowledge of tests and measurements and selection and use of appropriate instruments.

6. Above average communication skills in order to explain assessment information to school personnel, parents, students, and other service providers

7. Understanding of natural supports and assistive technology.

8. Ability to select, administer, and interpret a wide assortment of evaluation instruments which includes commercial work sample systems, and situational assessments.

9. Understanding and knowledge of specific assessment techniques and skills and the processes for conducting vocational evaluation and career assessment, including:

a. Job and training analysis;

b. Work samples and systems;

c. Situational and community-based assessment;

d. Behavioral observation;

e. Learning and functional skills assessment; and

f. Work site assessment (ecological assessment).

10. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

11. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.

FORMS (8VAC20-543)

Request for New Education Program Endorsement Area (undated)

ATTACHMENT C

Proposed *Regulations Governing the Review and Approval of Education Programs in Virginia*

PUBLIC COMMENTS

Presented to the Virginia Board of Education
April 28, 2016

Virginia Department of Education
Division of Teacher Education and Licensure
P. O. Box 2120
Richmond, Virginia 23218-2120

8VAC20-543. Proposed *Regulations Governing the Review and Approval of Education Programs in Virginia*
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Commenter	Section	Comment	Agency Response
Elizabeth Langran, Marymount University		I am concerned with the expectations for implementation of the new regulations. Just as VDOE took time to thoughtfully develop these proposed regulations, it will take university faculty time to revamp existing courses and programs. Any new course or program revisions will need to be sent through several rounds of review and voting before it can even reach our Curriculum Committees, and this process takes at a *minimum* one year. There is additional concern for how this would affect our students currently in the pipeline to have changes requiring a quick turnaround. In short, we need at a minimum one year to implement these new regulations.	A period of transition will be considered for the regulations.
Jane Bray (Dean), Old Dominion University		Implementing the proposed far-reaching and innovative regulations will be a challenge. The Virginia Department of Education, the teacher preparation programs, and the school divisions will need to work together to create implementation plans and deploy assessment measure such as the employer satisfaction survey. The data gathering and analysis, in order to be effective will also require notification and additional time.	A period of transition will be considered for the regulations.
Beth Ackerman, VACTE President	8VAC20-543-20 Accreditation and administering this chapter.	While members of VACTE support the encouragement of four-year programs for teacher licensure, there was concern expressed that there was not enough support in the wording of this regulation to continue to support licensure graduate programs.	The text was revised to reference approved program (rather than approved baccalaureate degree program).
Heather Schoffstall, Liberty University	8VAC20-543-20 Accreditation and administering this chapter.	Does 8VAC20-543-20 allow for master's level programs as well, or is it limited to baccalaureate level only?	
Donna Watson, Ph.D. Bluefield College	8VAC20-543-20 Accreditation and administering this chapter.	Requiring all programs to be nationally accredited could create additional demands in terms of data collection and reporting on colleges and universities with teacher education programs. Requiring national accreditation must be tied to an agreement between the Commonwealth of Virginia and CAEP that seeks to minimize duplicate reporting of data and requiring data that teacher education programs have no authority or means to collect.	The Department of Education will enter into a partnership agreement with the Council for the Accreditation of Education Preparation (CAEP).
Dr Karrin Lukacs, Shenandoah University	8VAC20-543-20 Accreditation and administering this chapter.	I would ask why graduate programs are not included as well.	The text was revised to reference all approved programs (rather than only approved baccalaureate degree programs).
Mary Bowser, Shenandoah University	8VAC20-543-20 Accreditation and administering this chapter.	Does 8VAC20-543-20 allow for master's level programs as well, or is it limited to baccalaureate level only? "academic degrees in the arts and sciences, or equivalent"	
Jean Roth Hawk, Bridgewater College	8VAC20-543-20 Accreditation and administering this chapter.	I support lifting of the professional studies coursework cap. This change will better allow schools of education to address the many needs of the profession.	The comments support removing the limit (cap) on professional studies at the undergraduate level. The text was revised to reference approved programs (rather than only approved baccalaureate degree programs).
Karrin Lukacs, Shenandoah University	8VAC20-543-20 Accreditation and administering this chapter.	I support the elimination of the professional studies coursework cap. As the parent of a child receiving special education services through his LEA, I also applaud the proposal to require 3 courses for the Provisional License in Special Education.	
Heather Schoffstall, Liberty University	8VAC20-543-20 Accreditation and administering this chapter.	It is great to have the "cap" removed from the professional studies requirements.	

8VAC20-543. Proposed *Regulations Governing the Review and Approval of Education Programs in Virginia*
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Commenter	Section	Comment	Agency Response
Jane Bray (Dean) and Leigh Butler, Old Dominion University	8VAC20-543-20 Accreditation and administering this chapter.	We are concerned about the elimination of the professional studies cap and encouraging teacher preparation to occur at the undergraduate level. The language used highlights the requirements to be completed within a "baccalaureate degree program." When credit hours are mandated in some areas of professional studies, the only way to achieve this at the undergraduate level is to reduce coursework in the content areas (to keep the general 120 hours for graduation).	
Mark Ginsberg, Ellen Rodgers; George Mason University	VAC520-543-20 Accreditation and administering this chapter.	Clarification needed on the role of SPA Standards with alignment to InTASC and State Standards. For CAEP, all units must do InTASC. There is a lack of clarity in terms of implementation (SPAs as an option, CAEP/State agreement).	The proposed regulations do require that institutions of higher education must be accredited by CAEP; however, program approval will be the responsibility of the Board of Education. CAEP Standard 1, in part, does require, " ***Candidate Knowledge, Skills, and Professional Dispositions*** *1.1 Candidates demonstrate an understanding of the 10 InTASC standards at the appropriate progression level(s) in the following categories: the learner and learning; content; instructional practice; and professional responsibility."* The Department of Education will enter into a state partnership agreement with CAEP.
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC-20-543-20-F Accreditation and administering this chapter.	Strong concern (Section F). Faculty are not in agreement with the following being the responsibility of the EEPs, and strongly suggest that this information be handled by schools districts/employers who can ensure that it is renewed periodically "complete training or certification in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillators."	The requirement that individuals must complete training or certification in emergency first aid, CPR, and the use of AEDs is a statutory requirement. The requirement must be completed prior to the issuance of a license.
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC-20-543-20-F Accreditation and administering this chapter.	General Support for this regulation. Clarification is needed as to when candidates are required to submit evidence of their accreditation for training. Currently, this is in the course EDSE 501, Intro to SPED. However, not all students take this course. Also, students are in schools for field experiences prior to internship. Further, clarification is needed with regard to what the state implies by "demonstrate proficiency." Will this be a state developed test or developed by individual IHEs?	The verification of the requirements stipulated in 8VAC-20-543-20-F is documented when the institution of higher education recommends the individual as completing an approved program.
James Wicks, Liberty University	8VAC20-543-20 Accreditation and	I do not believe it is necessary to "require" a professional education program in Virginia to be nationally accredited since the main purpose of the program is to provide for Virginia	The proposed regulations do recommend that all institutions of higher education be

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	administering this chapter.	licensure. If specific higher education institutions wish to prepare candidates for licensure in states other than Virginia then they should be at liberty to seek regional and/or national accreditation of their choice to meet those specific program goals. This would relieve specific institutions, lacking that level of accreditation, from suffering undue harm while continuing to serve existing and future teaching needs in the state of Virginia.	nationally accredited by CAEP.
Jane Bray (Dean) and Leigh Butler, Old Dominion University	8VAC20-543-20 Accreditation and administering this chapter.	ODU recognizes the importance of national accreditation. We expect not only will the university meet the expectations of full accreditation; we also expect all programs within the department will hold national recognition from specialized professional education programs.	The comment supports the proposed revision.
Heather Schoffstall, Liberty University	8VAC20-543-20 Accreditation and administering this chapter.	With CAEP accreditation, allow SPAs as an option.	Education (endorsement) programs must be approved by the Board of Education. Institutions of higher education may still seek SPA approval.
Robert N. Corley III, Virginia State University	8VAC20-543-20 Accreditation and administering this chapter.	Revise to read as follows: B. Professional education programs in Virginia shall obtain and maintain national accreditation from a national accrediting body recognized by the U.S. Department of Education or the Council for Higher Education Accreditation (CHEA), Professional education programs in Virginia seeking national accreditation through a recognized accrediting body shall adhere to procedures and timelines established by such body and the established Virginia Partnership Agreement. Professional education programs shall ensure and document that programs are aligned with standards set forth in 8VAC20-543-40 through 8VAC20-543-50 and meet competencies outlined in 8VAC20-543-60 through 8VAC20-543-640. Rationale: Language is revised to align with proposed definition for "Accredited program" in 8VAC20-543-10 and text in 8VAC20-543-40 through 60. Question: When will this take effect based on relationship to CAEP requirements and standards, especially as pertaining to the current Department of Education/CAEP schedule for approved professional education seven year reviews? Consider including this information as part of the State/CAEP Partnership Agreement. D. What is an "earned major"; what does "equivalent in the area sought" actually mean? To ensure clarity of intent, please provide a couple of examples within the text of this section. These terms are not used consistently across universities (and even within some departments). Check with SCHEV for guidelines on how to define for Virginia programs. Revise to read as follows: E. Professional studies coursework and methodology, including field experiences, required in this chapter shall be designed for completion within a baccalaureate or graduate degree program. Rationale: Programs may be offered at both graduate and undergraduate levels of study.	The proposed regulations recommend that all programs must be accredited by CAEP. An earned major means to acquire a major through the institution. The equivalent is listed because individuals may have earned credits equal to a major, but the institution has not officially declared the individual has a "major." A period of transition will be considered for the regulations. The text is revised to reference approved programs (rather than approved baccalaureate degree program). The proposed regulations recommend a biennial reporting period. The timeline to submit new endorsement programs is a process outside of the approved program regulations. Due to the review process timeline, requests for new endorsement programs are submitted once a year. In addition to the review of the programs, each must be reviewed by the Advisory Board on Teacher Education and Licensure and then presented to the Board in two consecutive meetings.

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		Revise the last sentence to read as follows: G. "… These procedures shall result in recommendations to the Board of Education every three years (triennial basis) for one of the following three ratings: "approved," "approved with stipulations," or "approval denied." Rationale: This language aligns with the notion of assessing program endorsement areas on a triennial basis (is similar to that required for accreditation designations for Virginia's school divisions). Also, deletion of biennial approval of programs will reduce the amount of reporting, paperwork, etc. required by the state for review and approval of professional education programs. Revise to read as follows: H. Education endorsement programs shall be approved under this chapter based on compliance with the criteria described in 8VAC20-543-40, 8VAC20-543-50, and 8VAC20-543-60. Board of Education program endorsement area approval every two years is burdensome and redundant. A three year approval process is more reasonable. This language aligns with the notion of assessing program endorsement areas on a triennial basis (somewhat similar to that required by Virginia's PreK-12 school accreditation standards). "I. The Department of Education will determine the timeline and procedures for applying for education endorsement program approval." Comment: Consider increasing the opportunity to submit requests to offer new endorsement programs to twice a year (i.e., during all and spring semesters). (Currently requests may be made only once a year in the spring.) Institutions will then have an opportunity to make requests in the fall and make revisions, if needed, by the spring semester deadline. Revise to read as follows: K. Professional education programs shall submit to the Department of Education on behalf of each education endorsement program under consideration an accountability measurement report as needed and an annual report card to include data prescribed by the Board of Education on education endorsement programs in accordance with department procedures and timelines. This language would be in alignment with other sections of the regulations as appropriate.	
Harvey Klamm, Liberty University	8VAC20-543-30 Application for new education endorsement programs.	As new regulations for approved programs are implemented, revisions of existing endorsements should not require matrices and other items that are submitted for NEW endorsements. Institutions seeking to comply with the new regulations should only be required to submit a rationale for revision(s) and a degree plan listing all courses. Program revisions for existing programs should be submitted with the next Biennial Report.	A period of transition will be considered for the regulations. The proposed regulations do require that institutions of higher education must be accredited by CAEP; however, program approval will be the responsibility of the Board of Education. The biennial reporting is part of education
Heather Schoffstall, Liberty University	8VAC20-543-30 Application for new education endorsement programs.	At the end of this process of Approved Program Regulations Revision, the revisions of the matrices, the back-and-forth third party process of "approving" them, the separate university internal curricular change systems, and the time consumed by all of these processes equates to an overwhelming burden on faculty and staff, and often removes us from our primary	

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		duties as teacher educators. That is not a good side-effect.	(endorsement) approval.
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC20-543-40 Standards for biennial approval of education endorsement programs.	General support for increasing standards (Standards for Biennial approval of education endorsement programs). General support for the field experiences, but clarification is needed with regard to how the state is defining "clinically-based" field experiences. Item #3: General support for the emphasis on field experiences in "diverse" school settings Item #4: General support and suggestion for the item addressing diverse settings; however, working with students with disabilities should also be included. Clarification. Faculty questioned the implications of FERPA when gathering post-graduation data (e.g., obtaining employer job satisfaction, evaluations and impact of performance on k-12 student outcomes). The state will need to clarify how this will be obtained. Will IHEs be required to obtain permission/consent from candidates upon graduation? Item #6: Concern that the biennial reporting requirement is excessive and does not fully align with CAEP.	
James Madison University - Phil Wishon, Maggie Kyger and Steve Purcell	8VAC20-543-40 Standards for biennial approval of education endorsement programs	Evidence that supervised clinical experiences are continuous and systematic and comprised of early field experience with a minimum of 10 weeks of full-time student teaching… It's not clear from the regulation whether a student teaching internship has to be at least 10 weeks in length or whether (2) eight-week placements (for a total of 16 weeks) will satisfy the requirement. Please clarify.	The proposed regulations require 10 weeks of full-time student teaching. Due to school calendars, adjustments may need to be considered.
Dr Karrin Lukacs, Shenandoah University	8VAC20-543-40 #3b: Standards for biennial approval of education endorsement programs	The definition of "full-time student teaching" needs to be clearer.	
Malcolm Lively, Hilve Firek, Mary Jo Karlis, Virginia Wesleyan College	8VAC20-543-40 Standards for biennial approval of education endorsement program. 8VAC20-543-50 Application of the standards.	Concerns: First, Regarding Standards for Biennial Approval of Education Endorsement Programs: The revision to 8VAC20-543-40 (also in 8VAC20-543-50) continues to penalize teacher education programs for counseling out admitted candidates who, as they progress, show poor potential or lack the dispositions to be good teachers, and especially those who decide for personal/career reasons to pursue other fields of study and have taken the Virginia Communication and Literacy Assessment early in the program. This measure also continues to penalize smaller undergraduate institutions with teacher education endorsement programs with small numbers—it takes only three completers or non-completers to fail one of the licensure assessments (Virginia Communication and Literacy Assessment, Reading for Virginia Educators, or Praxis Subject Area Assessment, and most likely the Praxis Subject	The proposed regulations were amended to recommend a change as noted below: Institutions with education endorsements programs that fall below the 80% biennial requirement shall submit to the Board of Education for approval an improvement plan to address the area(s) of stipulation including measurable goals and timelines. Semi-annual reports must be submitted to the Director of Teacher Education to document the progress in addressing the goals to eliminate the stipulation until the

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		Area Assessment) when you reach the 10 required for reporting on the Biennial Report, to lose a program, which totally discounts the success of the rest, especially if those failing an assessment have already exited the program and are non-completers.	next biennial review period. The proposed regulations are amended to add a process to allow an institution of higher education that has an education (endorsement) program falling below 80 percent to submit a correction action plan.
Robert N. Corley III, Virginia State University	8VAC20-543-40 Standards for biennial approval of education endorsement programs.	1. Change to triennial reporting. Keep the other wording in the standard. This would allow application of a three year running tally procedure similar to Standard of Learning accreditation standards in Virginia's PreK-12 schools. 2. Candidate progress and performance on an assessment of basic skills as prescribed by the Board of Education for individuals seeking entry into an approved education endorsement program. Written clarification is needed in the approved program regulations regarding how this requirement may be met for program endorsement areas such as Administration and supervision PreK-12 and School counselor preK-12 endorsement areas. The *Code of Virginia* states, in part, the following: "B. As provided in § 22.1-298.2, the Board of Education shall prescribe an assessment of basic skills for individuals seeking entry into an approved education program and shall establish a minimum passing score for such assessment. The Board also may prescribe other requirements for admission to Virginia's approved education programs in its regulations…." Administration and supervision and Support Personnel" represent approved education programs. However, no entry level assessment of basic skills is required. Language in the *Code* is neither explicit nor implicit regarding whether or not these endorsement areas are exempt from this requirement. Indicators of the achievement of this standard shall include the following: "a. Results on Board of Education prescribed entry-level assessments;" Written clarification is needed in the approved program regulations regarding how this requirement is met for program endorsement areas such as Administration and supervision PreK-12 and School counselor PreK-12 endorsement areas. Rationale: Same as that provided for the previous item. "b. Evidence that supervised clinical experiences are continuous and systematic and comprised of early field experiences with a minimum of 10 weeks of full-time student teaching under the supervision with demonstrated effectiveness in the classroom..." Clarify how this language relates to program requirements of Administration and Supervision and Support Personnel requirements (e.g., for Virginia State University School counselor PreK-12 and School Administration and supervision PreK-12 program endorsements.) Regulations need to clearly define requirements for teachers and administrators, school	

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		counselors, etc. Consider the use of a designation such as "Advanced Programs" to align with language used by CAEP.	
Harvey Klamm, Liberty University	8VAC20-543-40 Standards for biennial approval of education endorsement programs.	Program non-completers should not be included in candidate passing rates. The required 80% passing rate should only include program completers. Exceptions should be considered when negative program approval decisions are based on fewer than 10 program completers, especially when small numbers are reported for critical shortage areas within our K-12 schools.	
Jane Bray (Dean) and Leigh Butler, Old Dominion University	8VAC20-543-40 Standards for biennial approval of education endorsement programs.	We are concerned about the biennial standard for candidate progress and performance on BOE assessment. This approach does not align with program improvement efforts and will worsen the effect of critical teacher shortage in hard-to-staff schools and hard-to-fill positions. We propose that programs be given the opportunity to submit a corrective action plan for one biennial cycle before the program is closed for poor performance.	
James Madison University - Phil Wishon, Maggie Kyger and Steve Purcell	8VAC20-543-40 Standards for biennial approval of education endorsement programs.	We oppose including the scores of program non-completers in the calculation for determining the 80% passing rate.	
M. Lively, Hilve Firek, J. Sullivan, MJ Karlis; Virginia Wesleyan College	8VAC20-543-40 Standards for biennial approval of education endorsement programs.	While the faculty and staff of the Teacher Education Program at Virginia Wesleyan College support the revision to 8VAC20-543-40 indicated in #6 [employer job satisfaction], we would ask that the Virginia Department of Education assist education program providers in the collection of this data. The data are very beneficial to education programs in order to track the success of graduates and also to determine if there are areas of weakness (or strength) that should be addressed. In the past, requests for such data from local school systems have resulted in very low return rates and in some circumstances, questions about the legitimacy of, or outright refusal to honor the request of this data based on privacy issues.	
Radford University Professional Education Committee: C. Bland	8VAC20-543-40 Standards for biennial approval of education endorsement programs.	We applaud this attention to preparing candidates for diverse school settings, however we ask the Board to consider the following barriers to the effective implementation of this regulation: 1. Geographic limitations – Teacher preparation programs in the western, southwestern, and rural regions of Virginia have limited access to diverse, urban settings. Distance, economic, and travel time considerations are all barriers to providing quality learning opportunities in diverse schools. The few diverse school settings within a reasonable drive of the home institution will likely be overwhelmed with requests for field placements. Will these schools be able to accommodate all the requests? 2. Quality of placements – If the geographic limitations are overcome, will the Board require that diverse school placements occur in accredited schools with fully licensed, proficient, or exemplary teachers? Such a requirement may further limit allowable placements while underscoring the high needs of urban, diverse schools. 3. Faculty leadership/supervision – Placing teacher candidates in a variety of schools	

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		across a wide geographic area presents significant challenges for existing faculty to direct and supervise field experiences, while maintaining teaching and scholarly work. Relegating field work to graduate students and adjunct faculty may limit the quality of field supervision. 4. Rural schools – rural schools with limited racial and ethnic diversity present a different set of teaching challenges including high poverty, students at risk of school failure, and schools facing economic hardship. We assume the requirement for diverse school settings will be applied to this population. We also ask for clarification concerning the expectations of diverse school setting placements: 1. Recommendations for type and duration of placements in "diverse schools" - What level of engagement will be required for the "diverse school setting" placement? Will observation or assisting hours meet the requirement or is full time teaching required in this setting? 2. Alignment with the definition of "diversity" as listed in 8VAC20-543-10 (repealed 542-10) These questions in no way diminish the value of experiences in a variety of school settings. We raise these concerns to highlight the challenges implicit in the new regulations and ask for the Board's assistance in defining the terms and considering the mediating barriers to implementation.	
Samuel J. Smith, VERA President	8VAC20-543-40 Standards for biennial approval of education endorsement programs.	Only scores of actual program completers should be included in the candidate passing rates. Non-completers' scores should be excluded. Programs with small numbers of candidates enrolled should be granted an exception to the 80% pass rate.	
Heather Schoffstall, Liberty University	8VAC20-543-40 Standards for biennial approval of education endorsement programs. 8VAC20-543-50 Application of the standards.	The descriptions of categories in 8VAC20-543-40-1 and 8VAC20-543-50-B are flawed (1) because they do not include program non-completers who have been counseled out of a program and program non-completers who have not taken the Praxis II test, and (2) because both completers and non-completers count in the 80% pass rate mandate for the program. We have to be given credit for both keeping good candidates in, and counseling out the non-successful ones before completion. With 8VAC20-543-40-6, colleges will need state assistance to obtain student achievement data from the P-12s for our completers employed in their schools.	
Heather Schoffstall, Liberty University	8VAC20-543-50 Application of the standards.	With small programs it can take several years to accumulate the 10 completers needed to "officially count" in the pass rate for the **80%** requirement. Small numbers means that the effect of one or two students has an inordinately huge impact on small programs as compared to larger programs. Also, the "sudden death" clause does not allow for programs	

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		to fix the problem and revise their training processes, which seems out of line when failing P-12 schools are given time to remediate and provided assistance to improve.	
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC20-543-50 Application of the standards.	C4 and 5 - Concern with this regulation. Clarification is needed regarding the timeframe for such assessments. Is this only during clinical experiences for students on a path to program completion or is this collected in longitudinal studies of program completers?	
Radford University PEC: K. Colley and T. Wallace	8VAC20-543-50, D Application of the standards.	This part of the regulations discusses the requirements for approval of education endorsement programs. In the proposed regulations (Section D), education endorsement programs may receive one of the following three ratings: approved, approved with stipulations, and approval denied. We are particularly concerned with the approval denied rating. According to the proposed regulations, an endorsement program may be denied approval if it does not have national accreditation or if its candidates' passing rates on Board required licensure assessments fall below 80% for two consecutive biennums. We are very concerned about the unintended consequences of denying approval to an education endorsement program. Programs that are denied approval are not permitted to admit students for two years. Measures that are punitive do not result in program improvement nor do they motivate programs to take proactive corrections. It is extremely difficult for programs to rebound and come back after being gone for two years. It is a critical time in education. We are desperately trying to address the declining number of teacher education candidates and the national teacher shortage. It is not the time to close education preparation programs. As an alternative solution to closing programs for two years, we suggest placing programs on corrective plans. Programs could continue to serve students and the school divisions in their region while addressing any concerns. In addition, programs could be required to submit annual reports to document improvement and that demonstrate the support of their college and university.	
Donna Watson, Ph.D. Bluefield College	8VAC20-543-50 Application of the standards.	Considering that college and university teacher education programs provide the majority of high quality teachers for the Commonwealth of Virginia and are the most heavily regulated and scrutinized entities who prepare teachers, any regulation that serves to deny approval on the basis of a single test score of its teaching candidates should be re-considered. The proposed regulations have added an additional category "Approved with stipulations" which should help the teacher education programs maintain their endorsements and continue to provide high quality teachers for critical shortage areas. I affirm this addition: Approved with stipulations. The education endorsement program has met standards in subsections A and B of this section and is making documented progress toward meeting standards in subsection C of this section. Biennial passing rates that fall	

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		below the 80% requirement for program completers and noncompleters shall result in the education endorsement program receiving a rating of "approved with stipulations." The passing rate for program completers and noncompleters must meet the 80% passing rate requirement by the end of the next biennial period for the program to be approved; if the 80% pass rate is not achieved, the program will be denied.	
Clara Hauth, Ph.D. Marymount University	8VAC20-543-50 Application of the standards.	Additional clarity is necessary regarding required licensure assessments. For example, students may drop their educational programs due to failure of licensure exams; this should be a caveat in the discussion. In addition, students who pass these exams but move (many of our VA higher education students may be military spouses etc.) these students who depart the program should not be counted against the University.	
Jean Roth Hawk, Bridgewater College	8VAC20-543-50 Application of the standards.	Reporting pass rates as specified for program non-completers presents some difficulties for small teacher education programs. If a candidate leaves our program, it can be for several reasons. 1.) Candidates -- especially in high-need areas—are being recruited by school divisions *before they complete our program.* School divisions offer provisional licenses and the candidate is *teaching* but is still counted as a non-completer. This should, I believe, be seen as a tribute to our preparation, but is instead, a threat to our required 80% pass rate. 2.) After admission to the program, candidates may exhibit dispositions or traits which are not compatible with excellence in teaching. These candidates are counseled out of the program prior to student teaching. Again, this appears to be a responsible and prudent action by the program, but can put it in jeopardy of falling below 80%. A better definition of non-completers for purposes of accountability is needed. With these two accounted for, a program could still be fairly evaluated on pass rates.	
Robert N. Corley III, Virginia State University	8VAC20-543-50 Application of the standards.	Revise entire section to align with language suggested for 8VAC20-543-10, 40, and 60. Consistency in language is needed throughout the document.	
Cathy Smeltzer Erb, Ph.D., Eastern Mennonite University	8VAC20-543-50 Application of the standards.	8VAC20-543-50. Application of the standards. The proposed change to “passing rates, reported by percentages, shall not fall below 80% percent biennially for program completers and program non-completers” is likely to create outcomes inconsistent with its intended purpose. If the purpose of this regulation is accountability, then institutions cannot be penalized for the decisions of students who exit prior to program completion, sometimes to take a position in a critical shortage area, and then be counted in the institution’s “non-completers” data. In the event that an institution determines that a candidate should be counseled out of teacher education, for whatever reason discovered after s/he has been admitted, this reporting requirement will encourage institutions to play the numbers game to keep candidates enrolled in order to maintain accreditation against the intention of preparing high quality teachers. Accreditation/program approval should not be tied to candidates’ decisions to exit a program. Programs with small Ns are particularly vulnerable in losing accreditation status if this regulation is approved. These small Ns programs are often the same programs on the critical shortage lists. We cannot continue to set standards that then lead to teacher shortages.	
Heather Schoffstall,	8VAC20-543-50, B	When we are in a time of teacher shortages, why are we raising so many requirements for	

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Liberty University	Application of the standards.	candidates? Many of the new requirements (such as specific SAT/ACT/GRE scores) have not been well-researched to prove their efficacy as meaningful selection criteria for effective teachers. Since SACS already accredits college programs in the content areas of English, mathematics, history, etc., why does the state need to follow behind and "re-accredit" or "re-approve" those same programs a second time? It costs taxpayers for each process and each report.	
James Madison University - Phil Wishon, Maggie Kyger and Steve Purcell	8VAC20-543-50, C4 Application of the standards.	The professional education program shall provide evidence of contributions to PreK-12 student achievement by candidates completing the program. The state has a role/responsibility to provide EPPs information about where graduates are employed within Virginia's school divisions. Additionally, it should provide to the EPPs performance/annual evaluation data (particularly for Standard 7 Student Academic Progress of the Uniform Performance Standards and Evaluation Criteria for Teachers) so that EPPs may report/provide evidence of graduates' contributions to PreK-12 student achievement. The state should also share the responsibility for encouraging P-12 division and school administrators to cooperate fully with data gathering, completion of employer surveys, etc.	
Robert N. Corley III, Virginia State University	8VAC20-543-60 Biennial accountability measurement report.	Delete biennial requirement. Require triennial reporting. Align language in this section with language used in 8VAC20-543-40 and 50, as appropriate.	
James Madison University - Phil Wishon, Maggie Kyger and Steve Purcell	8VAC20-543-70 Annual report card.	4. Number of candidates admitted in education endorsement programs who are in the top quartile of the college of university population. The proposed requirement will present a resource demand on the university data management system. This is not information that the university data management system is currently designed to collect, particularly given the large number of majors represented by all teacher education candidates in our approved programs.	Edits are recommended to the annual report card.
Jane Bray (Dean) and Leigh Butler, Old Dominion University	8VAC20-543-70 Annual report card.	The proposal to include an annual report card places an additional burden on the teacher preparation programs who are already reporting the requested data in annual Title II reporting, CAEP, along with the state biennium reports. The focus for teacher preparation will be data reporting and compliance, instead of using the data to improve teacher excellence.	
Robert N. Corley III, Virginia State University	8VAC20-543-70 Annual report card.	Clarify 1. Institution's accreditation status (i.e., is this asking for the university regional or the professional education program accreditation status?) If both are needed, add the appropriate category. Change 2. To 2. Education endorsement program approval status; Change 7. Biennial to 7. Triennial	

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		Change 13. "…within two years of employment…" to "within three years of employment…" Rationale: Changes provide consistency of language used throughout the document.	
Harvey Klamm, Liberty University	8VAC20-543-70 Annual report card.	If CAEP accreditation is required for all institutions, then additional reporting should not be necessary. Additional reporting is time-consuming, costly, and does not improve the quality of schools beyond already state recognized CAEP assessments. All CAEP institutions must submit a comprehensive annual report that should provide all data needed to document program success. A copy of this report can be provided to the state and should be sufficient in meeting any report card regulation.	
Malcolm Lively, Hilve Firek, J. Sullivan, MJ Karlis; Virginia Wesleyan College	8VAC20-543-70 Annual report card.	Concern: Regarding Annual Report Card: The faculty and staff of the Teacher Education Program do not support the revision indicated in 8VAC20-543-70 that requires the VDOE "to produce an annual report card," especially as the language in the proposed Regulations does not specify how such a "grade" would be calculated or what guidelines would be used to determine the "grade." This data could penalize small, high quality programs that have lesser numbers of program completers if just a very few candidates became non-completers. Also, using the criterion of "number of candidates admitted in education endorsement programs who are in the top quartile of the college/university population" to rate a teacher education program supplies no legitimate indication of the quality of the graduates (teachers) produced by the program. This statistic could vary wildly depending on the reporting period and the time at which students seek admission to the education program. Very little educational research supports this specific criterion, and to date, little to no research has shown a positive correlation between undergraduate student rank and success and effectiveness of teachers.	
Heather Schoffstall, Liberty University	8VAC20-543-70 Annual report card.	8VAC20-543-70 - This mandate for an Annual Report for the state raises a workload issue. In order to be compliant with the regulation to have CAEP accreditation, we already have to compile an Annual Report. We already have to do a Title II report annually. We already have a VA Biennial Report. So much of the data we report for these 3 is redundant. To require a 4th report is overkill. It would make better sense if the annual report card could be designed based on data from the CAEP report since CAEP accreditation is required for all institutions.	
Michelle Goodwin, Liberty University	8VAC20-543-70 Annual report card.	If CAEP accreditation is required for all institutions, then additional reporting should not be necessary. All CAEP institutions must submit a comprehensive annual report that should provide all data needed to document program success. The annual report card should be designed based on data from the CAEP annual report. The CAEP annual report is quite comprehensive and should be able to provide sufficient documentation of the effectiveness of the programs.	
Cathy Smeltzer Erb, Ph.D. Eastern Mennonite	8VAC20-543-70 Annual report card.	Annual Report Card. The reporting requirements for teacher education programs is extensive and duplicates other reporting requirements (Biennial Accountability Measurement Report	

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University		stated in 8VAC20-543-70, Title II, CAEP Annual Report, PEDS for AACTE institutions, etc.). Items #1-8 listed in this section duplicate many of the items also required in the regulatory item 8VAC20-543-70 Biennial Accountability Measurement Report, listed just prior to this item in the proposed regulations. Streamlining of reports seems plausible	
James Madison University - Phil Wishon, Maggie Kyger, and Steve Purcell	8VAC20-543-70 Annual report card.	Annual report cards should not be required. Educator preparation programs are already among the most aggressively regulated of all professions. The reports that institutions must already submit to the Council for Accreditation of Educator Preparation (CAEP), SPAs in many instances, Title II, and SACS should more than satisfy what the proposed annual report cards are designed to accomplish.	
Karrin Lukacs, Shenandoah University	8VAC20-543-70 Annual report card.	"Other data as requested by the Board" needs to be defined.	
Kristi S. Fowler, Hollins University	8VAC20-543-80 Competencies and requirements for endorsement areas.	I'd like to offer that I am greatly concerned by the fact that in the section 8VAC20-543-80, both science and math require six semester hours in the discipline, a methods course, and passing a rigorous assessment while history and social sciences requires only six hours in the discipline and passing a rigorous assessment; a methods course is equally critical for effective preparation of early/primary educators. I hope a methods course will be added to the requirements for history and social sciences.	A methods course in teaching elementary history and social sciences is recommended.
Kristi S. Fowler	8VAC20-543-80 Competencies and requirements for endorsement areas.	Both science and math require six semester hours in the discipline, a methods course, and passing a rigorous assessment while history and social sciences requires only six hours in the discipline and passing a rigorous assessment; a methods course is equally critical for effective preparation of early/primary educators.	
Alice Young	8VAC20-543-80 Competencies and requirements for endorsement areas.	Support flexibility with determining content for elementary education and the inclusion of math and science methods as means for meeting competencies. (Concern expressed regarding the wording and what constitutes a rigorous content examination)	Comment supports suggested revision. The rigorous content examination refers to the licensure content assessment prescribed by the Board of Education.
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC20-543-80 Competencies and requirements for endorsement areas.	General support for this proposal. There is also support for the specific Methods of Teaching Elementary Math and Methods of Teaching Elementary Science courses. Item F. Clarification is needed on the need for a Specialization for Special Education - General Curriculum K-12 programs. Does this apply solely to undergraduate programs? Will the license reflect the specialization area? If not, what is the point for IHEs to track this information? Concern with how this will be tracked/recorded and relayed to the VDOE from the IHEs. If required for graduate level programs, then this would be overly limiting to recruitment and admission of candidates.	Comment supports methods course work for elementary mathematics and science. 8VAC20 543-80. Item F, referencing a requirement of a specialization for a special education-general curriculum endorsement has been proposed to be stricken.
M. Lively, Hilve Firek, J. Sullivan, MJ Karlis; Virginia Wesleyan College	8VAC20-543-80 Competencies and requirements for endorsement areas.	Regarding Competencies for Endorsement Areas: Elementary Education The faculty and staff of the Teacher Education Program are hesitant to support the proposed revisions to 8VAC20-543-80 that require completion of "12-15 semester hours each in	8VAC20 543-80. Item F, referencing a requirement of a specialization for a special education-general curriculum endorsement has been proposed to be

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		English, history and social sciences, mathematics, and science." This revision essentially requires candidates seeking endorsement in early/primary education preK-3 or elementary education preK-6 to pursue a prescribed 48-60 hour major in addition to college/university general studies program requirements and other graduation requirements, plus the required professional studies coursework. The hesitancy stems from the fact that it would seem to counter the revisions in 8VAC20-543-20 to support the achievement of requirements for recommendation for a teaching license within a baccalaureate program. This revision would more or less require potential candidates to decide to be teachers within the first semester of college. Such requirements would also severely impact the ability of education candidates in undergraduate institutions to pursue study abroad opportunities. We would be more supportive if the option to complete a lesser number of courses and pass a "rigorous assessment… prescribed by the Board of Education" were made clearer. Please note that on the whole, we strongly support making sure that potential elementary teachers are knowledgeable across these discipline areas, but the specification of minimum credit hours does not credibly ensure such knowledge. Additional Requirements for Special Education: General Curriculum K-12 Regarding Competencies for Endorsement Areas: Special Education General Curriculum K-12 The faculty and staff of the Teacher Education Program at Virginia Wesleyan College are hesitant to support the proposed revisions to 8VAC20-543-80 that require "one area of specialization in English, history and social sciences, mathematics, or science." This revision essentially requires candidates seeking endorsement in Special Education General Curriculum K-12 to pursue an additional 2 to 3 courses (half to a full semester in the 4-credit curriculum at VWC) in addition to their liberal studies major, college/university general studies program requirements and other graduation requirements, plus the required professional studies coursework, to which potentially one course has been added. The hesitancy stems from the fact that it would seem to counter the revisions in 8VAC20-543-20 to support the achievement of requirements for recommendation for a teaching license within a baccalaureate program. The additional coursework likely will cause candidates in our program to extend their program to a ninth semester. This revision would more or less require potential Special Education General Curriculum K-12 candidates to decide to be teachers within the first semester of college. Such requirements would also severely impact the ability of education candidates in undergraduate institutions to pursue study abroad opportunities. Please note that on the whole, we strongly support making sure that potential special education teachers are knowledgeable across all discipline areas, but the specification in one area might actually limit the ability to achieve that goal.	stricken.
Robert N. Corley III, Virginia State University	8VAC20-543-80 Competencies and requirements for	Clarify the following language in "A. The professional education program develops, maintains, and continuously evaluates high quality education endorsement programs….Candidates in education endorsement programs shall demonstrate competence	Professional studies are required for instructional personnel. Administrators and supervisors are required to have

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	endorsement areas.	in the areas in which they plan to practice and complete professional studies requirements and applicable assessments, in addition to meeting requirements for specific licenses, pursuant to the *Licensure Regulations for School Personnel* (8VAC20-22)…." Comment: This section is unclear and needs some revising. For example, the language implies that all education endorsement programs must complete professional studies requirements. This is not the case for some of the Administration and Supervision and selected Support Personnel endorsement programs.	instructional personnel experience; therefore, individuals seeking an administration and supervision endorsement should have met professional studies requirements.
Jane Bray (Dean) and . Leigh Butler, Old Dominion University	8VAC20-543-80 Accreditation and administering this chapter.	There is a disconnect between the focus on competency alignment and credit hour requirements. ODU supports the use of competencies, which will allow interdisciplinary approaches to teacher preparation that integrate content and pedagogy. Specifically, the requirement for six credits of Reading (early/primary education, preK-3, pk-6, and special education endorsements) does not align with a competency-based approach, and eliminates the ability to truly integrate reading across the curriculum. There is a jarring disconnect between competencies in the approved program regulations and mandated credit hours in the proposed licensure regulations. Further, it states that "Candidates seeking an early/primary, prek-3, and prek-6 endorsement shall complete 12-15 semester hours each in English, history and social sciences, mathematics, and science addressing competencies set forth in these regulations …" What happened to the competencies?	
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	Suggested Revisions **8VAC20-543-90: Professional Studies Requirements for Early/Primary Education, Elementary Education and Middle Education** 1b. The interaction of children with individual differences - economic, social, racial, ethnic, religious, physical, and mental - should be incorporated to include skills contributing to an understanding of ~~developmental disabilities and~~ developmental processes and issues related but not limited to low socioeconomic status, attention deficit disorders, developmental disorders, gifted education, including the use of multiple criteria to identify gifted students, substance abuse, child abuse, and family disruptions. [Comment: The concern with this regulation is that "developmental disabilities" are spelled out and noted multiple times, yet there is not attention to other relevant disabilities. Suggestion is for a broader wording taking into account developmental processes and issues and various disabilities (e.g., twice exceptional.] 2a (1). Skills in this area shall contribute to an understanding of the principles of learning; the application of skills in discipline-specific methodology; effective communication with and among students; selection and use of materials, including media and contemporary technologies; selection, development, and use of appropriate curricula, methodologies, and materials that support and enhance student learning and reflect the research on unique, age-	The Professional Studies competencies are revised based on the suggestions as noted below: *incorporated the revision suggested in 2a(1); *changed the word "involvement" to "engagement" in 2a(5)

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		appropriate, and culturally relevant curriculum and pedagogy. [Comment: What is meant by effective communication with and among students? Is the reference to "Varied and effective methods of communication with and among students."?] 2a (2). Understanding of the principles of blended learning and ~~online~~ instructional strategies and the application of skills to deliver online instruction must be included. 2a (5). Study in (i) methods of improving communication between schools and families, (ii) ~~communicating~~ partnering with families regarding their social and instructional needs of children's development, (iii) ways of increasing family engagement in student learning at home and in school, (iv) the Virginia Standards of Learning, and (v) Virginia Foundation Blocks for Early Learning: Comprehensive Standards for Four-Year-Olds prepared by the department's Office of Humanities and Early Childhood shall be included. 2a (6). Early childhood educators must understand the role of families in children's development and education. ~~in relation to teaching educational skills~~. 2b (1). Skills in this area shall contribute to an understanding of the principles of learning; the application of skills in discipline-specific methodology; effective communication with and among students, selection and use of materials, including media and contemporary technologies; evaluation of pupil performance; and the relationships among assessment, instruction, and monitoring student progress to include student performance measures in grading practices, the ability to construct and interpret valid assessments using a variety of formats in order to measure student attainment of essential skills in a standards-based environment, and the ability to analyze assessment data to make decisions about how to improve instruction and student performance. [What is meant by effective communication with and among students? Is the reference to "Varied and effective methods of communication with and among students."?] 6. ~~Reading~~ Language and Literacy. 6a. Early/primary education preK-3 and elementary education preK-6 - language acquisition and reading and writing. ~~Skills~~ Knowledge listed for these endorsement areas represent the minimum competencies that a beginning teacher must be able to demonstrate. These skills are not intended to limit the scope of a beginning teacher's program. Additional knowledge and skills that add to a beginning teacher's competencies to deliver instruction and improve student achievement should be included as part of a quality learning experience. **8VAC20-543-140. Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.** 2a. Skills in this area shall contribute to an understanding of the principles of learning; the application of skills in discipline-specific methodology; effective communication with and	

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		among students; selection and use of materials, including media and contemporary technologies; selection, development, and use of appropriate curricula, methodologies, and materials that support and enhance student learning and reflect the research on unique, age-appropriate, and culturally relevant curriculum and pedagogy. 5b. This area shall address diverse approaches based upon behavioral, cognitive, affective, social, and ecological theory and practice developmentally appropriate ways to respond to children and their needs. [What is meant by effective communication with and among students? Is the reference to "Varied and effective methods of communication with and among students."?] 5b. This area shall address diverse approaches based upon culturally responsive behavioral, cognitive, affective, social, and ecological theory and practice. 6b (1). Language acquisition: Skills in this area shall be designed to impart a thorough understanding of the Virginia English Standards of Learning as well as the complex nature of language acquisition as a precursor to literacy. Language acquisition shall follow the typical development of linguistic competence in the areas of ~~phonetics,~~ semantics, syntax, morphology, phonology, and pragmatics. 6b (2) Reading and writing: Skills in this area shall be designed to impart a thorough understanding of the Virginia English Standards of Learning as well as the reciprocal nature of reading and writing. Reading shall include phonemic and other phonological awareness, concept of print, phonics, fluency, vocabulary development, and comprehension strategies.	
Micol Hutchison, Virginia Commonwealth University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	Our society's move away from teaching as a profession hasn't been good for anyone: kids, teachers, or society. If teachers are entrusted to educate our children (and I hope they are!), we should ensure that they have the background, knowledge, and context about education to do this well. Though a name change might seem like a minor thing, the message it sends--and the additional changes it might cause--are at best unnecessary and at worst damaging.	The Professional Studies requirement of "The Teaching Profession" is proposed to be amended as "Foundations of Education and the Teaching Profession."
Amy Gray, VCU	8VAC20-543-90 Professional studies requirements for	The foundations courses in the VCU program have helped me to develop my understanding of the broader social and cultural construct of education. To be transparent, foundations courses were not the first courses I took in my program. I took two electives	

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	early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	prior to taking my foundations courses, and felt lost. It wasn't until my first foundations course that I felt I had been given the building blocks for my graduate education. As soon as a student starts in the program and is in an elective class of mine, I tell them once they take foundations, it will all make sense. They sigh with relief every time. These courses should be required and the name should stay the same. These courses are my foundation.	
Laura Gariepy	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	Do not remove 'Foundations of Education' from teachers' professional requirements While this may seem like a trivial change, I believe that it is actually a very significant and detrimental change. Foundations of Education has been a requirement in Virginia for at least the last 30 years and the content of such courses is still called for, even in the proposed regulation change. In the proposed regulation change, the title of the course changes from Foundations of Education to The Teaching Profession, yet the content of the course remains essentially the same. The proposed regulation appears below: • 5. The teaching profession. Skills in this area shall be designed to develop an understanding of the historical, philosophical, and sociological foundations underlying the role, development and organization of public education in the United States. Attention must be given to the legal status of teachers and students, including federal and state laws and regulations, school as an organization/culture, and contemporary issues and current trends in education, including the impact of technology on education. Local, state, and federal governance of schools, including the roles of teachers and schools in communities must be included. Professionalism and ethical standards, as well as personal integrity must be addressed. Knowledge and understanding of Virginia's Guidelines for Uniform Performance Standards and Evaluation Criteria for Teachers must be included. The Foundations of Education field deals directly with teaching students not only the historical, philosophical, and sociological Foundations of education, but also with what it means to be an ethical professional of education who has examined issues of personal integrity, especially as related to how one successfully remains in the teaching field and how one equitably serves and understands our increasingly diverse student population (the field of multicultural education is a sub-field of the Foundations of Education). *In essence, the Foundations of Education courses around the state are already doing what the new*	

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		regulations seem to want, thus why change the name? This proposed change from "Foundations of Education" to "The Teaching Profession" will needlessly cut the course off from the discipline/field of Social Foundations of Education – a distinct field of study with graduate programs across the nation (e.g. University of Virginia; Virginia Tech; University of North Carolina Greensboro; University of South Carolina; and the University of Michigan to name a few). The faculty who teach these courses have had specific training in the Foundations fields, and if the name is changed in the new regulations, I worry that this particular professional studies requirement may not end up being taught by the faculty best prepared to do the course justice. Foundations of Education coursework provides a unique and critically important component of teacher education, bringing perspective and meaning to the task of teaching and fostering consideration of the role of public schools in our democracy. Study in Foundations of Education plays a key role in the development of reflective, thoroughly professional, and ultimately effective teachers for the Commonwealth because it places day-to-day classroom practice within wider contexts, providing time and space for consideration of such activities in light of the overall aims of education; such as education's role in supporting freedom of thought, social fairness, care for others, democratic self-government; and the role of schooling in students' and teachers' assumptions, beliefs, and attitudes surrounding diverse communities. In other words, Foundations of Education's focus on the "whys" of education—from societal goals to cultural and social trends affecting all aspects of education—are critical to effective implementation of the "hows" of classroom practice. Historically, Virginia has served as a point of origin for many of the realizations of the crucial role education plays in our democratic society and Foundations of Education study serves to help Virginia's teachers continue to understand, appreciate, and maintain these connections.	
Cathy Smeltzer Erb, Ph.D., Eastern Mennonite University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary	8VAC20-543-890 and 8VAC20-543-1340. In the Professional Studies requirements, maintain the name "Foundations of Education" to emphasize the importance of philosophical and foundational underpinnings of a democratic education system, and the ethical framework that comprises teachers' work. I appreciate strengthening the competencies focused on Assessment in the Professional Studies requirements.	

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	grades 6-12 endorsements, and adult education		
Kathleen Daly, Virginia Commonwealth University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	Ensuring that pre-service teachers come to the teaching profession with an understanding of the sociological forces at work in education is an essential part of their ability to positively impact students' lives in a range of settings. Changing the title of this course leaves this essential component as a possible implication, a footnote, rather than an integral part of teacher training. The course title "The Teaching Profession" reflects a belief that the educational system is a one-size-fits-all approach, when we know this is not the case. Consider the importance of the social and philosophical elements of education and retain the title "Foundations" so that professors who are experienced in this field can continue to teach these courses and impart a broader understanding of the nature of the field of education to new teachers.	
Michael Broda, Virginia Commonwealth University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	I'm writing to stress the importance of maintaining the title "Foundations of Education" (proposed to be changed to "The Teaching Profession") in the professional studies requirements of Virginia's teacher licensure regulations. This word change is not trivial- the term Foundations signals a broader and more contextual understanding of the historical, philosophical, and sociological underpinnings of our education system in a way that the proposed title does not. Foundations, as a distinct discipline, is critical to helping new teachers contextualize their roles and responsibilities as educators- it is a must-have and a powerful body of knowledge to instill in our future educational leaders.	
Donna Dockery, VCU	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary	Foundations of Education coursework provides a unique and critically important component of teacher education, bringing perspective and meaning to the task of teaching and fostering consideration of the role of public schools in our democracy. Students in our counselor education program enrolled in these courses gain a deeper understanding of the role of education historically and currently, collaborate with future teachers and leaders in ways that forge connections for their future professional roles, and develop wider lenses through which to understand and critically reflect on the issues and concerns in current schools. It is important that student preparing for roles in schools consider the overall aims of education; such as education's role in supporting freedom of thought, social fairness, care for others, and democratic self-government as they prepare for effective and ethical practice. Keep Foundations of Education as a name and requirement.	

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	grades 6-12 endorsements, and adult education.		
Gabriel A. Reich, Virginia Commonwealth University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	I would like to register my support for maintaining language in the regulations for VA schools of education that emphasizes the importance of stand-alone courses in the social foundations of education. It is in classes such as these that students learn to hone their judgment and ethical decision making skills by exploring professional dilemmas and making decisions informed by knowledge of the lives of their students both in and outside of schools, as well as the history of education in this country. To short this opportunity can cause major problems for pre-service teachers. I teach students history/social studies methods. While we may discuss issues that come up in social foundations classes, I would have to curtail their instruction in pedagogical methods if I had to include the teaching of foundations in my courses. The schools of education around this state take their cue from you. What you value ends up guiding decisions about programs, hiring, and budgets at our schools. Maintaining a strong support for the social foundations will directly support our ability to graduate teachers who are ready to be successful in Virginia schools.	
Donia Spott	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	As a veteran teacher with over 20 years' experience, I am concerned that Virginia is considering changing the "Foundations of Education" course title to "The Teaching Profession". We need to make sure that our teacher preparation programs continue to provide the historical, philosophical, and social context necessary for developing effective and innovative educational programs and decisions. Changing the name is unnecessary and gives the impression that a teacher's professionalism is more important than the education they plan to help provide to our children. Our state's children deserve teachers who seek to develop and implement learning opportunities through thoughtful reflection and continuing analysis of their practice. Foundations in Education courses are a critical starting point for new teachers to begin this process.	
Kurt Stemhagen	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary	As a former public middle school math teacher in Virginia and, as a current associate professor of education at VCU, I urge the board to reconsider the change in language in the proposed teacher licensure regulations from "Foundations of Education" to "The Teaching Profession." Foundations of Education is a well-developed field of study. Its coursework provides a unique and critically important component of teacher education, bringing perspective and meaning to teaching and fostering consideration of the role of public schools in our democracy. Study in Foundations of Education plays a key role in the development of reflective, professional, wise, and ultimately effective teachers for the Commonwealth because it places day-to-day classroom practice within its wider contexts, providing time and	

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	grades 6-12 endorsements, and adult education.	space for consideration of such activities in light of the overall aims of education. In other words, Foundations of Education's focus on the "whys" of education—from societal goals to cultural and social trends affecting all aspects of education—helps teachers to carry out the "hows" effectively. Removing the wording "Foundations of Education" from the professional studies requirement in the regulations would have the effect of cutting off this professional studies area from its disciplinary mooring. Professional studies requirements for licensure need to be linked to an academic field/area so that the coursework in teacher preparation is informed by research and discussion that comes from disciplinary communities. For example, Ethics and integrity are two areas included in the proposed category of "The Teaching Profession." Ethics and integrity devoid of the focus on values and context that comes with study in the Foundations will likely lead to classes that focus on narrow compliance and a vision of a good teacher as one who merely does what she is told. It might seem counterintuitive, but replacing "Social Foundations" with the "Teaching Profession" is a blow to the idea of teacher as professional, at least in any robust sense of the term "professional." In addition to being an educational researcher and a former teacher, I am also a parent of elementary school-aged children. When I think of the kinds of teachers I want for my children, I am certain that in addition to teachers with knowledge and skills, they need reflective, passionate teachers who have thought long and hard about *why* they teach and how the work they do matters beyond the walls of the classroom, both for the children they teach and for wider society. Foundations of Education is a key component of the preparation of these sorts of teachers.	
Thomas H. Hartman, Ph.D.	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	Re: the proposed course name change from "social foundations" to" the teaching profession." I am strongly opposed, failing sufficient explanation. I understand the described course content remains essentially the same but I must presume this is temporary, else why change the name? What can be a foot? I have no personal investment in the matter: I have no professional connection to any school of education. I am afraid what I suspect is a move away from the estimable tradition of John Dewey and progressive educational philosophy. Dewey held public education to be a prime engine of social responsibility, social progress, and social justice. To leave that to one side in favor of an emphasis on teaching as a semi-isolable function would be parallel to a seminary's ditching courses in the social context of ministry in favor of a " just preach the gospel; leave social concerns to others" approach. I am not suggesting -- nor did Dewey -- that the k-12 classroom is an appropriate place for social "preaching." Of course it is not. But the teacher needs to be aware of the profound social implications of what he or she does or does not do, and what the educational system itself does or does not prioritize. To somehow discount "social foundations" would actually disempower the classroom by pretending a distance from social context that cannot possibly be valid.	

8VAC20-543. Proposed *Regulations Governing the Review and Approval of Education Programs in Virginia*
Public Comment Summary

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Valerie Robnolt, VCU	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	Keep the Foundations Requirement in Initial Teacher Licensure As a teacher educator, I believe the Foundations requirement is a valuable part of our pre-service teachers' preparation. Please do not change the requirement!	
Audra Parker, George Mason University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	I am writing in response to the proposed changes to the Initial Teacher Licensure Regulations for elementary educators. As program coordinator and an instructor for the current required course (Foundations of Education), I would like to encourage the board to consider keeping the focus on social/political/economic/cultural contexts of education as a requirement for preservice teachers. I teach this course fairly regularly at Mason in our introductory semester, and I find that exploring with these topics allows preservice teachers to unpack their preconceived notions of schooling and to grapple with the idea that not all students experience school in the same way that they did. Their learning curve in this course is tremendous, and their openness to understanding how diverse learners school experiences vary across contexts. This is particularly important as our population continues to become more diverse and as our students attain teaching positions in the vastly different areas of Virginia. Similarly, I would also encourage the board to reconsider removing the Social Studies Methods course requirements from elementary teacher preparation. Social Studies is a critical content area that is often the center of opportunities for content integration--a key instructional approach in elementary schools and one that is supported by a wealth of research in elementary student learning.	
Alexa Fox, Loudoun County Public Schools	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies	Keep the Foundations Requirement in Initial Teacher Licensure. This class shaped who I am as a teacher. Without this class I would not be able to make every day informed educational decisions for my ECSE classroom. If you let just anyone teach this class, you might as well let anyone teach. It takes a special professor, with the educational background to teach this class. Keep it the way it is.	

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	requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.		
Jessica, Teacher	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	Hearing that foundations of education may no longer be a requirement for students going into education is very concerning to me. In this class I learned so much that helped shaped the teacher I am. I still use materials from this class in my classroom today. The name foundation says it all. It is the foundation that crates a well-rounded and knowledgeable teacher! We would not stop teaching students the foundation of math like numbers and adding. So why would we send teachers out into the world without giving them the foundation they need.	
Kristan Morrison, Radford University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	I am a teacher educator at Radford University, specializing in teaching the Foundations of Education. My Ph.D. coursework is in this field and it disturbs me that the state of Virginia is looking to change the title of one of the professional studies courses from "foundations of education" to "the teaching profession." Doing so will separate the course from its disciplinary roots, and the courses thus might not be taught by those who specialized in the foundations of education in their graduate coursework. Many people have commented at this site: https://www.townhall.virginia.gov/L/comments.cfm?stageid=6643 regarding this title change (regarding *Licensure Regulations for School Personnel* [8 VAC 20 - 22]) and those comments are relevant to this section of the town hall comments as well, so please do look there to see what was posted regarding the Foundations of Education.	
Kristan Morrison, Radford University Aida Manning Sidney Green Barry Morrison Taylor Magda Alexa Fox	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies	An online petition was created and can be accessed at the following Web site: https://www.change.org/p/virginia-department-of-education-retain-the-foundations-of-education-title-in-virginia-teacher-preparation-regulations?recruiter=406290682&utm_source=share_petition&utm_medium=facebook&utm_campaign=share_facebook_responsive&utm_term=des-lg-share_for_starters-no_msg. **Petition**: The Virginia Department of Education has proposed to eliminate the title of Foundations of	

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Carmel Vaccare Courtney Cavendish Matthew Akers Cheri Morton Kim Gerette Cynthia Stinnette Laura Rowlett Emily Treadway Megha Behl Kalley Thompson Cody Jones Nicole Hancock Annie Blackburn Abby Thomas Martin De Anda Amanda Shrewsberry Brenda Tyler Laura Noll Wendy Burcham Charles Brady Rebecca Philips Susie Loeffler Taylor Downey Shawn Sthreshley Maike Philipsen Heather Nunnally David Naff Marta Montiel Jordan Smith Deborah Marks Teri Johnson Micol Hutchison Melanie Buffington Lara Coggin Donald Belt Lawrence Golonka Lianna Moss-Everhart Bill Muth Colleen Connolly Kurt Stemhagen Aaron Garber Susan Watson	requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	Education from one of the professional studies requirements in the teacher licensure regulations and rename the requirement "The Teaching Profession." While this may seem like a trivial change, we, the undersigned, believe that it is actually a very significant and detrimental change. Foundations of Education has been a requirement in Virginia for at least the last 30 years and the content of such courses is still called for, even in the proposed regulation change. In the proposed regulation change, the title of the course changes from Foundations of Education to The Teaching Profession, yet the content of the course remains essentially the same. The proposed regulation appears below: • **5. The teaching profession. Skills in this area shall be designed to develop an understanding of the historical, philosophical, and sociological foundations underlying the role, development and organization of public education in the United States. Attention must be given to the legal status of teachers and students, including federal and state laws and regulations, school as an organization/culture, and contemporary issues and current trends in education, including the impact of technology on education. Local, state, and federal governance of schools, including the roles of teachers and schools in communities must be included. Professionalism and ethical standards, as well as personal integrity must be addressed. Knowledge and understanding of Virginia's Guidelines for Uniform Performance Standards and Evaluation Criteria for Teachers must be included.** The Foundations of Education field deals directly with teaching students not only the **historical, philosophical, and sociological Foundations of education,** but also with what it means to be an **ethical professional** of education who has examined issues of **personal integrity**, especially as related to how one successfully remains in the teaching field and how one equitably serves and understands our increasingly diverse student population (the field of multicultural education is a sub-field of the Foundations of Education). ***In essence, the Foundations of Education courses around the state are already doing what the new regulations seem to want, thus why change the name?*** This proposed change from "Foundations of Education" to "The Teaching Profession" will needlessly cut the course off from the discipline/field of Social Foundations of Education – a distinct field of study with graduate programs across the nation (e.g. University of Virginia; Virginia Tech; University of North Carolina Greensboro; University of South Carolina; and the University of Michigan to name a few). The faculty who teach these courses have had specific training in the Foundations fields, and	

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Elisabeth Rigsby Gabriel Reich Kathleen Daly Tamara Sober Antonio Espinoza Aubrey Duke Michael Broda John Broome Kathleen Cauley Shannon Huff Christine Taylor Teresa Coffman Jocelina Santos Molly Allen Krista Johnston Andrew Gilbert Jordyn Jones Stephanie Wasta		if the name is changed in the new regulations, we worry that this particular professional studies requirement may not end up being taught by the faculty best prepared to do the course justice. Foundations of Education coursework provides a unique and critically important component of teacher education, bringing perspective and meaning to the task of teaching and fostering consideration of the role of public schools in our democracy. Study in Foundations of Education plays a key role in the development of reflective, thoroughly professional, and ultimately effective teachers for the Commonwealth because it places day-to-day classroom practice within wider contexts, providing time and space for consideration of such activities in light of the overall aims of education; such as education's role in supporting freedom of thought, social fairness, care for others, democratic self-government; and the role of schooling in students' and teachers' assumptions, beliefs, and attitudes surrounding diverse communities. In other words, Foundations of Education's focus on the "whys" of education—from societal goals to cultural and social trends affecting all aspects of education—are critical to effective implementation of the "hows" of classroom practice. Historically, Virginia has served as a point of origin for many of the realizations of the crucial role education plays in our democratic society and Foundations of Education study serves to help Virginia's teachers continue to understand, appreciate, and maintain these connections. We, the undersigned, hereby petition the Virginia Department of Education to return the title Foundations of Education to its list of prescribed professional studies courses. Foundations of Education scholars will thus be ensured a place in continuing to equip Virginia's teachers not only with the practical methods and techniques needed to be successful, but also with the frameworks to understand how, when, and why to apply those tools in light of the broader contexts of education.	
Thomas Hartman, Ph.D.	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	I am strongly opposed, failing sufficient explanation. I understand the described course content remains essentially the same but I must presume this is temporary, else why change the name? What can be afoot I have no personal investment in the matter: I have no professional connection to any school of education. I am afraid what I suspect is a move away from the estimable tradition of John Dewey and progressive educational philosophy. Dewey held public education to be a prime engine of social responsibility, social progress, and social justice. To leave that to one side in favor of an emphasis on teaching as a semi-isolable function would be parallel to a seminary's ditching courses in the social context of ministry in favor of a " just preach the gospel; leave social concerns to others" approach. The classroom of course is not a place for preaching but teachers themselves need to be aware.	

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Lisa Abrams Virginia Commonwealth University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	Understanding social foundations is essential to developing teachers that will be effective is a variety of school settings. Teachers need to understand how social and cultural contexts and issues influence their daily work with the learners. The core tenants of social foundations encourage thoughtful, reflective practice and encourage flexibility in instructional planning and delivery in order to meet the growing diversity among VA's school-age population.	
Maike Philipsen, Virginia Commonwealth University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	"Foundations of education" denotes a specific field of study with its own knowledge base and graduate programs. Well prepared faculty teach foundations of education courses and enhance teacher preparation by providing in-depth information about professional ethics and the meaning of education in a democracy. They teach preparing teachers the rich history of public education in our country and how to learn from the past, shaping meaningful and rich educational systems now and for the future. Foundations of Education's focus on the "whys" of education—from societal goals to cultural and social trends affecting all aspects of education—is critical to effective implementation of the "hows" of classroom practice. All of that gets lost if the name "Foundations of education" is dropped and replaced by a term without history or disciplinary tradition, such as "the teaching profession." It is not a wise move.	
Jose Alcaine, Virginia Commonwealth University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades	Keep the foundations of education language in the regulations governing education programs in the Commonwealth. Foundations of education is a unique and vital field of study in graduate programs across the nation. In addition, the dedicated faculty who teach these courses are uniquely trained in the field and are passionate about the course material and its impact in the development of well-rounded, effective, and compassionate teachers. As the term implies, this course work provides the foundation for everything meaningful that follows and allows for a deeper appreciation and understanding of the vital role education plays in our society. Please keep the foundations of education language.	

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	6-12 endorsements, and adult education.		
Paula Katz, Third-grade Teacher	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	Foundations of education" should not be eliminated. Universities are the gatekeepers of the teaching profession. This class is about why we teach. This class involves the ethics and importance of teaching. Teachers need this class to evolve into the professionals we want caring for our children.	
Radford University PEC: K. Morrison and S. Schneider	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	We are writing to express our concerns with some changes proposed in the Teacher Licensure Regulations for the commonwealth of VA. Specifically, our concerns are in these areas: 8VAC20-23-130. Professional studies requirements, item 5 8VAC20-23-190. Professional studies requirements, Item 4 In essence, the changes proposed in these sections seem to be doing four things: 1. Removing the title "Foundations of Education" and replacing it with "The Teaching Profession." 2. Moving the assessment content out of the foundations course into a separate course. 3. Explicitly adding in content on professionalism, ethical standards, and personal integrity 4. Adding in content on Virginia's Guidelines for Uniform Performance Standards and Evaluation Criteria for Teachers While we certainly agree with item number 2 above, that the assessment content is important enough to be moved out and made a professional studies requirement of its own, we do have some strong concerns about item 1. Our primary concern rests with changing the title of the professional studies requirement of "Foundations of Education" to "The Teaching	

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		Profession." While it might seem minor, such a title change represents something very significant to the field of educational foundations. Perhaps the writers of the proposed regulations are unaware that there is a field called the Foundations of Education (also referred to as the Social Foundations of Education), which is served, among others, by a national organization called the Council for Social Foundations of Education (CFSE). The CFSE has developed a set of professional standards purposed with informing state regulatory agencies on initial teacher certification requirements in the field of the foundations of education (http://csfeonline.org/about/csfe-standards/). Removing the wording of "Foundations of Education" from the professional studies requirement in the licensure regulations would, in effect, divorce this professional studies area from its disciplinary mooring. All professional studies requirements for licensure should be linked to an academic field/area because there is a need for a united professional voice to help articulate what happens in this course (especially when it concerns such a broad statement as "the historical, philosophical, and sociological foundations of education"). How the Commonwealth of Virginia titles a professional studies requirement (regardless of how an IHE ultimately titles the course) is important. By using the title "Foundations of Education," the commonwealth is affirming the value of a particular professional field as well as helping an IHE understand who has the expertise to teach such courses (e.g. people who have graduated from PhD programs specializing in the Foundations of Education). *The state regulations regarding teaching licensure are legal documents, and thus semantics DO matter.* Additionally, as relates to items 3 and 4 in the listing above, the disconnection of "foundations of education" as a title seems inconsistent with the wording that follows the title change in the proposed regulations. The Foundations of Education field deals directly with teaching students not only the historical, philosophical, and sociological foundations of education, but also with what it means to be an ethical professional of education who has examined issues of personal integrity, especially as related to how one successfully remains in the teaching field and how one equitably serves and understands our increasingly diverse student population (the field of multicultural education is a sub-field of the foundations of education). In essence, the foundations of education courses around the state are already doing what the new regulations seem, on the surface, to want. Based on the fact above that the Foundations of Education is already doing what the proposed regulations seek for "The Teaching Profession" course to do, and that foundations scholars are the best equipped to carry out this mission, we assume that the proposed change to the title is merely a case of the writers of the regulation changes not fully understanding that the terminology "Foundations of Education" is referencing a particular academic	

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		field/focus. We hope that our explanations above have illustrated how the term "Foundations of Education" is important, that such referencing determines how a university teacher preparation program best plans this course and finds qualified individuals to teach it, and thus needs to remain in the regulations.	
Robin Hurst, Virginia Commonwealth University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	As the track coordinator for the Adult Learning Master's Program at VCU, I strongly suggest that you do not change "Foundations of Education" to "The Teaching Profession". Most of our students are not employed in the PK-12 environment. They are professionals working within organizations in both the public and private sector, teaching Adult Learners in a variety of settings. Our students are interested in understanding the social foundations and goals of education to aid them in a broader understanding of working with adults in a learning environment. I fear the change to "The Teaching Profession" would force courses to be more focused on PK-12, and not provide the foundations for those wishing to provide learning experiences to our state's growing adult population. KEEP FOUNDATIONS OF EDUCATION!	
Nora Alder	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	Social Foundations courses are key to the depth of teacher understandings of the importance of social context in schooling. Most Social Foundations courses include a history of American education, overviews of funding, changes in demographics and tax basis, some understanding of education law, Supreme Court rulings that have effected discipline, special education and desegregation, some of the major curriculum and instruction movements over time and some of the major philosophical underpinnings of education. I have taught pre-service teachers in Nevada who were not required to have this class and the depth of their understandings did not hold a candle to that of the Virginia students I work with. Please keep this requirement!	
James McMillan, Virginia Commonwealth University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140	As former Chair of our Foundations of Education Department at VCU, and current Interim Associate Dean of Academic Affairs for the School of Education, I wanted to indicate my strong support for continuation of required social foundations for teacher licensure. Social foundations is the one course that effectively integrates multiple perspectives related to the history and cultural underpinnings of schooling, as well as providing students with essential coverage of ethics. Our School of Education faculty as a whole supports inclusion of these competencies, and believe that removal from the regulations will lead to less informed, less critically reflective teachers who will not have appropriate and needed professional	

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	Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	knowledge.	
Sharon Zumbrunn, Virginia Commonwealth University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	As a former educator and as a current assistant professor of educational psychology at VCU, I strongly support the continuation of the social foundations requirement for teacher licensure. It is essential that our pre-service teachers are equipped with an understanding of the historical and cultural underpinnings of education to make critically informed decisions as practitioners.	
Adai Tefera, Virginia Commonwealth University	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	As a new faculty member in the Foundations Department at Virginia Commonwealth University's School of Education, I am writing to ask that you keep "Foundations of Education" and not replace it with "the teaching profession." Courses in the foundations of education bring perspective and meaning to the task of teaching and fostering the role of public schools in our U.S. democracy. In fact, the course offerings in the Foundations of Education Department are one of the primary reasons why I was drawn to VCU's School of Education while searching for a faculty position. Furthermore, the study of Foundations of Education plays a key role in the development of reflective, thoroughly professional, and ultimately effective teachers for the Commonwealth because it places day-to-day classroom practice within wider contexts, providing time and space for consideration of the overall aims of education, including education's role in supporting freedom of thought, social fairness, care for others, and democratic self-government, to name a few. For these reasons and many more, I ask that you keep Foundations of Education as a key course offered in Virginia.	
Jill Jones, Teacher, Mary Munford Elementary School	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and	Please keep the "Foundations of Education" wording in teacher licensure regulations. It is important to me that we continue to encourage our teachers to be people with integrity who will stand up for what they believe in (including: caring for students, their students' parents, the community in which they teach, and the profession).	

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	middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.		
Tom Hartman	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	I am strongly opposed, failing sufficient explanation. I understand the described course content remains essentially the same but I must presume this is temporary, else why change the name? What can be afoot? I have no personal investment in the matter: I have no professional connection to any school of education. I am afraid what I suspect is a move away from the estimable tradition of John Dewey and progressive educational philosophy. Dewey held public education to be a prime engine of social responsibility, social progress, and social justice. To leave that to one side in favor of an emphasis on teaching as a semi-isolable function would be parallel to a seminary's ditching courses in the social context of ministry in favor of a " just preach the gospel; leave social concerns to others" approach. Of course I hope I am wrong as to what is afoot. If there is material explaining the proposed change, would you forward it to me by mail or email? I am not suggesting --nor did Dewey-- that the k-12 classroom is an appropriate place for social "preaching." Of course it is not. But the teacher needs to be aware of the profound social implications of what he or she does or does not do, and what the educational system itself does or does not prioritize. To somehow discount "social foundations" would actually disempower the classroom by pretending a distance from social context that cannot possibly be valid.	
Samuel J. Smith, VERA President	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12	Please retain the Foundations requirement. What makes professionals in any field is their understanding of the "why" behind their actions. Minimizing Foundations will move teacher preparation even further into the direction of becoming a technical field where future teachers think less reflectively about their practice. Foundations courses bring together the theoretical and the practical so that pre-service teachers apply principles from psychology, sociology, philosophy, etc., specifically to the field of education. Foundations courses also provide students a critical view of educational reform movements throughout history so that they are more informed to advocate for meaningful policies in the future.	

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	endorsements, special education, secondary grades 6-12 endorsements, and adult education.		
Malcolm Lively, Hilve Firek, J. Sullivan, MJ Karlis; Virginia Wesleyan College	8VAC20-543-40 Standards for biennial approval of education endorsement programs 8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	The faculty and staff of Virginia Wesleyan College support the revision of the professional studies requirements addressed in 8VAC20-543-90 and 8VAC20-543-140 regarding the revised competencies for professional studies, and strongly support the revision to 8VAC20-543-40 indicated in #3, b, which more clearly indicates "a minimum of 10 weeks" of supervised "full time teaching" with "at least 150 clock hours spend in direct teaching." This is much more clearly defined than in the Amended 2011 Regulations.	
Harvey Klamm, Liberty University	8VAC20-543-90 and 8VAC20-543-140 8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and	I ask that you reconsider and keep the foundations course requirement. I have worked in the field of education in Virginia for 43 years. During that time, I have observed a growing pragmatic desire within education to reflect less on the foundations of why schools function as they do, in preference to just preparing teachers pedagogically. To decrease the amount of time focused on the philosophical, theoretical, and historical aspects of the foundations of education, from a full course to an element within a course as advocated in this change, will significantly impact teacher preparation by minimizing understandings of the roots of education that are fundamental to the thrust and values within pedagogy. May we not sacrifice the teaching of who we are and how we came to be as schools and as teachers for the sake of streamlining regulations?	

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	adult education.		
Tracey Pritchard, Liberty University	8VAC20-543-90 and 8VAC20-543-140.	It is critical that our teacher education programs continue to offer and provide a course in the historical, philosophical, and social contexts of education. Changing the name indicates that these aforementioned areas are not a part of the material for this course and instead teacher professionalism is the focus. While teacher professionalism is important, we need well-rounded educators who learn to be thoughtful practitioners through the study of past experiences and reflective practitioners of their current practices. A foundational course, at the start of an education program, assists students in being thoughtful and reflective practitioners.	
James Madison University - Phil Wishon, Maggie Kyger and Steve Purcell	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-140 Professional studies requirements for preK-12 endorsements, special education, secondary grades 6-12 endorsements, and adult education.	We support including instruction related to personal character, professional integrity, ethical decision-making, and professionalism in Foundations of Education coursework. We also support continuing to include the study of social foundations as a foundational aspect of this instruction. Changing "Foundations of Education" to "The Teaching Profession" seems arbitrary, and although we do not oppose, we would appreciate understanding the rationale for this proposed change.	
Radford University Professional Education Committee: Greg Sherman	8VAC20-543-90 Professional studies requirements for early/primary education, elementary education, and middle education. 8VAC20-543-90 Online Instruction reference	This section describes recommendations for early/primary education, elementary education, and middle education teacher preparation that include "Understanding of the principles of online learning and online instructional strategies and the application of skills to deliver online instruction…" As worded, these recommendations are far too vague and may not be applicable to most teachers at this level. More specifically, "principles of online learning" are essentially no different than "principles of book learning" (or any other mediated environment). Modality does not meaningfully affect learning principles. Similarly, effective "online instructional strategies" are no different from effective classroom instructional strategies in general. The only difference is that a teacher may need to learn how to manipulate an online system, such as a Learning Management System (LMS), to implement and deliver a discussion board or provide access to a video lecture. The principles of good discussions, or effective presentations are the same whether =such strategies take place in the classroom or online. But if the intention is to promote the "…application of skills to deliver online" then a certain degree of specificity seems in order. Does "online" refer to synchronous or asynchronous technology and delivery (or both)? Should all teachers learn how to set up a course in an LMS? If so, which system….any? And most importantly, how relevant are these skills for the target teachers (early/primary education, elementary	

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		education, and middle education)? From an instructional design perspective, "online" is just another form of technology-supported instruction. It might be best to remove the references to "online" and just keep the revised portion of the existing wording earlier in the paragraph: "…selection and use of materials, including media and contemporary technologies."	
Tracey Pritchard, Liberty University	8VAC20-543-100. Early childhood (add-on).	The program in early childhood education for three-year-olds and four-year-olds shall ensure that the candidate holds an active license with an endorsement in elementary education (such as preK-3 or preK-6) or special education early childhood issued by the Virginia Board of Education Candidates who hold an active license in special education general curriculum K-12 should also be eligible for the add-on endorsement. Special education preparation is related to many early childhood competencies. Upon completion of the additional 9 hours of graduate coursework in early childhood that is requirement for the endorsement, all competencies would be met for candidates who hold the special education general curriculum endorsement. Practicum experience should be required for the early childhood add-on endorsement. Compare to 45 hours required in the corresponding licensure regulations: 8VAC20-23-140. Early childhood for three-year-olds and four-year-olds (add-on endorsement). 3. Completed a supervised practicum of at least 45 instructional hours in a preschool setting (i.e., three-year-olds and four-year-olds Also compare to 45 hours required in approved programs for gifted add-on: 8VAC20-543-320. Gifted education (add-on endorsement). 9. The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experiences with gifted students.	A practicum requirement is recommended to be added to the regulations.
Radford University Professional Education Committee: SPED faculty	8VAC20-543-100. Early childhood for three-year-olds and four-year-olds (add-on).	We give the VDOE kudos for adding the ECSE license to those that can add the 3-4 year old endorsement. This is especially important as many school systems are providing inclusive Virginia Preschool Initiative (VPI) classrooms, and having both endorsements available to candidates in ECSE programs will qualify them to teach in these classrooms. However, we do have a question/need for clarification about this add-on endorsement for ECSE initial licensure pre-service candidates. Will pre-service initial licensure candidates who take coursework for both ECSE and the 3-4 year old add-on endorsement simultaneously in their programs be able to apply for the add-on when they apply for initial licensure in ECSE, or is the requirement that they receive their ECSE license first, then apply for the add-on endorsement?	The early childhood for three-year-olds and four-year-olds add-on endorsement is proposed as an add-on for individuals who hold an elementary education endorsement or an early childhood special education endorsement. The early childhood endorsement was added because this endorsement does cover pre-kindergarten. A practicum requirement is recommended to be added to the regulations
Karen Parker, Liberty	8VAC20-543-100. Early	Candidates who hold an active license in special education general curriculum K-12 should	

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University	childhood for three-year-olds and four-year-olds (add-on).	also be eligible for the add-on endorsement. Special education preparation is related to many early childhood competencies. Upon completion of the additional 9 hours of graduate coursework in early childhood that is required for the endorsement, all competencies would be met for candidates who hold the special education general curriculum endorsement.	
Karen Parker, Liberty University	8VAC20-543-100. Early childhood for three-year-olds and four-year-olds (add-on).	Practicum experience should be required for the early childhood add-on endorsement. Compare to 45 hours required in the corresponding licensure regulations: 8VAC20-23-140. Early childhood for three-year-olds and four-year-olds (add-on endorsement). 3. Completed a supervised practicum of at least 45 instructional hours in a preschool setting (i.e., three-year-olds and four-year-olds. Also compared to 45 hours required in approved programs for gifted add-on: 8VAC20-543-320. Gifted education (add-on endorsement). 9. The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experiences with gifted students.	
Robert Pianta, University of Virginia	8VAC20-543-100. Early childhood for three-year-olds and four-year-olds (add-on).	Expand opportunities for effective early childhood education teacher preparation. The proposed language for early education teacher preparation programs (e.g. covering preschool- grade 3 and for 3 and 4 year olds specifically) would greatly enhance the effectiveness and impact of this growing and important sector of the education workforce. The proposed language focuses programs on the knowledge, skills, and competencies identified by research to contribute to learning and development of young children. In contrast to the current language the proposed language is a major improvement and will strengthen Virginia's early education system. Moving toward a competency-based system positions Virginia as a leader nationally. And there is considerable interest and promise in a four-year degree focused on teaching in early education programs that could lead to initial licensure.	
Beth Ackerman, VACTE President	8VAC20-543-100. Early childhood for three-year-olds and four-year-olds (add-on).	Please consider adding a practicum experience to the add-on endorsement.	
James Madison University - Phil Wishon, Maggie Kyger and Steve Purcell	8VAC20-543-100 Early childhood for three-year-olds and four-year-olds (add-on endorsement).	We support the proposal which would allow those with Early Childhood Special Education licensure to add-on endorsement for 3- and 4-year-olds. Regarding ECE more generally, we also support the proposal which would allow emphasis at the undergraduate level on early childhood development as well as on content specific to P-3 licensure. For the past two generations, research on the critical importance of the positive benefits that young children receive through exposure to best instructional ECE practices from highly qualified early childhood teachers has been compelling and unequivocal.	
Mark Ginsberg, George Mason University, Dean and Professor	8VAC20-543-110 Early/primary education prek-3.	1 (b) - Edit this regulation to read: "The ability to AUTHENTICALLY … Proposed revision: The ability to <u>authentically</u> integrate English, mathematics, science, health, history and	The original language proposed is recommended.

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	(Note the same language is in 8VAC20-543-120.)	social sciences, art, music, drama, movement, and technology in learning experiences;	
Samuel E. Benson, CTE and PLTW Certified 2015 Northern Region VTEEA Middle School Technology and Engineering Education	8VAC20-543-220 Technology Education.	I have been teaching Technology Education in the state of Virginia for over forty-five years. Before any changes are made to the present Technology Education teacher certification procedure, please consider the words written by the commenter, George D. Bishop, VACTE Representative/Governmental Relations Chair, VTEEA. He said it so very well. Classroom management skills are a very important part of the teaching-learning process. Please re-consider what will be required for engineers to become teachers. Please, stay with what we presently do to prepare our CTE educators for the classroom.	Individuals seeking an endorsement in engineering will be required to meet professional studies requirements, including classroom and behavior management.
Jessie White, Hampton, Virginia	8VAC20-543-220 Technology Education.	I am a proponent of STEM learning for all children. I have worked with the Virginia STEM Learning Network, the STEM Innovation Network, and have brought a Governor's STEM Academy to your attention in addition to my job. When I think of the collaboration that can and should occur among the many disciplines that make up our education system, I feel confident in your leadership and ability to make the right decisions. As a Technology teacher and Career and Technical Education Director in Hampton, I advocated that all children, whether first generation STEM learners, children from environmentally challenged homes, or Governor's School candidates should learn STEM and seek to improve not only their economy, but to contribute to local, regional, and the Virginia Economy. I ask that you direct the parties involved in this proposed endorsement to work together to improve the system that has been developing, improving, and providing good results for almost 30 years. I have witnessed proponents of this endorsement heckle K-12 teachers in public and at conferences and conventions, saying "That is not engineering." This finger shaking is the epitome of the ills that plague public education; those who lack the research and practice attempt to shame good teachers into submission rather than collaborate. Children must learn at developmentally appropriate levels. Engineers are created at the post-secondary level. It is up to K-12 educators to get them there. Virginia has quite a number of STEM and particularly good Technology and Engineering programs. This current proposed endorsement ignores this work and the people who brought engineering to Virginia as far back as the 1980's. Dr. Cannaday, as the Superintendent in Hampton, you saw the work of Robert Johnson and others develop the Center for High Technology. Today, that is a Project Lead the Way program and a Robotics program taught by engineers who are Technology teachers. Their students have won engineering awards. In close, I hope that Virginia continues with its current K-12 engineering system, based in good research and practice that works for all children, and allow improvement rather than replacement. As engineering changes in the next century, the purposes of creating a STEM literate society are the same and collaboration among its disciplines is the key. While there may be a prima facie logic to creating a new endorsement, history proves that education	The endorsement in "engineering" is recommended to be established. The engineering endorsement is another pathway for individuals to become licensed and endorsed to teach engineering courses. Individuals holding valid Virginia teaching licenses with an endorsement n technology education may teach engineering courses.

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		reform without due process or research leads to faulty logic and less student ability. Please do not allow this endorsement to continue as submitted.	
Dee A. B. Weikle	8VAC20-543-250 Computer Science.	Overall the changes to the computer science guidelines are positive. I especially like the addition of 3#. Knowledge of the ethical, moral and legal issues associated with applications in programming and computer science. Understanding the implications of our use of computers is especially important to bring to the K-12 environment where students are forming life-time habits around the use and possible misuse of computing applications of all kinds. I am also pleased to see the update of item six to eliminate the dated terms of mainframe, minicomputer and microcomputer along with the removal of 7. An ability to use basic applications, as those specific applications of interest will be changing with the times. Another improvement is the removal of the word "structured" in the specification of which languages should be learned, as there are those that are useful today that may not be considered structured. I do have some concern about the addition of design into the new item number 5. I think this gives the impression that students with a bachelor's degree who are going out to teach in K-12 need to know how to design a programming language and this is a topic more appropriate to a graduate program.	The comment supports the revisions to the computer science competencies with one exception. No revisions are recommended for Item 5.
Jim Batterson	8VAC20-543-280 Engineering.	For a teaching license endorsement in mathematics or a science, Virginia requires high school teachers to have either a major in the subject or significant coursework in that subject. For example, to be endorsed in chemistry, one must, in part: *"…Complete a major in chemistry or 32 semester hours in chemistry, including inorganic chemistry, organic chemistry, physical chemistry, and analytical chemistry and other preparation consistent with the competencies required for the endorsement; or* *Earned an endorsement in another science discipline and at least 18 credits in chemistry, including preparation in each of the following areas: inorganic chemistry, organic chemistry, physical chemistry, and analytical chemistry."* However there is no similar requirement to teach engineering in VA, but, instead, a high school teacher must get a technology education endorsement. There is no endorsement for engineering in VA and, thus, there is currently no guarantee that a high school engineering teacher has either a major or significant coursework in the engineering discipline. College preparation for technology education involves knowing about a very broad range of technologies, how to use them, how to repair them, and to some extent the engineering design process. It is aimed at preparing students to go directly into the workforce with a national certification or to go to a community college or apprentice program for additional	The endorsement in "engineering" is recommended to be established. The engineering endorsement is another pathway for individuals to become licensed and endorsed to teach engineering courses. Individuals holding valid Virginia teaching licenses with an endorsement n technology education may teach engineering courses. The endorsement does require, among other requirements, at least a bachelor's degree from a regionally accredited college or university. Professional studies and assessments also are requirements individuals must meet to become eligible for a Collegiate Professional or a Postgraduate Professional License.

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		formal coursework. Though using some technologies, engineering majors do not learn about the breadth of technologies that technology education majors learn, but learn more advanced mathematics, advanced science, and specific advanced engineering analysis and design coursework that technology education majors do not take. Evidence of these differences can be found in the requirement that engineering majors take an additional 12 hours of specific technology education coursework to qualify for a technology education endorsement (proposed to be raised to 15 additional hours) and in the currently proposed engineering endorsement which is the subject of this paper which provides for twelve specific hours that a science or technology education major should take to be endorsed in engineering. Simply put technology and engineering are not equivalent. Technology is a *result* of applying scientific knowledge and engineering knowledge and processes to solve a problem or societal need. Since 2010, a team of high school engineering teachers and professional engineering subject matter experts from academe, government labs, and industry, have worked with ABTEL and the VDOE to create an appropriate set of engineering content area knowledge requirements for an engineering endorsement to address the Board of Education Goal 5 of "highly qualified and effective educators". This paper provides details on the differences and relationships between the S, T, and E of STEM, some of the differences in formal preparation of engineering and technology education college graduates, and finally a history of activities that led to the proposed engineering endorsement 8VAC20-23-330 and the proposed competencies for an approved teacher preparation program in engineering, 8VAC20-543-280 in the proposed licensure packages before you today. BACKGROUND AND STEM DEFINITIONS Numerous reports[1] over the past decade have spoken to the link between innovation and STEM (Science, Technology, Engineering, and Mathematics) education. Science, technology, and mathematics all *serve* innovation but innovation itself is born of the engineering design process (the "E" of STEM) – not the scientific method. And engineering is not equivalent to technology. In short: • Science discovers the principles of the natural world – the world that is; • Engineering produces the human-designed world – the world we want;	

[1] Examples are: testimony by Aneesh Chopra on Supporting Innovation in the 21st Century Economy to Committee on Science and Technology, Subcommittee on Technology and Innovation, United State House of Representatives, March 24, 2010; "Innovation America – A Final Report" from The National Governors Association, July 2007; The 2009 report by the National Academy of Engineering and National Research Council, "Engineering in K-12 Education", is available from the National Academies Press (www.nap.edu).

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		• Technology is the result of applying scientific and engineering knowledge and processes to solve a problem The Commonwealth requires significant mathematics and science coursework of all children for successful completion of and graduation from the K-12 program. Very little is required in technology and nothing is required in engineering for graduation. A number of Virginia's schools participate in excellent extra-curricular engineering activities such as FIRST Lego, Tec, and Robotics[2]. A relatively small number of Virginia schools participate in curriculum-based engineering programs such as *Virginia Children's Engineering* in K-5 and *Project Lead The Way* in high school. The locus for the limited K-12 engineering activity in Virginia since its introduction in the late 1980's has been in Career and Technical Education where these important initiatives were first taken and have been sustained. The accompanying PowerPoint graphic shows the STEM "continuum" from mathematics on the left to the trades on the right. At the top of the chart, on the left, one sees that mathematics is taught as primarily theory while trades, at the other end of the spectrum, on the far right, is almost all hands-on with very little theory. In the middle of the chart, we find engineering – the "E" of STEM. Engineering is an even blend of hands-on and theory and, while the trades focus on teaching students how to build and repair *existing* systems, engineering focuses on the design and fabrication *new* systems – innovation. These columns should not be seen as isolated "stovepipes" but rather blending one into the other universe) forward. Sheldon must develop theories about matter and the universe that are either validated or disproven via Leonard's experiments - which of course are done with machines and instruments designed by Howard and built and maintained by skilled technologists and craftsmen (who we unfortunately do not see on the show). The skills represented by each of the columns are equally important. Furthermore, Leonard must have trades and crafts people (technicians) to manufacture, operate, monitor, and repair when necessary, the machines that carry out his experiments. A couple of specific examples to further understand the chart: Engineering and the trades (the right-hand three columns): Let's look at an example in which a car is brought into a garage with some unexplained problem. In the far right-hand "trades" column, a traditional automobile-repair CTE course teaches the student how to repair a car – identifying a problem with an automobile and correcting it with an off-the-shelf replacement part. This trade's graduate can identify the problem with the car, go to the parts supply room, get a replacement part, install it, and send the fixed car on its way. For the same situation, an *engineering technologist* (next column to the left) would be trained to do the same problem diagnosis and repair, but, also, in a case where the part was not	

[2] Other examples include Future Cities, Egg Drop and model boat and race-car contests.

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		available in the supply room, would be able to *manufacture* a replacement part using computer aided design and manufacturing or fabrication – often known as a "middle skill". Moving one more column to the left, the *engineer* may not be able to do the problem diagnosis, but once given the failed part and its location in the car system, would be able to combine her additional knowledge of science theory, perhaps in materials chemistry, and engineering analysis of the vehicle requirements to analyze why the original part failed and then innovate the design of a totally *new* part from an alloy or polymer or composite or different alloy that is maybe stronger, lighter, safer, cheaper, or more environmentally sound than the standard part on the shelf. <u>Science and engineering (the left-hand three columns)</u>: In a second example, consider a NASA mission objective such as the one that led to the design and incredibly successful mission of the NASA Mars Rover and Science Lab, Curiosity: is there now or was there ever life on Mars? NASA *scientists* must determine what needs to be measured and how well it has to be measured. *Engineers* must then take these requirements and design an instrument to meet them. But also they must meet requirements and constraints from project managers regarding the size, mass, energy consumption, and cost of the instrument. These constraints often lead to the engineers and scientists working closely together to find compromises in the original measurement requirements in order to meet mission constraints. The engineering designs are taken by engineering technologists and skilled crafts and trades people, who then fabricate this novel instrument within the specifications and stringent requirements dictated by the planetary science mission and the hostile space environment. Furthermore, engineers must design and technicians must fabricate the rocket, descent vehicle, and the rover vehicle, and engineers must design the guidance trajectory from Earth to Mars, and a very complex descent through an unknown Martian atmosphere to a safe landing at a specified location on the incompletely-known Martian surface. So, as mentioned earlier, the knowledge and skills represented by any column are not better or worse or more or less important than those represented in any other column – they are just different. A synthesis of ALL of them are required to move our knowledge of the universe forward and provide technological advances to safely satisfy human needs in society. TEACHER PREPARATION But we have a "gap" in Virginia. Until just recently, while mathematics and science were found in the VDOE Instruction Division, the trades <u>and</u> engineering were found in the separate Technology, Career, and Adult Education Division. Thus, in Virginia, we have had a culture of an "either-or" dichotomy of curriculum with hands-on instruction for those traditionally going directly into the workplace or to community college, removed from the more theoretical curriculum that is aimed at the college-bound. The State Superintendent has recently corrected this mid-20th century	

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		organizational paradigm by bringing CTE into organizational alignment with mathematics and science. However the endorsement requirement for engineering teachers, which developed in CTE over the years, continues to be that of technology education. The purpose the proposed engineering endorsement, 8VAC20-23-330, is to provide for engineering teachers with an appropriate background and formal training in science, math, and engineering. The close relationship with science and the importance of engineering has been recognized by several statewide and national reports including: • The 2007 science & engineering panels sponsored jointly by NASA and Virginia's Secretary of Education[3] • The 2011 National Research Council "Framework for K-12 Science Education" • The 2011 National Academies of Engineering Report on K12 Engineering Education[4] • The 2012 Next Generation Science Standards In 2013, on recommendation from ABTEL, the VBOE approved a change to the 8VAC20-22 teaching licensure package which did include both a recommended engineering endorsement (now 8VAC20-23-330) and a set of competencies required for K-12 teacher preparation programs in engineering (8VAC20-543-280) in Virginia. These are the subject of today's public hearing. If the endorsement does not become regulation, things will remain as they are today, with, for example, a chemical engineering major from M. I. T. unable to get a provisional teaching license to teach engineering in Virginia's high school	

[3] The engineering panel was composed of eleven practicing engineers drawn from industry, government labs, and academe along with three high school engineering teachers.

[4] *"The committee concluded that, although it is theoretically possible to develop standards for K–12 engineering education, it would be extremely difficult to ensure their usefulness and effective implementation. This conclusion is supported by the following findings:*
(1) there is relatively limited experience with K–12 engineering education in U.S. elementary and secondary schools,
(2) there is not at present a critical mass of teachers qualified to deliver engineering instruction,
(3) evidence regarding the impact of standards-based educational reforms on student learning in other subjects, such as mathematics and science, is inconclusive, and
(4) there are significant barriers to introducing stand-alone standards for an entirely new content area in a curriculum already burdened with learning goals in more established domains of study. "

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		without completing twelve (to be increased to fifteen hours in the technology education proposal also before you today) additional hours of technology education courses to satisfy requirements for a technology education endorsement. There are, in general, three major degrees offered by universities in the area of technology and engineering: • Technology Education[5] (schools of education) • Engineering Technology[6] (schools of engineering) • Engineer[7] (schools of engineering) The formal post-secondary education for the science, engineering, and technology disciplines reflects the needs of the graduate practitioners – often containing significant coursework from the neighboring discipline. Thus scientists have significant mixes of math and engineering depending on their theoretical or applied bent, while engineers must have significant math, science and hands-on engineering technology training to carry out their profession. Technology education majors, while having extraordinary hands-on experience across a very broad array of technologies, lack the in-depth science and math theory as well as engineering analysis and design coursework to teach legitimate engineering courses….just as engineering majors often lack hands-on skills in a significant number of areas to teach high school technology education courses. While not the same as coursework taken by science majors, an engineering major does have significant coursework in advanced science. All engineers must know a significant amount of physics. Chemical engineering majors generally will take a significant number of chemistry theory and lab courses. This will lead to a new paradigm for filling out the teaching schedule for high school engineering teachers as Virginia allows for adding additional endorsements via passing the *Praxis 2* content knowledge exams. Thus with the addition of knowledge of Modern Physics, any engineering major would likely be prepared to pass *Praxis 2* in physics; chemical engineering majors should easily qualify to teach	

[5] Nominally offered by schools of education, *technology education* focuses on the critical hands-on skills traditionally taught in shop or vocational education classes. Professors are seldom engineers, but rather technology education and trades specialists themselves.
[6] Nominally offered by schools of engineering, *engineering technology* contains more engineering, mathematics and science than technology education and the graduate is prepared for a career as a project manager using current tools and technology to carry out projects that require today's technology. Engineering Technologists are implementers rather than designers.
[7] Offered by ABET (Accreditation Board for Engineering and Technology) accredited schools of engineering, *engineering* requires that the student have significantly more and higher level mathematics and science than engineering technologists. The engineer is trained on conceptual aspects as well as hands-on application so as to be prepared to innovate through the design of new systems of value to society.

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		chemistry; geo engineering majors qualify to teach earth science; and bio engineering majors to teach biology. Of course, engineering majors can also opt for the traditional process of taking 15 technology education hours and teach technology education along with engineering. Just as math and science teachers are required to have degrees or a significant number of hours in their content area, so have we reached the point in high school (pre-college) engineering, wherein, engineering teachers should have a degree in engineering (or at least significant career experience in an engineering field following a mathematics, science, technology education, or engineering technology degree). INDUSTRY SUPPORT AND HISTORY OF THE PROPOSED REGULATIONS In 2011, a presentation was made to ABTEL on behalf of ten technology and academic leaders[8] from across the Commonwealth, requesting "that ABTEL investigate the establishment of an engineering licensure endorsement for high school teachers and recommend that such investigation substantially involve a panel of practicing engineers (subject matter experts) drawn from university engineering schools, national laboratories, and industry". In 2012 a five-person[9] panel of engineers from universities, a government laboratory, and industry, in collaboration with a senior technology education coordinator from a large urban school division, developed and submitted to ABTEL a draft set of requirements for a high school engineering teacher endorsement. The requirements offered five separate options or pathways to the endorsement in an effort to accommodate as many backgrounds as possible while still assuring that students taking engineering courses have appropriately qualified engineering teachers. Thus there were pathways for science majors, engineering majors, and technology education majors with each pathway simply assuring that the prospective licensee have a proper mix of math, science, and hands-on engineering coursework or professional experience. For example, while an engineering major would qualify straight-away, technology education and science majors would be required to have	

[8] This group included: Capt. Joe Bouchard (USN ret.), Former Delegate VA General Assembly; Doug Dwoyer, Director (retired) of Research, NASA Langley Research Center; Tim Early, President/CEO, Hampton Roads Technology Council; Rear Adm. Bill Hayden (USN ret.), Executive Director, STARBASE Victory, Portsmouth Public Schools; Rick Lally, Interim Director, Innovate!HamptonRoads; John Ledgerwood, Engineering & Technology Coordinator, VA Beach Public Schools; Bob Lindberg, President & Executive Director, National Institute of Aerospace; Brett Vassey, Executive Director & CEO, Virginia Manufacturers Association; and Jonathan Whitt, Executive Director, Region 2000 Technology Council.

[9] Members (and pertinent affiliation at the time) were Bob Kolvoord, Head of the Interdisciplinary & Applied Science Dept (and developer and former interim Dean of the Engineering major) at James Madison University; Doug Dwoyer, retired Director for Research & Technology at NASA Langley Research Center; Bob Lindberg, President of the National Institute for Aerospace, former vice-president Orbital Sciences Corp; John Ledgerwood, Technology Education Coordinator for VA Beach Public Schools; and Jim Batterson, Head, Dynamics & Control Branch at NASA Langley Research Center

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		completed 12 hours of specified engineering coursework. In 2011, Senate Joint Resolution SJ308[10] was passed requesting the VDOE: "….to establish shared goals for an engineering program of study, and assign a shared responsibility for this program between the existing science, mathematics, and technology disciplines…and… that K-12 engineering not be subsumed by just one curriculum domain, but only taught in conjunction with science, mathematics, and technology education by teachers with appropriate training in the engineering design process, the scientific method, science, and manufacture to specifications and constraints." The intent of SJ308 was NOT to limit the outcome to the "current departments of technology, math, and science", but rather (and because there was and still is not an engineering department) to force a meeting between these existing elements to see what might be the right approach for developing engineering skills for the Commonwealth's students "…by teachers with appropriate training….". This resolution led to the appointment of an "Engineering Education Advisory Committee" by the VDOE which met in late 2011 and was composed of 16 citizen participants from across the Commonwealth	

[10] WHEREAS, STEM is the acronym used in K-12 education for Science, Technology, Engineering, and Mathematics; and
WHEREAS, each component of STEM differs from the others in subtle but important ways; and
WHEREAS, science is concerned with the discovery of the laws by which nature works— the discovery of the natural world; and
WHEREAS, mathematics is concerned with the study of patterns and relationships among quantities, numbers, and shapes; and
WHEREAS, technology education is concerned with the modification of the natural environment in order to satisfy human needs and wants; and
WHEREAS, engineering is concerned with the creation of the human-designed world—the purposeful shaping of science and technology to meet societal needs; and
WHEREAS, innovation, critical thinking, and problem solving are highly desired twenty- first-century capabilities in the Commonwealth and the nation; and
WHEREAS, innovation is born directly of engineering rather than science and mathematics; and
WHEREAS, the engineering design process differs from the scientific method; and
WHEREAS, engineering design leads to the manufacture or fabrication of a product that meets design requirements and constraints; and
WHEREAS, engineering teachers require a significant background in the engineering design process and the manufacture to specifications process as well as science, mathematics, and technology education; and
WHEREAS, mastery in the engineering design process or manufacture to specifications process is not required of science and mathematics teachers; and
WHEREAS, mastery in science and mathematics is not required of technology education teachers; and
WHEREAS, a robust K-12 STEM education will lead students to successful transition to higher education in engineering; now, therefore, be it
RESOLVED by the Senate, the House of Delegates concurring, That the Department of Education be requested to establish shared goals for an engineering program of study, and assign a shared responsibility for this program between the existing science, mathematics, and technology disciplines; and, be it
RESOLVED FURTHER, That K-12 engineering not be subsumed by just one curriculum domain, but only taught in conjunction with science, mathematics, and technology education by teachers with appropriate training in the engineering design process, the scientific method, science, and manufacture to specifications and constraints.

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		with a pretty good skill mix led and facilitated by VDOE senior staff in instruction, science, and technology education. There were three engineers including me, a number of education school personnel including two technology education faculty members from ODU's School of Education, a chemistry professor, and science museum personnel. The workshop was led and facilitated by the VDOE assistant superintendents who were responsible for science and math and for technology education. The final report draft from the VDOE to the Governor and General Assembly was not sent out to the sixteen members of the advisory committee for editorial comment and corrections. There were several misinterpretations in the report that could have been caught by such a step, but, rather, it was publicly released as SD-13 in December of 2011. The VDOE had for years been severely (even structurally) stove-piped with respect to technology education and science/math education with engineering assigned to technology education. SJ308 was an attempt by its sponsors to get the three existing departments to work together to develop an appropriate position on addressing engineering education – it was not intended to restrict the result to the existing departments. It was meant to be enabling – not restrictive. In December 2012 in response to a VDOE NOIRA regarding revisions in teacher licensure regulations, two of Virginia's leading and largest engineering and technology professional organizations, the Virginia Manufacturers Association (VMA) and the American Council of Engineering Companies-VA (ACEC-VA), submitted a recommendation that the state create an engineering endorsement with two clear purposes in mind: • Ensuring that high school engineering teachers are highly qualified in engineering content education • Removing barriers to bringing engineering majors from universities into the Virginia teaching workforce To this end, these industry leaders submitted a specific recommendation for the wording of such an endorsement…wording that was very close to the wording of 8VAC20-23-330 before you today. In addition to the joint ACEC-VA/VMA submittal, letters of support for the submittal were sent by several individual engineering and technology leaders from industry and academe. In addition to the proposed endorsement wording, the team of five engineering and technology education professionals developed and submitted to VDOE a proposed set of competencies for a teacher preparation program in engineering. This proposal was modeled on the template already in use for a physics teacher preparation program in Virginia colleges and universities. Both proposed regulations were approved by ABTEL in May of 2013 and recommended to the VBOE, which approved them on June 27, 2013. They then underwent scoring and	

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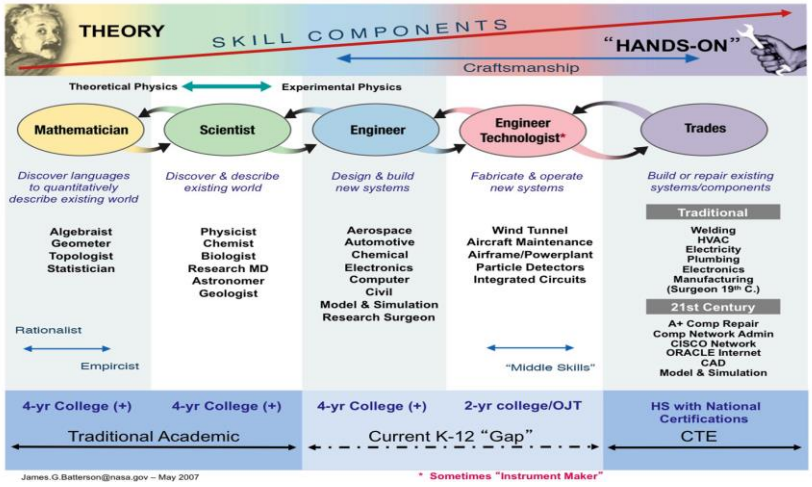
		vetting in the executive branch as the first part of Stage 2 of the VA Regulatory Town Hall Process and have come before you today after that vetting and scoring. SUMMARY Unlike a physics, biology, earth science, chemistry, or math major, an engineering major cannot get a provisional teachers license upon college graduation with a content area degree. The engineering major must take an additional 12 hours of technology education courses to be endorsed in technology education and begin teaching. Moreover, there is no requirement that engineering teachers in Virginia have significant formal coursework of the type taken by engineering majors, thus depriving high school engineering students of a teacher with significant engineering content knowledge. 8VAC20-23-330 was developed in collaboration of practicing engineers from academe, government labs, and industry and technology education professionals and is aimed at assuring that (1) high school engineering teachers have an adequate background in engineering knowledge and (2) removing barriers to engineering majors entering the Virginia teaching workforce. In addition, 8VAC20-543-280 defines the competencies that Virginia's colleges should meet as a guideline in creating an engineering teacher preparation program. See Chart:  	
Donald Williams, Professional engineer and	8VAC20-543-280 Engineering.	I support the proposed 8VAC20-543-280and 8VAC20-543-330. If passed, I believe these changes will improve engineering education in Virginia. The rationale for endorsing a new	

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CTE teacher, Phoebus High School Hampton		engineering program and licensing includes the following: 1. Engineering is a separate subject. It is NOT science, math or even technology. We have a wide assortment of technology education courses for those students who are interested in the broad study of technology. Many of these serve the purpose of teaching technological literacy. *Our country recognizes the importance of engineering, but it is a near fatal flaw to think a science, math or technology teacher can teach engineering. Placing engineering in the Technology Education curriculum may have seemed appropriate in the past, but it should now evolve to the distinct discipline that it really is.* 2. Technology Education (TE) teachers are well trained for many of the general courses in technology education. They are not trained as engineers or even possess rudimentary levels of knowledge in the physics and engineering topics involved in courses such as Project Lead the Way (PLTW). PLTW attempts to train teachers in their courses, but an 80 hour summer training is insufficient time to expect a candidate teacher to actually understand statics, dynamics, kinematics, thermodynamics, electricity/electromagnetics, electronics, fluid mechanics, etc. I have watched teachers in these summer trainings who don't know the subject matter even when the training concludes. It must be realized, but it is rarely explained, that the PLTW summer training courses ONLY require the teacher to DO the same content that the student will do in the school year. It doesn't teach anything beyond the course itself. *Shouldn't the teacher have knowledge beyond the course he/she is teaching?* 3. Virginia's engineering courses are taught by any TE teacher available to teach the course, with no training in any formal or informal engineering program. Any engineer could identify these teachers when they see them teach a topic that they only know superficially. Imagine a class where a student asks a reasonable question that is "just beyond" what is covered in their high school textbook. Most TE teachers won't have a clue. Teachers don't have to know everything, but they should be competent in their subject. Engineering subject matter is still "taught" by the teacher with the aid of a textbook. *We don't expect students in math and science courses to "discover" the answers to all their questions.* 4. The current status of TE teachers standing in the classroom teaching engineering does a disservice to both students and engineering. Students see mildly competent or incompetent adults in the role of engineering expert. Students are taught that building mousetrap cars, CO2 cars, paper airplanes, balsa bridges, etc., is engineering. Many of these "projects" are poorly conceived because students are hardly taught the connection between the science and math (i.e. no calculations) to their design. That's not engineering! We aren't preparing students well enough to pass engineering school in college. I'm not sure currently whether curriculum for high school engineering courses like PLTW are more limited by the student's or the teacher's abilities. This should never be the case! 5. We could verify this lack of knowledge in those who are teaching our students	

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		engineering. Ask the teachers of engineering courses to pass an AP Physics test. Physics is the science associated with most of the applications of engineering taught in high school engineering courses. I doubt many of them would pass a combined Algebra, Geometry, Trigonometry, and Statistics test. I am certain the majority of those teachers who would not meet the licensing requirements of the proposed engineering endorsement (as outlined in 8VAC20-23-330 [proposed licensure regulations]) would fail the test. Why do we let them teach a subject that they don't understand? 6. The arguments made for keeping engineering in TE are simplistic: a. One argument made for keeping engineering in TE is that they're already doing it. This is the logical fallacy of circular reasoning. b. Another argument is that they teach the engineering design process (practically a mantra for state TE and VTEEA representatives). That flow chart is taught in the first week. But TE teachers don't know how to do the FULL engineering design process because they can't teach the required math and science and its application. Watch an engineering class and see how little (if any) calculations are done as part of a project. We are misleading students. c. We won't be able to find the teachers to teach higher performing engineering classes. But this is actually an admission that current teacher are weak or incompetent. d. TE teacher colleges can't use the word "engineering" in the title of their courses. This is because the school of engineering knows the sharp differences in what is taught in college TE courses versus what is taught in actual engineering courses. So if we recognize that TE doesn't really teach engineering in college, why do we pretend that it's sufficient for high school? e. But TE courses currently teach "design". Just because you have the word design in the curriculum, doesn't make the course equal to engineering. Fashion Marketing and Art teach design. I don't think anyone confuses these courses with engineering. TE design is just primitive size and shape creativity at the most. Again, it misleads students into thinking engineering can be divorced from math and science, calculations, and the depth of engineering discipline. 7. The turf war is really about money. Perkins funds are designated for CTE courses. So the current TE colleges and CTE directors use the scare tactic that engineering won't get money from Perkins Act. If the Perkins funds are currently being properly spent on TE "engineering like "courses now, then can't they be used for engineering courses after these proposals are implemented? In the past, CTE has morphed from its roots in Industrial Arts and Vocational Education, absorbed ROTC, and includes the wide variety of endorsements that currently fall under CTE. Couldn't CTE accept that the engineering endorsement is required to teach any course with engineering in the title (similar to what the colleges do with courses titles)? This would be a SIMPLE SOLUTION THAT JUST REQUIRES THE WILL TO DO IT. IT IS A CLEAR CHOICE TO IMPROVE THE QUALITY OF ENGINEERING EDUCATION IN VIRGINIA.	

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		Virginia will provide better education in engineering by raising the standards. Education and society call it STEM not STeM. Let's make Virginia fulfill the "E" for engineering. Let's make the discipline real.	
Valdis Edward Ozols, Bath County High School	8VAC20-543-280 Engineering.	As a Virginia K-12 educator for the past eight years, I am writing to express my deep concern regarding proposed changes to the *Regulations Governing the Review and Approval of Education Programs in Virginia*. Specifically, my concerns target the proposed 8VAC20-543-280, Engineering as a new program of study and 8VAC20-23-330, the addition of an engineering teaching license. If passed, this will affect the current high school pre-engineering programs and teachers. One significant issue in attracting CTE teachers in Virginia is the low rate of pay compared to private industry. Having a separate engineering program will eliminate classes for some students. Virginia led the Nation in 1988 in developing the first high school engineering courses within the subject area of Technology Education, and later incorporated nationally recognized engineering courses developed by Project Lead The Way (PLTW) that align with post-secondary engineering programs. As a result the Virginia Technology Education programs have produced students who successfully completed post-secondary 4-year Engineering programs not only through Virginia universities, but others across our nation. The Technology Education curriculum is nationally recognized by the NSF, NASA, NAE, and other credible organizations as addressing the K-12 technology and engineering content and practices. My associations and their members have advocated for STEM partnerships for many decades. At the K-12 level in Virginia that partnership was specified in 2011 with the passing of Senate Joint Resolution 308, which established a shared responsibility among the existing science, technology, and mathematics subjects. Rationale for NOT endorsing a new engineering program includes the following: 1. As submitted to the VA DOE in 2013 the proposed revisions to the Virginia Technology Education Regulations infuses engineering in a manner that aligns with the ITEEA national Standards for Technological Literacy and the National Assessment of Educational Progress (NAEP) for Technology and Engineering Literacy. 2. K-12 engineering education nationally, and in Virginia, is focused on the engineering design process, as specified by the American Society of Engineering Education (ASEE), ITEEA, and the Next Generation Science Standards. 3. Technology Education is an approved subject area in Virginia K-12 education that teaches the engineering design process. 4. Engineering courses, including Project Lead the Way, are currently taught in	

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		Technology Education. I ask that the infrastructure for STEM education, inclusive of program regulations, funding, and professional development, remain directed at the existing science, technology, and mathematics education programs in Virginia.	
Mike Piccione, VTEEA and ITEEA Member and Technology Educator Thomas Jefferson High School for Science and Technology	8VAC20-543-280 Engineering. 8VAC20-543-220 Technology Education.	As a high school educator for the past 15 years, and a member of the Virginia Technology and Engineering Education Association (VTEEA) and International Technology and Engineering Educators Association, (ITEEA), I am writing to express my deep concern regarding proposed changes to the *Regulations Governing the Review and Approval of Education Programs in Virginia*. Specifically, my concerns target the proposed 8VAC20-543-280, Engineering as a new program of study and 8VAC20-23-330, the addition of an engineering teaching license. If passed, this will affect the current state high school pre-engineering programs and teachers. We are the top high school in the country according to Newsweek and this licensure change would adversely impact the teachers in our program. The Technology Education curriculum is nationally recognized by the NSF, NASA, NAE, and other credible organizations as addressing the K-12 technology and engineering content and practices. My associations and their members have advocated for STEM partnerships for many decades. At the K-12 level in Virginia that partnership was specified in 2011 with the passing of Senate Joint Resolution 308, which established a shared responsibility among the existing science, technology, and mathematics subjects. Rationale for NOT endorsing a new engineering program includes the following: 1. As submitted to the VA DOE in 2013 the proposed revisions to the Virginia Technology Education Regulations already infuses engineering in a manner that aligns with the ITEEA national Standards for Technological Literacy and the National Assessment of Educational Progress (NAEP) for Technology and Engineering Literacy. 2. K-12 engineering education nationally, and in Virginia, is already focused on the engineering design process, as specified by the American Society of Engineering Education (ASEE), ITEEA, and the Next Generation Science Standards. 3. Technology Education is an approved subject area in Virginia K-12 education that already teaches the engineering design process. 4. Engineering courses, such as Engineering Design, Energy Systems, Robotics, and Prototyping are currently taught in our Technology Education department.	

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		Please keep the current structure for STEM education, inclusive of program regulations, funding, and professional development. Permit the content to remain directed at the existing science, technology, and mathematics education programs in Virginia, if change needs to be made then direct more resources to the teachers that are currently teaching, not away from them.	
D.E. Shapiro, President, VA Technology & Engineering Education Association	8VAC20-543-280 Engineering.	On behalf of the Virginia Technology and Engineering Education Association, I request that changes not be made to the *Regulations Governing the Review and Approval of Education Programs in Virginia*. Specifically, the proposed repealing of the current 8VAC20-542 (items 8VAC20-542-10 through 8VAC20-542-600) and replacement with 8VAC20-543, with the associated additions of items 8VAC20-543-10 through 8VAC20-543-640. I offer the following to support our request: • In 1988, the Virginia was the first Commonwealth/State to add Engineering courses to the existing Technology Education Program. • In 2011 the Senate Joint Resolution 308' Establishing Shared Goals for an Engineering Program of Study with Shared Responsibility Among the Science, Mathematics, and Technology Disciplines was passed which specifies a partnership between our existing science, technology, and mathematics subjects to teach Engineering. • In 2011, the Virginia Technology Education Association changed their name to Virginia Technology and Engineering Education Association to reflect the Engineering Education (VTEEA) taught within our Technology Education Programs. This also mirrors the addition of engineering in our parent organization the International Technology and Engineering Educators Association. • Engineering Education is already included in our Science, Technology, and Math Programs. Our schools are already teaching STEM in our K-12 courses. It is unnecessary to make further provisions for Engineering Education or Engineering Education Licensure. • The VTEEA includes staff development in Engineering Education in their Summer Staff Development to assist in preparing all Technology and Engineering Education programs. Our Project Lead the Way (PLTW) instructors all have had in-depth instruction on teaching engineering in the required PLTW courses. • The Technology Education curriculum is nationally recognized by the National Science Foundation, NASA, National Academy of Engineering, and other credible organizations that address the K-12 technology and engineering content and practices. • We already have a teacher shortage throughout education. Creating another endorsement requirement will only add to the number of teachers to be hired for these positions. Please support the programs that are already offered and the licensure currently in place. Do not add to already strained budgets and shortages of teachers. Our current Technology	

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		Education program in Career and Technical Education does an excellent job of preparing students for both career and college opportunities.	
Greg Pearson, Senior Program Officer National Academy of Engineering	8VAC20-543-280 Engineering. 8VAC20-543-220 Technology Education.	The Board is to be applauded for recognizing the importance of engineering education at the K-12 level. The National Academies, among other groups, have been following the evolution of more integrated forms of pre-college STEM education for many years, and the role of engineering in these efforts is significant. (See, for example, the 2014 report, STEM Integration in K-12 Education, and the 2009 report, Engineering in K-12 Education). Engineering, through the engineering design process, provides application opportunities for math and science that are often missing in traditional instruction in these subjects. Its focus on concrete, real-world problem solving also has the potential to increase student motivation to learn. As the Board is aware, the field of technology education has had a major role in early efforts to introduce engineering to the K-12 classroom, starting with the 2000 publication of the Standards for Technological Literary, which devote considerable attention to engineering. The standards have informed technology education teacher training programs as well as the development of some of the most successful engineering curriculum projects in the country, such as Engineering is Elementary (Museum of Science, Boston), the Engineering by Design program (International Technology and Engineering Educators Association [ITEEA]), and coursework offered by Project Lead the Way. As the Board also knows, the recently published Next Generation Science Standards put new demands on K-12 science teachers to incorporate engineering practices alongside those for science, and the College Board is in the early stages of designing an AP Engineering course. These developments, combined with the general uptick in more integrated forms of STEM education, suggest a growing demand for teachers familiar with engineering. While there is no formal consensus on the exact skills and knowledge teachers need to effectively deliver engineering in the K-12 classroom, experience to date suggests a degree in engineering is not necessary. This is not to suggest that K-12 education would not benefit by having more individuals with engineering background involved in teaching. However, at the current time, the bulk of those teaching engineering coursework in K-12 have training in technology education or science. There are efforts, such as the UTeach Engineering program in Texas, that are encouraging newly minted engineering grads to go into teaching. But these initiatives are producing teachers certified to teach K-12 science and math, not engineering, per se. The pathways to a teaching career in K-12 engineering are not well mapped out, as this is still an evolving landscape. Whatever actions the board ultimately takes on this issue, I would hope that it does not inadvertently weaken the role of the technology education community in providing engineering experiences to K-12 students in the state.	

8VAC20-543. Proposed *Regulations Governing the Review and Approval of Education Programs in Virginia*
Public Comment Summary

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Adam Frederick, Lake Ridge Middle School	8 VAC 20-543-280 Engineering.	I concur with George Bishop: "I oppose the proposal (8 VAC 20-23) creating an additional path for engineers to gain teacher licensure. *Virginia Code* (8 VAC 20-22) currently offers options for certification that are based on sound reasoning. There is no need to reinvent the wheel for engineers who are simply seeking to escape the pedagogy requirement. Research shows that content knowledge is only 20 percent of what makes a good teacher. Engineers need to understand the ramifications of decisions they might make in a secondary classroom and be especially mindful of adolescent development. Simply knowing how mathematics and science are applied to the engineering process is not enough to warrant placing engineers into a classroom without formal training. I certainly do not oppose having engineers in the Career and Technical education field, nor do I oppose having engineers teaching mathematics or science if that is their desire. What I do oppose is having a separate discipline for engineers and different licensing procedures for engineers to teach, especially procedures based upon faulty reasoning which, if followed to a logical conclusion, would say that only lawyers could teach criminal justice. Additionally, research shows that the science and engineering courses at the nation's colleges and universities lose students based not on student performance or secondary school preparation, but on the quality of college education, be it poor teaching resources or lack of pedagogy. Pedagogy training is absolutely necessary to develop effective educators. Additionally, the current proposal (8 VAC 20-543), designed to create an engineering discipline is unnecessary and redundant. Current *Virginia Code* (8VAC 20-543) already incorporates the instruction of engineering coursework within the Career and Technical Education umbrella. There is no statistical evidence that Virginia public schools are not meeting the needs of colleges and universities with regard to students continuing post-secondary study in the field of engineering. In fact, there is ample evidence cited by numerous studies that there are actually too many engineers graduating from our nation's colleges and universities each year. Furthermore, according to the United States Department of Labor's Bureau of Labor Statistics, the employment prediction for 2012-2022 job growth in mechanical, aerospace, and industrial engineering fields is slower than average. In the majority of comments posted I see no actual statistics provided that support the need for a stand-alone engineering discipline. The following publications should be read and digested prior to making a determination to add engineering as a discipline or making any changes to the regulations for endorsement for Virginia. This effort to change the existing *Virginia Code* is unnecessary, arbitrary, and redundant. Such a change will weaken the standards already in place and by which Technology Education teachers demonstrate on a daily basis the application of mathematics and science (engineering) through the use of technology. Science, Technology, Engineering and Mathematics (STEM) education is alive and well in Virginia without the proposed changes." http://www.asee.org/papers-and-publications/publications/college-profiles/2011-profile-engineering-statistics.pdf	

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		http://www.theatlantic.com/education/archive/2014/03/the-myth-of-the-science-and-engineering-shortage/284359/ http://www.tbp.org/pubs/Features/Su09Brown.pdf http://www.urban.org/research/publication/eye-storm/view/full_report	
Brenda D. Long, Ph.D. Executive Director, VA Assoc. for Career and Tech Ed	8VAC20-543-280 Engineering.	I am opposed to the proposed Engineering Endorsement and the *Regulations Governing the Review and Approval of Education Programs in Virginia* [8 VAC 20 -543]. The proposed engineering endorsement duplicates content that has long-been covered and continues to be a part of technology education. Virginia is a national leader in secondary engineering education since the Technology Education Service created the first high school engineering courses in 1988. If the goal of the proposed engineering endorsement is to get more students to enter engineering, then, by definition that is Career and Technical Education. Such a program already exists in technology education and duplication of endorsements are not needed. Engineers already have an avenue to Virginia licensure thorough technology education (reference 8VAC20-23-270 Career and Technical Education--technology education], as well as, through the Career Switcher program, or through a provisional licensure program. Engineering is an integral part of Virginia's technology education program. This statewide program is improved thorough existing channels such as the curriculum revision schedule and the DACUM panels used annually by the Department of Education's Office of Career and Technical Education. To have a separate engineering endorsement and an engineering program, are clearly a duplication of services. During a time of continued budget constraints at the local school division, funding a separate engineering program is a waste of valuable resources, when engineering concepts are already in place within the technology education curriculum. Senate Resolution 308 passed in 2011 specified engineering education within Virginia is the shared responsibilities of science, technology, and mathematics and not the silo approach to STEM as proposed by the separate engineering endorsement. An engineering endorsement is already in place through technology education and engineer programs and concepts are already in place through the technology education curriculum.	
Sidney Arthur Rader, DTE Retired	8VAC20-543-280 Engineering.	I was completely taken aback when I received notification of the fact that a proposal has been made to offer a separate engineering course within the Virginia Public Schools. For the majority of my Technology Education teaching career, I was not only involved with the courses offered within my curriculum area, but also with the promotion and support of engineering education. I developed a close relationship with the JETS Organization at the National Level and was the advisor to several teams winning the Virginia State Competition of the National Engineering Design Challenge Competitions. I was able to broker relationships between the Technology Student Association and the JETS Organization where the National Engineering Design Challenge was concerned. When the JETS Organization made its decision to cease operation due to lack of support and participation, Dr. Rosanne White, executive director of the Technology Student Association, reached out to the JETS Board and was able to negotiate the transfer of many of the	

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		programs and activities of the JETS Organization to the Technology Student Association. The TEAMS Program is alive and well today because of Dr. White and her dedicated staff at the Technology Student Association. The UNITE Program as well as the Engineering Design Competition within TSA are also providing students with opportunities for exposure to STEM integration activities that prepare them for career paths in the Engineering and Technical Fields. I believe that this proposed course, separate from the courses already being offered to students here in the Commonwealth, would prove to be a mistake of paramount proportions. There is no denying the fact that research dictates that integrated Science, Technology, Engineering & Mathematics, STEM education, is the most logical and successful approach to preparing students for Engineering and Technical fields. A separate course is unnecessary and would prove to be a step in the wrong direction. Through the Virginia Department of Education, Career & Technical Education classes (CTE), Technology and Engineering education courses included, students in the commonwealth have and are being appropriately prepared for College and Careers. Our technology education classes and programs here in the commonwealth have consistently been recognized as national leaders in incorporating engineering courses and content since 1988, and in some cases as me, before. In 2011, Senate resolution 308 directed the shared responsibility for engineering content across Science, Technology & Mathematics classes and the successes of this directive are evident across the commonwealth. It is essential and should be considered mandatory that this shared responsibility be sustained as an avenue to establishing a strong future workforce. The Engineering Design Process and a "Hands On" learning environment within Technology and Engineering classrooms within the commonwealth and across the nation will continue to be the preferred and most successful approach, with the support of math and science programs. Engineering is STEM. The proposed added course is redundant, unnecessary, and a misdirection and waste of resources. Working within the framework of success that already exists is the best way to promote engineering within the commonwealth and the nation.	
Philip A. Reed	8VAC20-543-280 Engineering.	I am the program coordinator for a Virginia approved, nationally accredited technology teacher preparation program at a STEM intensive research university. I initially spoke to the Board of Education (BOE) and the Advisory Board on Teacher Education and Licensure (ABTEL) in 2014 regarding key clarifications of K-12 technology and engineering education at the state and national levels. The documents I cited form the foundation for Virginia's technology education program and include: • Garmire, E. & Pearson, G. (Editors). (2006). *Tech Tally: Approaches to Assessing Technological Literacy*. Washington, D.C.: National Academies Press. http://www.nap.edu • International Technology & Engineering Educators Association (ITEEA). (2000, 2002, 2007). *Standards for Technological Literacy: Content for the Study of Technology*. Reston, VA: Author. http://www.iteea.org	

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		• Katehi, L., Pearson, G., & Feder, M. (Editors). (2009). *Engineering in K-12 Education: Understanding the Status and Improving the Prospects*. Washington, D.C.: National Academies Press. http://www.nap.edu • National Academy of Engineering. (2010). *Standards for K-12 Engineering Education?* Washington, DC: National Academies Press. http://www.nap.edu • Pearson, G. & Young, A. T. (Editors). (2002). *Technically Speaking: Why all Americans Need to Know more about Technology*. Washington, DC: National Academies Press. http://www.nap.edu Technology education program information on the Virginia Department of Education's website (http://www.doe.virginia.gov/instruction/career_technical/technology/index.shtml) as well as the Virginia CTE Resource Center website (http://cteresource.org/about/) demonstrates that the program is aligned to national trends in K-12 technology and engineering education. In fact, some states (e.g. Missouri) and professional organizations (e.g. ITEEA, CTETE, and VTEEA) use the term *technology and engineering education*. A separate engineering education program in Virginia is not needed because the Virginia model covers technology and engineering education… but the name has not been changed to reflect this. There are additional issues and confounding questions with the proposed engineering program in the *Regulations Governing the Review and Approval of Education Programs in Virginia* [8 VAC 20 - 542]. If the goal of the proposed engineering program is to get more students to enter engineering then, by definition, that is career and technical education. Such a program already exists in technology education and engineers already have a pathway to Virginia licensure through technology education (see 8VAC20-23-270. Career and technical education - technology education). Engineering (especially engineering design as outlined in *Standards for Technological Literacy* and the *Next Generation Science Standards*) is an integral part of Virginia's technology education program. The technology education program in Virginia is improved through existing channels such as the curriculum revision schedule and DACUM panels used annually by the Department of Education's Office of Career and Technical Education. These processes involve engineers and other professionals. Engineers wishing to improve the technology and engineering education program in Virginia should collaborate with the VTEEA and the Department of Education's Office of Career and Technical Education rather than propose a full program duplication through back doors. If the new engineering program regulations are approved, will the state start fracturing all programs by specific professions?	
James Madison University - Phil Wishon, Maggie Kyger and Steve Purcell	8VAC20-543-280 Engineering.	We support adoption of this proposal. Engineering is a critical feature of progressive P-12 STEM programs, and this proposal will help increase the number of teachers who are highly qualified in the area of engineering education.	
Robert Hughes,	8VAC20-543-280	I am 25 years old and currently a student at Old Dominion University. I am on track to	

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Old Dominion University Mechanical Engineering Student	Engineering.	graduate Cum Laude with a Mechanical Engineering degree with a Concentration in Aerospace Engineering in May of 2016. I am currently, as my senior project, working with NASA to help them improve their plane design for the GS-10, also known as the "Greased Lightning." For this project I am lead of the design and modeling portion of this project. During this project we are to build a thrust stand to experimentally find the thrust and acoustic tradeoffs of different types of propellers. This is an exciting study for not only my group but for the university, as well, because this area of study hasn't had much time invested in it as of this time. Today, I am writing you today to express to you that I do not support the proposed regulation. I believe it's the exact opposite route that Virginia Publics Schools should be taking in regards to the opportunities that could be given to the future technology driven generation. That being said, I fully support the Senate Joint Resolution 308 passed by the 2011 Virginia General Assembly. Being a future engineer myself, I can't help but being excited for a resolution that requires science, mathematics, and technology teachers to collaboratively teach engineering. I would like to explain to you that this isn't blind support on my behalf. Now that you know where I am going, I would like you to know where I've been. I hope that this can aid you with the understanding of how important the technology department is. This track I have taken, though it seems like a long one, started when I reached 9th grade. Up until this point, though I always enjoyed math and would do it in my sleep, I never really connected to any of my classes. During this 9th grade year I took a class that finally gave me that spark and it was called "Basic Technical Drawing." In this class I was taught the engineering design process and how to draft blueprints and drawings by hand. Though we all went into this class thinking it was going to be easy we were quickly shown that it was not. That being said, I had a blast. That was the class that introduced me to Autodesk's AutoCAD program and my interest immediately skyrocketed. Finally, I found something that fully grabbed a hold of me. Yet, it was only the beginning. The next year, my sophomore year, is when I would be introduced to the finest teacher I have ever had the privilege to meet and subsequently be taught by in a class called "Computing Systems." This course introduced me to computer operations and programming using the "Alice" program developed by Carnegie Mellon University. In my Junior year I took "Electronics Technology" where we used engineering to design and build circuit boards by hand. This class allowed me to learn a solid electrical foundation which still helps me with projects (such as the NASA project I mentioned above). Another class I took, expanding on the basic course mentioned above, was "Engineering Drawing" where I was introduced to my favorite program, Autodesk's Inventor. Once I was shown this program I instantly was hooked. This led to me, during my Senior year, to take "Architectural Drawing" and "Advanced Drafting." The latter is where I was introduced to 3D Max, by far	

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		the most powerful modeling program I have been introduced to. Though, to be honest, Inventor still had my heart, which without it I wouldn't have the opportunity to lead the portion of the project I am right now. Also, during this time, I participated in a program called Robotics, where my school was the first to do so in not only my school but the entire area. I also now watch my 12-year-old niece learning to use engineering design in real life situations in her middle school by taking classes like "Inventions and Innovations". She is also helping out with the Robotics divisions just as I did. I get the great pleasure of now seeing her come home with that same spark that was created in my heart and listening to her passion behind these courses. I hope now you can understand that these aren't just simple courses for students to take. In fact, they represent eye opening and life changing experiences that can't be withheld from the coming generations. So I write this letter in hopes that you understand the importance of engineering in technology education courses. This program forever changed my life and has the ability to change countless more. The coming generations depend on it. Thank you very much for your time.	
Bruce Watson Director of Career and Technical Education	8VAc20-543-280 Engineering.	I'm speaking in opposition to the proposed regulation item 8VAc20-543-28 0(engineering endorsement). In many of our elementary schools, students are exposed to Children's Engineering programs where they "engineer" solutions to real-world problems and design challenges given to them by their teacher. This program is not designed to make every child an engineer, but to expose them to design process, problem-solving, creating thinking, analysis, and STEM activities. As students matriculate to secondary schools, they have an opportunity to expand on the engineering principles they have learned in elementary school as they participate in middle school technology education courses that we refer to as "pre-engineering" in nature. As students move to high school, their course choices greatly increase in the core subjects as well as in CTE courses. Certainly, one valid way to look at the purpose of secondary education focuses on two major points: - To expose students to as many different experiences as possible, including co-curricular or extra-curricular learning, and - To help students find their passion for learning and possible post-secondary and career choices. It is not responsibility of secondary education to ensure that students graduate with a marketable skill. To that point, secondary engineering teachers are not expected or required to create professional engineers, but to foster a student's interest in engineering through the secondary courses, some of which may be dual-credit, and to guide each student to appropriate post-secondary education opportunities offered at our 2 and 4 year universities. According to Dr. James Lane, Superintendent of Goochland Schools: "Goochland County	

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		Public Schools are currently offering at least two engineering courses taught by current Career and Technical Education teachers; at least one of them is a dual enrollment course being offered through James Madison University. The purpose of these classes is to help expose students to engineering, while at the same time providing the necessary pre-requisite engineering courses. The Commonwealth of Virginia, by offering an engineering teaching endorsement, could potentially create a problem in that most Engineering teachers also teach other courses. Whereas we have an excellent Engineering program now, we could not sustain a full time teacher without having them teach other courses. We would be comfortable if the Tech. Ed. endorsement could also continue to teach engineering." To place additional requirements on school divisions, particularly small school divisions would create monetary and logistical challenges that would be difficult or impossible to overcome and ultimately may bring the demise of some engineering courses. In summary, I reiterate that we do not need another engineering program, but rather, consideration of increased funding for further staff development for our Technology Education teachers and for renovation and updating of our engineering labs to reflect 21st century technologies.	
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC20-543-300 English as a second language preK-12.	Revise as follows: **8VAC20-543-300. English as a second language preK-12.** The program in English as a second language shall ensure that the candidate has demonstrated the following competencies: 1. Skills in methods of teaching English as a second language to include instruction based on the ~~understanding of the~~ World-Class Instructional ~~and~~ Design and Assessment (WIDA) English Language Development (ELD) Standards; 2. ~~Skills in student assessment for English as a second language to include the Assessing Comprehension and Communication in English State-to-State for English Language Learners (Access for ELLs®) test;~~ Designing and administering formative or classroom-based assessments and interpreting results of both formative and summative assessments, including the WIDA ACCESS test. Using the results of a variety of formative assessments, including performance-based assessments of oral language and writing, to direct instruction. Ensuring that formative assessments reflect high validity and reliability for the purposes for which they are used and are appropriate for the targeted students. Teaching test-taking skills in preparation for standardized tests. ~~3. Skills in the teaching of reading and writing to include (i) the five areas of reading instruction: phonemic awareness, phonics, fluency, vocabulary and text comprehension; (ii) similarities and differences between reading in a first~~	Edits are incorporated into the proposed regulations.

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		~~language and reading in a second language; and (iii) a balanced literacy approach;~~ 3. Skills in the teaching of reading and writing to include phonemic awareness, pre-reading, during-reading, and post-reading strategies, vocabulary development, and reading comprehension of a variety of genres or text structures, guided reading, organization of writing using predominant text structures in the content areas, and editing skills in writing. Ability to structure interactive tasks that engage students in using oral language to develop reading skills. Ability to determine students' reading levels and design instruction for multi-level classrooms by incorporating appropriate scaffolding or language supports. 4. Knowledge of the effects of sociocultural variables in the instructional setting; 5. Proficiency in spoken and written English; ~~6. Understanding of second language acquisition;~~ Skills in providing language and cognitive supports or scaffolding based on the various states of the second language acquisition process. 7. Knowledge of another language and its structure; 8. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing; *[Replace with Skills in teaching grammar and syntax in the context of reading or writing and ability to model and teach editing skills.]* 9. ~~Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes~~; and 10. Knowledge of both general linguistics and English linguistics.	
James Wicks, Liberty University	VAC20-543-320 Gifted education (add-on endorsement).	The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experiences with gifted students.	A practicum is listed as a requirement for the endorsement.
Patty Griffin, Co-Chair Virginia Advisory Committee for the Education of the Gifted	8VAC20-543-320 Gifted education (add-on endorsement).	The competencies (8VAC20-543-320. Gifted education competencies) as outlined below are *found to be suitable* for ensuring that the coursework completed to earn an add-on endorsement in gifted education are comprehensive, cohesive and reflective of the current gifted education field. Mastery of these competencies establishes a foundation for educators to have the necessary	The comment supports the proposed revisions, and the recommended proposed text (Item 6 in the comments in bold font) is incorporated into the regulations.

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		knowledge and skills to meet the needs of gifted learners throughout Virginia. The program in gifted education shall ensure that the candidate holds an active license with a teaching endorsement or endorsements issued by the Virginia Board of Education and has demonstrated the following competencies: 1. Understanding of principles of the integration of gifted education and general education, including: Strategies to facilitate the interaction of gifted students with students of similar and differing intellectual and academic abilities; Development of activities to encourage parental and community involvement in the education of the gifted; Strategies to encourage collaboration among professional colleagues, especially in the areas of curriculum and professional development; and Strategies to collaborate and consult with general education teachers and other resource specialists on behalf of gifted students. 2. Understanding of the characteristics of gifted students, including: Varied expressions of advanced aptitudes, skills, creativity, and conceptual understandings; Varied expressions of the affective (social-emotional) needs of gifted students; and Gifted behaviors in special populations (i.e., those who are culturally and linguistically diverse, economically disadvantaged, highly gifted, or have special needs or disabilities, including twice-exceptional students). 3. Understanding of specific techniques to identify gifted students using diagnostic and prescriptive approaches to assessment, including: The selection, use, and interpretation of multiple standardized, norm-referenced aptitude and achievement assessment instruments; The selection, use, and evaluation of multiple identification criteria and strategies; The use of both formal and informal nonbiased measures to provide relevant information regarding the aptitude and ability or achievement of potentially gifted students; The use of authentic assessment tools such as portfolios to determine performance, motivation, interest, and other characteristics of potentially gifted students; The use and interpretation of reliable rating scales, checklists, and questionnaires by parents, teachers, and others; The evaluation of data collected from student records such as grades, honors, and awards; The use of case study reports providing information regarding exceptional conditions; and The roles and responsibilities of the identification and placement committee.	

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		4. Understanding and application of a variety of curricular and instructional models, methodologies, and strategies that ensure: The use of the Virginia Standards of Learning as a foundation to develop a high level of proficiency, academic rigor, and complexity for gifted learners in all curricular academic areas; The acquisition of knowledge and development of products that demonstrate creative and critical thinking as applied to student learning both in and out of the classroom, including inquiry-based instruction, questioning strategies, and problem-solving skills; The development of learning environments that guide students to become self-directed, reflective, independent learners; The acquisition of tools to enable students to contribute to a multicultural, diverse society, including preparation for college and careers; and The development of learning environments that recognize and support the affective needs of the gifted students. 5. Understanding and application of theories and principles of appropriately differentiating curriculum specifically designed to accommodate the accelerated learning aptitudes of gifted students, including: Accelerated and enrichment opportunities that recognize gifted students' needs for advanced content and pacing of instruction, original research or production, problem-finding and problem-solving, higher level thinking that leads to the generation of products, and a focus on issues, themes, and ideas integrated within and across disciplines; Opportunities for students to explore, develop, and research their areas of interest, talent, or strength using varied modes of expression; Emphasis on advanced and complex content that is paced and sequenced to respond to gifted students' persistent intellectual, artistic, or technical curiosity; exceptional problem-solving abilities; rapid acquisition and mastery of information; conceptual thinking processes; and imaginative expression across a broad range of disciplines; Evaluation of student academic growth and learner outcomes through appropriate multiple criteria, including a variety of pre-assessments and post-assessments; and Use of current and advanced technologies to enhance student performance and academic growth. **6. (NEW) Understanding the fundamental principles of differentiated curricula for effective program planning and evaluation, including:** **Program design and development for gifted learners;** **Research and topics for affective administrative arrangements, supervision, and program implementation;**	

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		Activities to encourage parental and community involvement in gifted education; and **Strategies for building an effective advisory committee.** 7. Understanding of contemporary issues and research in gifted education, including: The systematic gathering, analyzing, and reporting of formative and summative data from local, state, and national perspectives; and Current local, state, and national policies, trends, and issues. 8. Understanding of and proficiency in grammar, usage, and mechanics and their integration in all forms of communication. 9. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes. 10. The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experiences with gifted students. It is our pleasure to have the opportunity to weigh in on such an important topic that will continue to move gifted education forward in the State of Virginia. Without a doubt this collaborative work will allow gifted education in Virginia to be recognized nationally for meeting the needs of our gifted children.	
Kristi S. Fowler	8VAC20-543-340 History and social sciences.	I hope a methods course will be added to the requirements for history and social sciences.	
Barbara Alice Reisner, Professor of Chemistry James Madison University These are my personal views, not necessarily those of my employer	8VAC20-543-430 Science – chemistry.	Ideally, every chemistry teacher should have a B.S. in chemistry and education training, but I also think it's reasonable to have a B.S. in another science discipline and strong coursework in chemistry. The state has a pathway for this -- an endorsement in another science area and at least 18 semester hours in chemistry. This sounds like an excellent way to produce more certified science teachers until I go through the requirements. A student pursuing this path needs at least once course in each of the following areas: inorganic chemistry, organic chemistry, physical chemistry, biochemistry and analytical chemistry. All of these courses require general chemistry as prerequisite. To complete this coursework at JMU, a student would need to complete a minimum of 24 credits in chemistry. • General Chemistry I & Lab (CHEM 131 & 131L) = 4 credits • General Chemistry II & Lab (CHEM 132 & 132L) = 4 credits (This course requires General Chemistry I.) • Organic Chemistry I (CHEM 241) = 3 credits (This course requires General Chemistry II.)	The ACS guidelines were reviewed and found to be congruent with the expectations contained in the proposed chemistry endorsement requirements. Foundation course work provides breadth and lays the groundwork for the in-depth course work. Approved program graduates must have completed competencies in each of the five traditional sub-disciplines of chemistry: analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, and physical chemistry. Typically, General Chemistry courses are

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		• Inorganic Chemistry I (CHEM 270) = 3 credits (This course requires General Chemistry II.) • Analytical Chemistry (CHEM 351 - includes a lab) = 4 credits (This course requires General Chemistry II.) • Biochemistry I (CHEM 361) = 3 credits (This course requires General Chemistry II and Organic Chemistry I.) • Physical Chemistry I (CHEM 331) = 3 credits (This course requires General Chemistry II. At JMU, this course also requires one semester of physics and two semesters of calculus.) We also require that students take a class in lab safety which is 1 credit. A lab safety course is recommended by the American Chemical Society (ACS) but is not specifically mentioned in the VA requirements. While I think that this is commendable and ideal, I don't think that it is necessary for candidates seeking the chemistry endorsement if they have a BS in another science discipline. I think that there might be a mismatch between how the state defines the five required courses and how the American Chemical Society defines these courses. The current ACS guidelines for the undergraduate degree (http://www.acs.org/content/dam/acsorg/about/governance/committees/training/2015-acs-guidelines-for-bachelors-degree-programs.pdf) describe the first course in analytical, biochemistry, inorganic, organic and physical as foundation course work. Foundation coursework is to be preceded by introductory or general chemistry. The ACS describes the introductory or general chemistry course(s) as an introduction to "basic chemical concepts such as stoichiometry, states of matter, atomic structure, molecular structure and bonding, thermodynamics, equilibria, and kinetics." (This would be the content of the AP course.) Foundation coursework uses specialized books or materials, not a general chemistry text. My concern is that that the state does not account for general chemistry in the development of the endorsement guidelines. Historically, general chemistry has been called inorganic chemistry; this has been incorrect since about World War II. Introductory analytical chemistry, physical chemistry, and inorganic chemistry are covered in the general chemistry course. Depending on the institution, applications of organic chemistry and biochemistry might also be covered in the general chemistry course. A chemistry teacher needs more than two semesters of general chemistry, but I would argue that they don't need all 5 of these additional courses. An eighteen credit hour requirement would require that a student take lecture and lab in 2-3 of these areas. I also think that chemical safety should be included in the requirements. I think a better approach would be to use language similar to what is in the licensure	survey courses that do not provide the depth of instruction in a specific area of chemistry.

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		regulations for physics. For their 18 credit hours, students should have preparation in specific subject areas rather than having specific courses. I believe that the Virginia Licensure Regulations need to be updated in light of how professional chemists define chemistry and revised to reflect the modern chemistry curriculum.	
Lisa McGee Policy and Planning Director, Dept. of Conservation and Recreation	8VAC20-543-120,420,430,440, 450 (Science endorsements)	DCR believes strongly in supporting non-formal education practitioners and preparing teachers for using the outdoors as an integrating context for education. We believe that a robust certification program for environmental educators should be paired with a formal endorsement in environmental education for classroom teachers. While the pathway forward for establishing an endorsement in environmental education for teachers continues to be complex, we are pleased to see the new language in the regulations calling for science, biology, chemistry, and physics teacher preparation programs to, "conduct systematic field investigations using the school grounds, the community, and regional resources. DCR supports teacher in the access and use of the Virginia State Parks and National Area Preserve network for student instruction and inquiry. We are pleased to see this new language to better develop and prepare Virginia teachers for conducting field investigations and are eager to work with future cohorts of teachers and their students to explore and learn about Virginia's natural and cultural treasures!	
G. Richard Whittecar, Geology Professor Old Dominion University	8VAC20-543-440 Science Earth Science	A faculty member for the past 35 years, I now teach a variety of geology courses for our undergraduate program – geomorphology, structural geology, hydrogeology, Quaternary geology, and research methods. Also, as the CoDirector of the MonarchTeach program, I am the lead faculty member from the College of Sciences working with the College of Education to increase the number of STEM majors who are equipped to teach science or math in secondary schools. I write as a concerned individual, and do not presume to speak for the University. I applaud the tone of the new regulations which stress the rigor of understanding that our students must have in their content area. In the Earth Science recommendations for secondary schools (8VAC20-543-440. Science - Earth science) I support almost all of the changes proposed; these changes help future teachers have the background needed to address the Essential Understandings and Essential Skills presently listed on the Virginia Department of Education website. I am thus presuming that future lists of Essential Understandings and Essential Skills will be very similar. However, the new regulations left a course off of the list of prescribed courses that is absolutely essential for teachers – geomorphology. The list also contains a course that is only marginally useful to teachers – structural geology. If we add a single course to the list, it should be geomorphology, NOT structural geology. Our students need specific background in order to teach the topics in the Standards of Learning ES 7. and ES.8. and they will only get a small part of that information in a	

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		structural geology course. Essential Understandings built upon ES.7 include information about folded and thrust-faulted mountains, subduction zone volcanoes and trenches, mid-ocean ridges, rift valleys, fissure volcanoes, flood lavas, strike-slip faults, earthquake activity, magma, hot spots, faults, and the rock cycle. A structural geology course would cover many of these topics, a few of them in great detail. However, the topics covered by SOLs in ES.8. are soil, weathering, karst topography, carbonate rocks, caves, sinkholes, limestone solution acidic groundwater, permeability, waste disposal, pollution, regional watershed systems in Virginia, and the state's major physiographic features - Chesapeake Bay, Appalachian Plateau, Valley and Ridge, Blue Ridge, Piedmont, and Coastal Plain. These are not topics covered in structural geology. However, ALL of the SOLs listed in both ES.7. and ES.8. ARE covered routinely in geomorphology courses. In order to understand the processes that form landscapes, the rocks, sediments, water and soils that are present directly beneath our feet and surround us, and how they are components of the global systems that control them, teachers must understand geomorphic processes and systems. Geomorphology should be on the required coursework list as much or more than any other course. An easy fix might be to include both geomorphology and structural geology to the prescribed coursework list, but this change would add an unnecessary burden to the Earth Science curriculum. The typical Earth Science program already is difficult to complete in four years. Multidisciplinary fields such as geology are built from an understanding of many related sciences (chemistry, biology, physics, calculus), and so Earth Science students must take two semesters of all of these courses, as well as statistics. They take more introductory science and math courses than students in other science fields. In addition, they must take courses in meteorology, astronomy, and oceanography. If we add more specific courses to the Earth Science curriculum, we should add only what is truly necessary, and structural geology is not necessary.	
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC20-543-460. Special education adapted curriculum K-12.	Suggested Revision **8VAC20-543-460. Special education adapted curriculum K-12.** 3b. Address diverse approaches and classroom organization based upon culturally responsive behavioral, cognitive, affective, social, and ecological theory and practice;…	
Radford University Professional Education Committee: SPED faculty	8VAC20-543-460. Special education adapted curriculum K-12.	We appreciate the changes under ~~3~~4 Collaboration The opening paragraph states, "The candidate also shall complete the competencies in at least one of the endorsement areas of Special Education Adapted Curriculum K-12, in addition to those required under professional studies…" Please note, there is only one area of endorsement under Special Education Adapted Curriculum K-12 so this language is	The language in the opening paragraph has been proposed to be stricken. The special education adapted curriculum k-12 endorsements is a stand-alone endorsement.

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		incorrect. 8VAC20-543-460, A.3 3. Management of instruction and behavior. We suggest the wording for "3 ~~2e~~. An understanding and application of classroom and behavior management techniques and individual interventions, including techniques that…" be changed to an understanding and application of the three tiers of behavioral interventions and support and management: School-wide, classroom and individual, including techniques that: … 8VAC20-543-460, B.3.b 3. Instructional methods and strategies for the adapted curriculum. We suggest the wording for, "(2) Foundational knowledge…Additional skills shall include proficiency in a wide variety of comprehension strategies and writing, as well as the ability to foster appreciation of a variety of literature and independent reading; and reading and writing across the content areas." be changed to Foundational knowledge…Additional skills shall include evidence-based emergent and early literacy strategies for students with complex disabilities including students using gestural, alternative or augmentative communication. 8VAC20-543-460, B.3.d "Alternative ways to teach content material including curriculum adaptation and curriculum modifications," we suggest the addition of universal design for learning and assistive technology after "modifications." 8VAC20-543-460, B.3.f "Strategies to promote successful integration of students with disabilities with their nondisabled peers;" we suggest a change to Strategies to initiate and support successful inclusion of students with disabilities with their nondisabled peers in their schools and communities." 8VAC20-543-460, B.3.g "Use of technology to promote student learning" we suggest a change to Use of instructional and assistive technologies to promote student learning and independence	No additional revisions were proposed in the sections listed.
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC20-543-470 Special education blindness and visual impairments preK-12.	General support for the regulation for SPED Blindness/VI PreK-12. Suggested Revision **8VAC20-543-470. Special education blindness and visual impairments preK-12.** 9. Professionalism. 9a. Understanding of the standards of professionalism, including ethical and professional	

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		practice. 9b~~11.~~ Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing. 9c~~12.~~ Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes.	
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC20-543-490. Special education early childhood (birth through age five).	**8VAC20-543-490. Special education early childhood (birth through age five).** 1. Understanding of the~~ nature and characteristics~~ trends and issues regarding major disabling and at-risk conditions, including: 1a. Pathways for service delivery to the birth-through-age-five population; 1d. Awareness ~~of the issues surrounding~~ cultural and linguistic diversity. 4c. Curriculum development and implementation to ensure developmentally appropriate intervention techniques in the areas of self-help, motor, cognitive, social and emotional, and language; ~~and~~ 4d. Service delivery to support success and functionality in all settings where same age, typically developing peers would be located; and 4e. Response and recognition and tiered instruction. 5. Understanding social and emotional development and guiding behaviors and the application of principles of learning and child development to individual and group management using a variety of techniques that are appropriate to the age of that child. 6. Understanding ~~of~~ speech and language development and intervention methods, considering the following factors: 6a. Developmental stages of language acquisition and communication; 6d. Use of language to get needs and wants met and use of functional communication for social interaction. 7b. Use and effects of medications and treatments. 8c. ~~Inclusive practices;~~ natural and least restrictive environments; 9a. Cultural and linguistic ~~differences~~ influences; and	

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		9b. Family ~~issues~~ dynamics. 10. Professionalism [new heading for 10, 12, 13] 10a. Understanding of the standards of professionalism. ~~12~~ 10b. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing. ~~13~~.10c. Understanding of and proficiency in pedagogy to incorporate writing as an instructional and assessment tool for candidates to generate, gather, plan, organize, and present ideas in writing to communicate for a variety of purposes. 11. Completion of supervised experiences at the early childhood level in a variety of settings, including but not limited to early intervention, home-based, school-based, and community-based settings.	
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC20-543-500 Special education general curriculum K-12.	A--"… The candidate also shall complete the competencies in at least one of the endorsement areas of Special Education General Curriculum K-12, in addition to those required under professional studies in 8VAC40-543-140, including reading and language acquisition. " Clarify "endorsement area." Does this mean specialization area as earlier defined - 8VAC20-543-80? Competencies and requirements for endorsement areas? – F. Candidates seeking an endorsement in special education- general curriculum K-12 must have one area of specialization in English, history and social sciences, mathematics, or science with 12-15 semester hours in the specialization area. Suggested Revision: **8VAC20-543-500. Special education general curriculum K-12.** 3b. Address diverse approaches to classroom organization and set-up based upon culturally responsive behavioral, cognitive, affective, social, and ecological theory and practice;	
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC20-543-500 Special education general curriculum K-12.	General support for the regulation, but the program (SPED general curriculum K-12) will need to address the added emphasis in licensure courses for: math instruction, writing instruction, IEPs, assistive and instructional technology, and reading	
Dr Karrin Lukacs, Shenandoah University	8VAC20-543-500. Special education – general curriculum K-12	Asking students seeking a special education/general curriculum endorsement to have a content area specialization will likely prevent these teachers -- many of whom do not have undergraduate degrees in English, history, mathematics, or science -- from entering a field that is most certainly understaffed.	8VAC20 543-80. Item F, referencing a requirement of a specialization for a special education-general curriculum endorsement has been proposed to be stricken.

8VAC20-543. Proposed *Regulations Governing the Review and Approval of Education Programs in Virginia*
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		In sum, and with all due respect, I would remind the Board to consider whether ALL of the Proposed Revisions are in the best interests of Virginia students. If there is not agreement among all parties involved as to whether or not these changes will result in quality teachers (and it seems that there might not be consensus on many of the issues), then I would urge -- for students' sake -- that they not be adopted. As a teacher educator, I see first-hand how current regulations often prevent prospective teachers from entering the field, so I fear that making it even more difficult for teacher education programs to admit students will negatively affect classrooms and communities across the state -- especially in areas that face multiple challenges.	
James Wicks, Liberty University	8VAC20-543-510. Special education – general curriculum K-6 (add-on endorsement).	Special education add-ons should require practicum with special education students. Compare to 45 hours required for add-ons for early childhood and for gifted: 8VAC20-23-140. Early childhood for three-year-olds and four-year-olds (add-on endorsement). 3. Completed a supervised practicum of at least 45 instructional hours in a preschool setting (i.e., three-year-olds and four-year-olds	A practicum requirement is recommended to be added to the regulations.
Tracey Pritchard, Liberty University	8VAC20-543-510. Special education – general curriculum K-6 (add-on endorsement).	A practicum should be required, with special education students at the 6-12 grade levels, for the special education add-on.	
Mark Ginsberg, Ellen Rodgers; George Mason University	8VAC20-543-530 8VAC20-543-530 Special education – general curriculum 6-12 (add-on endorsement).	Support for this proposal. Strong concern regarding the lack of a specified field experience or practicum component.	
Tracey Pritchard, Liberty University	8VAC20-543-530 Special education – general curriculum 6-12 (add-on) endorsement).	Practicum should be required, with special education students at the endorsement grade level (K-6, 6-8, 6-12), for a special education add-on endorsement	
James Wicks, Liberty University	8VAC20-543-530 Special education – general curriculum grades 6-12 (add-on endorsement).	Special education add-ons should require practicum with special education students. Compare to 45 hours required for add-ons for early childhood and for gifted: 8VAC20-23-140. Early childhood for three-year-olds and four-year-olds (add-on endorsement). 3. Completed a supervised practicum of at least 45 instructional hours in a preschool setting (i.e., three-year-olds and four-year-olds	
Beth Ackerman, VACTE President	8VAC20-543-530. Special education – general curriculum grades 6-12 (add-on)	Please consider adding a practicum experience to the add-on endorsements.	
James Wicks, Liberty University	8VAC20-543-530. Special education – general curriculum grades 6-12 (add-on)	Special education add-ons should require practicum with special education students. Compare to 45 hours required for add-ons for early childhood and for gifted: 8VAC20-23-140. Early childhood for three-year-olds and four-year-olds (add-on endorsement). 3. Completed a supervised practicum of at least 45 instructional hours in a preschool setting (i.e., three-year-olds and four-year-olds	

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Tracey Pritchard, Liberty University	8VAC20-543-530. Special education – general curriculum grades 6-12 (add-on)	A practicum with special education students at the 6-8 grade levels should be required for a special education add-on.	
Karen Parker, Liberty University	8VAC20-543-510/520/530. (special education endorsements)	Special education add-ons should require practicum with special education students. Compare to 45 hours required for add-ons for early childhood and for gifted: 8VAC20-23-140. Early childhood for three-year-olds and four-year-olds (add-on endorsement). 3. Completed a supervised practicum of at least 45 instructional hours in a preschool setting (i.e., three-year-olds and four-year-olds 8VAC20-543-320. Gifted education (add-on endorsement). 9. The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experiences with gifted students.	
Beth Ackerman, VACTE President	8VAC20-543-510, 520, 530 (special education endorsements)	Please consider adding a practicum experience to the add-on endorsements (ECE).	
Heather Schoffstall, Liberty University	8VAC20-543-510, 520, 530 (special education endorsements)	I think all special education add-ons should require practicum with special education students. Please compare to the 45 hours required for add-ons for early childhood (8VAC20-23-140) and for gifted (8VAC20-23-370).	
James Madison University - Phil Wishon, Maggie Kyger and Steve Purcell	8VAC20-543-580, 590. Mathematics specialist for elementary education. Mathematics specialist for middle education.	We support maintaining the current K-8 mathematics specialist license for two reasons. First, elementary teachers should have a detailed understanding of middle school mathematics and vice versa, providing a perspective on the learning trajectories students across multiple grade bands. Second, we would struggle to recruit enough candidates for a cohort in either grade band if the licensure were to be differentiated.	The recommendation is to establish (1) a mathematics specialist for elementary education endorsement and (2) a mathematics specialist for elementary and middle education endorsement.
Emerson-Stonnell, Lewis, Shilling-Traina, Smith, and Timmerman Program Coordinators and professors for Longwood	8VAC20-543-590 8VAC20-543-580 Mathematics specialist for elementary education. Mathematics specialist for middle education	We support the decision to separate the elementary and middle school mathematics specialist endorsements. This change recognizes the need for program coursework that is more tailored to the content and pedagogy necessary for mathematics specialists to meet the needs of elementary and middle school students and teachers. However, the program requirements as written are not different for the elementary and middle school specialist programs with the exception of the technologies mentioned in B.7. While we believe there should be some overlap in the program requirements of these two programs we do not think they represent distinctively different programs as currently written. For example, the elementary school specialist would benefit from a curriculum that included more focus on lower elementary (Prek-1) foundational knowledge while middle school specialists would benefit from curriculum that extends into high school concepts taught in many middle schools. As currently written, the pre-requirement of secondary licensure and the technologies mentioned are the only differences in the requirements for these two programs.	

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		We feel teachers and students would benefit from program mathematics requirements that differ for the programs and include these differences in B2. As written, a person with an initial secondary mathematics licensure could obtain both certifications with the same course work while a person without that initial license would complete the same course work but earn a different license. This is very atypical as usually the purpose of having different programs is that the coursework in those programs is also different. Additionally, we also feel the language in part B of both the elementary and middle mathematics specialists requirements currently reads as if the program consists of a three-year period where the specialists are teaching and they are demonstrating competencies through this teaching. This language is similar to the previous language for the elementary mathematics specialist but needs revising. Current version: "The mathematics specialist program shall ensure that the candidate has completed at least three years of successful classroom teaching experience in which the teaching of mathematics was an important responsibility and demonstrated the following competencies:" We recommend: "The mathematics specialist program shall ensure the candidate has completed at least three years of successful classroom teaching experience in which the teaching of mathematics was an important responsibility and ensures the candidate has demonstrated the following competencies:" We appreciate the opportunity to comment and the Virginia Board of Education's consideration of our positions.	
Robert N. Corley III, Virginia State University	8VAC20-543-610 School counselor preK-12.	The program shall include at least 100 clock hours of internship and practicum experience in the preK-6 setting and 100 clock hours of internship and practicum experience in the grades 7-12 setting. Clarification is needed regarding teaching experience, etc., requirements for this endorsement area. There is a discrepancy between proposed licensure and approved program regulations regarding teaching experience, etc., requirements. In both options, the proposed licensure regulations include requirements for clock hours and a teaching experience, etc. However, the proposed approved program regulations only require the clock hours.	