

Regulations Governing the Review and Approval of Education Programs in Virginia

Effective September 21, 2007

Amended January 19, 2011

*State Board of Education
8VAC20-542-10 et. seq.*



*Virginia Department of Education
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STATE BOARD OF EDUCATION CHAPTER 542 REGULATIONS GOVERNING THE REVIEW AND APPROVAL OF EDUCATION PROGRAMS IN VIRGINIA

Part I Definitions

8VAC20-542-10. 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 unit 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 National Council for the Accreditation of Teacher Education (NCATE), the Teacher Education Accreditation Council (TEAC), or a process approved by the Board of Education.

“Biennial accountability measures” means those specific benchmarks set forth in 8VAC20-542-40 to meet the standards required to obtain or maintain program approval status.

“Biennial report” means the report submitted to the Virginia Department of Education every two years by approved education programs.

“Candidates” means individuals enrolled in education programs.

“Candidates completing a program” means individuals who have successfully completed all coursework, required assessments, including those prescribed by the Board of Education, and supervised student teaching or required internship.

“Candidates exiting a program” means individuals who have successfully completed all coursework, regardless of whether the individuals attempted, passed, or failed required assessments, including those prescribed by the Board of Education, and/or who may not have completed supervised student teaching or required internship.

“Distance learning” means a formal educational process in which the majority of the instruction occurs when the learner and the instructor are not in the same place at the

same time. In this process, information or distributed learning technology is the likely connector between the learner, the instructor, or the site of program origin.

“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 program” means a planned sequence of courses and experiences leading to a degree, a state license, or preparation to provide professional education services in schools.

“Exceptionalities” means physical, mental, sensory, and emotional disabilities or differences, including gifted/talented abilities.

“Field experiences” means program components that are 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 are accredited for this purpose by external entities such as regional accrediting agencies. They include classroom observations, tutoring, assisting teachers and school administrators, student teaching, and internships.

“Full-time faculty” means employees of a higher education institution with full-time assignments within the education program as instructors, professors, administrators, or other professional support personnel (e.g., student teaching supervisor or advisor).

“General education” means courses and other learning experiences in the liberal arts and sciences that candidates in baccalaureate programs typically complete in the first two or three years of their programs for the purpose of becoming liberally educated college students.

“Governance” means the system and structure for defining policy and administering procedures for the professional education program.

“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.

“Part-time faculty” means employees of a higher education institution who have less than a full-time assignment in the education program. Some part-time faculty are full-time employees of the college or university with a portion of their assignments in the education program. Other part-time faculty are not full-time employees of the institution and are commonly considered adjunct faculty.

“Pedagogical studies” means courses and other learning experiences in which candidates study and apply concepts, theories, and research about effective teaching.

“Professional education faculty” means those individuals who teach one or more courses meeting essential competencies in endorsement areas, provide services to education students (e.g., advising or supervising student teaching) or administer some portion of the education program.

“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 educator preparation program that is primarily responsible for the preparation of teachers and other professional school personnel.

“Professional studies” means courses and other learning experiences to teach candidates the historical, economic, sociological, philosophical, and psychological foundations of schooling and education.

“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.

“Regional accrediting agency” means one of the six accrediting associations, including New England Association of Schools and Colleges, Middle States Association of Colleges and Schools, North Central Association of Colleges and Schools, Northwest Association of Schools and Colleges, Southern Association of Colleges and Schools, and Western Association of Schools and Colleges, recognized by the United States Department of Education.

“Scholarly activities” means the active involvement in an individual's area of specialization as demonstrated through such faculty activities as research, articles published in refereed journals, program evaluation studies, documentation of ongoing activities, grant-seeking, and presentations at professional meetings.

“School faculty” means licensed practitioners in preK-12 schools who provide on-site instruction, supervision, and direction for candidates during field-based assignments.

“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, the fine arts, foreign language, health, and physical education, and driver education.

Part II

Administering the Regulations

8VAC20-542-20. Administering the regulations.

A. Professional education programs in Virginia shall obtain national accreditation from the National Council for the Accreditation of Teacher Education (NCATE), the Teacher Education Accreditation Council (TEAC), or a process approved by the Board of Education.

B. 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.

C. Professional studies coursework and methodology, excluding field experiences, are limited to 24 semester hours for any baccalaureate degree program (or equivalent thereof) in early/primary education (preK-3), elementary education (preK-6), and special education. All other baccalaureate degree programs (or equivalent thereof) shall not exceed 18 semester hours of professional coursework and methodology, excluding field experiences.

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

E. If a professional education program fails to maintain accreditation, enrolled candidates shall be permitted to complete their programs of study. Professional education programs shall not admit new candidates. Candidates shall be notified of program approval status.

F. Education programs shall ensure that candidates demonstrate proficiency in the use of educational technology for instruction and complete study in child abuse recognition and intervention.

G. Standards and procedures for the review and approval of each education program shall adhere to procedures for administering the regulations as defined in this section and in 8VAC20-542-40, 8VAC20-542-50, and 8VAC20-542-70. 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 programs shall be approved under these regulations biennially based on compliance with the criteria described in 8VAC20-542-40.

I. Education programs shall submit to the Department of Education, on behalf of each education program under consideration, a Program Compliance Certification Affidavit in accordance with department procedures and timelines.

J. The education program administrator shall maintain copies of approved programs and required reports.

K. The Department of Education may conduct on-site visits to review programs and verify data.

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

M. Modifications may be made by the Superintendent of Public Instruction in the administration of these regulations. Proposed modifications shall be made in writing to the Superintendent of Public Instruction, Commonwealth of Virginia.

Part III

Accreditation or a Process Approved by the Board of Education

8VAC20-542-30. Options for accreditation or a process approved by the Board of Education.

A. Each professional education program in Virginia shall obtain and maintain national accreditation from the National Council for the Accreditation of Teacher Education (NCATE), the Teacher Education Accreditation Council (TEAC), or a process approved by the Board of Education.

B. Each Virginia professional education program seeking accreditation through a process approved by the Board of Education shall be reviewed. A report of the review shall be submitted to the Board of Education in accordance with established timelines and procedures and shall include one of the following recommendations:

1. Accredited. The professional education program meets standards outlined in 8VAC20-542-60.

2. Accredited with stipulations. The professional education program has met the standards minimally, but significant weaknesses have been identified. Within a two-year period, the professional education program shall fully meet standards as set forth in 8VAC20-542-60.
 3. Accreditation denied. The professional education program has not met standards as set forth in 8VAC20-542-60. The State Council of Higher Education for Virginia (SCHEV) shall be notified of this action by the Department of Education.
- C. Professional education program accreditation that has been denied may be considered by the Board of Education after two years if a written request for review is submitted to the Department of Education.
- D. Professional education programs in Virginia seeking accreditation through NCATE, TEAC, or an accreditation process approved by the Board of Education shall adhere to the following requirements:
1. Accredited professional education programs shall be aligned with standards in 8VAC20-542-60; and
 2. Accredited professional education programs shall be aligned with competencies in 8VAC20-542-70 through 8VAC20-542-600.
- E. Professional education programs in Virginia seeking accreditation through a process approved by the Board of Education shall follow procedures and timelines as prescribed by the Department of Education.

Part IV

Standards for Biennial Approval of Education Programs

8VAC20-542-40. Standards for biennial approval of education programs.

Approved education programs in Virginia shall have national accreditation or be accredited by a process approved by the Board of Education and demonstrate achievement biennially of the following accountability measures:

1. Candidate progress and performance on prescribed Board of Education licensure assessments. Candidate passing rates, reported by percentages, shall not fall below 70% biennially for individuals completing and exiting the program. Achievement of an 80% biennial passing rate shall be required by July 1, 2010. Candidates completing a program shall have successfully completed all coursework, required assessments, including those prescribed by the Board of Education, and supervised student teaching or internship. Candidates exiting a program shall have successfully completed all coursework, regardless of whether the individuals attempted, passed, or failed required assessments, including those prescribed by the Board of Education, and/or who may not have completed supervised student teaching or required internship.
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 preparation program. Indicators of the achievement of this standard shall include the following:
 - a. Results on Board of Education prescribed entry-level assessments; and

- 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 any deficiencies.
3. Structured and integrated field experiences to include student teaching requirements. Indicators of the achievement of this standard shall include the following:
 - a. Evidence that candidates receive quality structured and integrated field experiences that prepare them to work in diverse educational environments; and
 - b. Evidence that at least 300 clock hours of field experiences for initial programs (including early exposure to preK-12 classroom experiences) to include a minimum of 150 clock hours of directed student teaching requirements are provided. Programs in administration and supervision shall provide field experiences with a minimum of 320 clock hours as part of a deliberately structured internship over the duration of a preparation program. The majority of the school level supervised experience shall take place during the school day in concentrated blocks of time when preK-12 students are present.
4. Evidence of opportunities for candidates to participate in diverse school settings that provide experiences with populations that include racial, economic, linguistic, and ethnic diversity throughout the program experiences. The indicator of the achievement of this standard shall include evidence that the professional education programs provide opportunities for candidates to have program experiences in diverse school settings that provide experiences with populations that include racial, 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 assessments in teaching that shall provide dependable information about student achievement;
 - b. Evidence to document faculty have made provisions for evaluating 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 candidates completing the program. The indicator of the achievement of this standard shall include documentation that the education program has two years of evidence regarding candidate performance based on employer surveys.
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 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 Programs

8VAC20-542-50. Application of the standards.

A. As a prerequisite to program approval, professional education programs in Virginia shall have national accreditation or be accredited by a process approved by the Board of Education as prescribed in 8VAC20-542-30 and 8VAC20-542-60. Failure to do so will result in the education program being designated as “approval denied.”

B. The education program’s candidate passing rates shall not fall below 70% biennially for individuals completing and exiting the program. Achievement of an 80% biennial passing rate for individuals completing and exiting the program shall be required by July 1, 2010.

C. The education program is responsible to certify documented evidence that the following standards as set forth in 8VAC20-542-40 have been met:

1. The 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 preparation program.
2. The education program shall provide structured and integrated field experiences.
3. The education program shall provide evidence of opportunities for candidates to participate in diverse school settings that provide experiences with populations that include racial, economic, linguistic, and ethnic diversity throughout the program experiences.
4. The education program shall provide evidence of contributions to preK-12 student achievement by candidates completing the program.
5. The education program shall provide evidence of employer job satisfaction with candidates completing the program.

D. The education program shall develop biennial accountability measures to be reviewed and approved by the Board of Education for partnerships and collaborations based on preK-12 school needs.

E. After submitting to the Department of Education the information contained in 8VAC20-542-50, education programs in Virginia shall receive one of the following three ratings:

1. Approved. The education program has met all standards set forth in 8VAC20-542-40.

2. Approved with stipulations. The education program has met standards in subsections A and B of this section and is making documented progress toward meeting standards in subsections C and D of this section.
3. Approval denied. The education program has not met standards in subsections A and B of this section. 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

Standards for Board of Education Approved Accreditation Process

8VAC20-542-60. Standards for Board of Education approved accreditation process.

A. Standard 1: Program Design. The professional education program shall develop and maintain high quality programs that are collaboratively designed and based on identified needs of the preK-12 community. Indicators of the achievement of this standard shall include the following:

1. The program design includes a statement of program philosophy, purposes and goals.
2. The program design incorporates the specific knowledge and skills that are necessary for competence at the entry level for educational professionals.
3. The program design includes a knowledge base that reflects current research, best educational practice and the Virginia Standards of Learning.
4. The program is designed from a framework that is knowledge-based, evidenced-based and articulated and that has been collaboratively developed with various stakeholders.
5. The professional education programs for teachers, school leaders, and other school personnel shall develop the essential entry-level competencies needed for success in preK-12 schools by demonstrating alignment among the general, content, and professional courses and experiences. Indicators of the achievement of this standard shall include the following:
 - a. The professional education program develops, implements, and evaluates programs, courses, and activities that enable entry-level candidates to develop the knowledge, skills, and dispositions identified in the program design framework.
 - b. The professional education program assesses candidates' attainment of the knowledge, skills, and dispositions identified in the program design framework.
 - c. The professional education program provides evidence that candidates have achieved the knowledge, skills, and dispositions identified in the program design framework.
6. The professional education program shall have multiple well-planned, sequenced, and integrated field experiences that include observations, practica, student teaching, internships, and other opportunities to interact with students and the school environment. Indicators of the achievement of this standard shall include the following:

- a. Field experiences provide opportunities for candidates to relate theory to actual practice in classrooms and schools, to create meaningful learning experiences for a variety of students, and to practice in settings with students of diverse backgrounds.
 - b. Field experiences provide opportunities for candidates to demonstrate competence in the professional teaching or administrative roles for which they are preparing, including opportunities to interact and communicate effectively with parents, community and other stakeholders.
 - c. Student teaching and other field experiences include a minimum of 300 clock hours, with at least 150 hours of that time spent in directed teaching activities at the level of endorsement. Programs in administration and supervision provide field experiences with a minimum of 320 clock hours as part of a deliberately structured internship over the duration of a preparation program.
 - d. Candidates in education programs complete field experiences, internships, or other supervised activities that allow them to develop and apply the new knowledge and skill gained in their programs.
 - e. Candidate performance in field experiences is evaluated and documented using multiple assessments, including feedback from education and arts and sciences faculty, school faculty, and peers, as well as self-reflection by candidates.
7. Professional education faculty collaborate with arts and sciences faculty, school personnel, and other members of the professional community to design, deliver, assess, and renew programs for the preparation and continuing development of school personnel and to improve the quality of education in preK-12 schools. Indicators of the achievement of this standard shall include the following:
- a. Professional education faculty collaborate with the faculty who teach general and content courses to design and evaluate programs that shall prepare candidates to teach the Standards of Learning.
 - b. Partnership agreements ensure that professional education faculty collaborate with personnel in partnering schools and school divisions to design and evaluate programs, teaching methods, field experiences, and other activities.
 - c. Partnership agreements ensure that professional education faculty collaborate with personnel in partnering schools to assess candidates during observations, practica, student teaching, internships, and other field experiences.
 - d. Opportunities exist for professional education faculty, school personnel, and other members of the professional community to collaborate on the development and refinement of knowledge bases, conduct research, and improve the quality of education.

B. Standard 2: Candidate Performance on Competencies for Endorsement Areas. Candidates in education programs shall demonstrate the knowledge, skills, and dispositions to meet professional, state, and institutional standards to ensure student success. Candidates shall demonstrate the competencies specified in 8VAC20-542-70 through 8VAC20-542-600.

1. Candidates in education programs have completed general education courses and experiences in the liberal arts and sciences and demonstrate the broad theoretical and practical knowledge necessary for teaching and preK-12 student achievement. Indicators of the achievement of this standard shall include the following:

a. Candidates demonstrate that they have a full command of the English language, use standard English grammar, have rich speaking and writing vocabularies, are knowledgeable of exemplary authors and literary works, and communicate effectively in educational, occupational, and personal areas.

b. Candidates demonstrate that they can solve mathematical problems, communicate and reason mathematically, and make mathematical connections.

c. Candidates demonstrate that they develop and use experimental design in scientific inquiry, use the language of science to communicate understanding of the discipline, investigate phenomena using technology, understand the history of scientific discovery, and make informed decisions regarding contemporary issues in science, including science-related careers.

d. Candidates demonstrate that they know and understand our national heritage; and have knowledge and skills in American and world history, geography, government/political science, and economics that create informed and responsible citizens who can understand, discuss, and participate in democratic processes.

e. Candidates demonstrate that they have supporting knowledge in fine arts, communications, literature, foreign language, health, psychology, philosophy and/or other disciplines that contribute to a broad-based liberal education.

f. Candidates take basic entry-level competency assessments prescribed by the Virginia Board of Education.

g. Candidates achieve passing scores on professional content assessments for licensure prescribed by the Board of Education prior to completing their programs.

2. Candidates in education programs shall demonstrate the knowledge, skills, and dispositions to work with a variety of students, including those from diverse backgrounds, and to have a positive effect on student learning. Indicators of the achievement of this standard shall include the following:

a. Candidates demonstrate the ability to apply knowledge and skills related to the physical, neurological, social, emotional, intellectual, and cognitive development of children and youth; the complex nature of language acquisition and reading; and an understanding of contemporary educational issues including the prevention of child abuse, appropriate use of technology, and diversity.

b. Candidates demonstrate the ability to apply the principles of learning, methods for teaching reading, methods for teaching the content area, classroom and behavior management, selection and use of teaching materials, and evaluation of student performance.

c. Candidates demonstrate the ability to have a positive effect on student learning through judging prior student learning; planning instruction; teaching; and assessing, analyzing, and reflecting on student performance.

- d. Candidates demonstrate the ability to use educational technology to enhance student learning, including the use of computers and other technologies in instruction, assessment, and professional productivity.
 - e. Candidates demonstrate the ability to analyze and use various types of data to plan and assess student learning.
3. Candidates in graduate programs for other school personnel demonstrate competencies for educational leadership roles as school superintendents, principals and/or assistant principals, central office administrators and supervisors, school counselors, reading specialists, mathematics specialists, or school psychologists. They demonstrate the knowledge and understanding to lead schools that use effective educational processes, achieve increased student learning, and make strong and positive connections to the community. Indicators of the achievement of this standard shall include the following:
- a. Candidates demonstrate understanding of the Virginia Standards of Learning and standards of appropriate specialty organizations, including how these standards relate to the leadership roles for which they are being prepared.
 - b. Candidates demonstrate the competencies specified in their intended licensure/endorsement areas as defined in 8VAC20-542-70 through 8VAC20-542-600.
 - c. Candidates achieve passing scores on the professional content assessments for licensure prescribed by the Board of Education prior to completing their programs.
 - d. Candidates demonstrate understanding of research, research methods, issues, trends, and research-based best practices that shall enhance the academic achievement of all preK-12 students and reduce academic achievement gaps among diverse preK-12 student groups.
 - e. Candidates demonstrate the ability to use educational technology, including computers and other technologies, in instruction, assessment, and professional development activities.
 - f. Candidates demonstrate the ability to use test data to revise instruction and enhance student achievement.
 - g. Candidates understand emerging issues that impact the school community and demonstrate the ability to collaborate with families, community members and other stakeholders.
 - h. Candidates demonstrate mastery of administration/supervision competencies through multiple sources of data such as internships, portfolios, and interviews, including employer satisfaction surveys.

C. Standard 3: Faculty in Professional Education Programs. Faculty in the professional education program represent well-qualified education scholars who are actively engaged in teaching and learning.

- 1. The full-time and part-time professional education faculty, including school faculty, adjunct faculty and others, represent diverse backgrounds, are qualified for their assignments and are actively engaged in the professional community. Indicators of the achievement of this standard shall include the following:
 - a. Professional education faculty have completed formal advanced study; have earned doctorates or the equivalent, or exceptional expertise in their field.

- b. Professional education faculty have demonstrated competence in each field of endorsement area specialization.
 - c. Professional education faculty demonstrate understanding of current practice related to the use of computers and technology and integrate technology into their teaching and scholarship.
 - d. Professional education faculty demonstrate understanding of Virginia's Standards of Learning.
 - e. Professional education faculty demonstrate understanding of cultural differences and exceptionalities and their instructional implications.
 - f. Professional education faculty who supervise field experiences have had professional teaching experiences in preK-12 school settings.
 - g. Professional education faculty are actively involved with the professional world of practice and the design and delivery of instructional programs in preK-12 schools.
 - h. Professional education faculty are actively involved in professional associations and participate in education-related services at the local, state, national, and international levels in areas of expertise and assignment.
2. Teaching in the professional education program is of high quality and is consistent with the program design and knowledge derived from research and sound professional practice. Indicators of the achievement of this standard shall include the following:
- a. Professional education faculty use instructional teaching methods that reflect an understanding of different models and approaches to learning and student achievement.
 - b. The teaching of professional education faculty encourages candidates to reflect, think critically and solve problems.
 - c. The teaching of professional education faculty reflects knowledge and understanding of cultural diversity and exceptionalities.
 - d. The teaching of professional education faculty is continuously evaluated, and the results are used to improve teaching and learning within the program.
3. The professional education program ensures that policies and assignments are in keeping with the character and mission of the institution or other education program entity and allows professional education faculty to be involved effectively in teaching, scholarship, and service. Indicators of the achievement of this standard shall include the following:
- a. Workload policies and assignments accommodate and support the involvement of professional education faculty in teaching, scholarship, and service, including working in preK-12 schools, curriculum development, advising, administration, institutional committee work, and other internal service responsibilities.
 - b. Policies governing the teaching loads of professional education faculty, including overloads and off-site teaching, are mutually agreed upon and allow faculty to engage effectively in teaching, scholarship, and service.
 - c. Recruitment and retention policies for professional education faculty include an explicit plan with adequate resources to hire and retain a qualified and diverse faculty. The plan is evaluated annually for its effectiveness in meeting recruitment goals.

4. The professional education program ensures that there are systematic and comprehensive activities to enhance the competence and intellectual vitality of the professional education faculty. Indicators of the achievement of this standard shall include the following:
 - a. Policies and practices encourage professional education faculty to be continuous learners.
 - b. Support is provided for professional education faculty and others who may contribute to professional education programs to be regularly involved in professional development activities.
 - c. Professional education faculty are actively involved in scholarly activities that are designed to enhance professional skills and practice.
 - d. Regular evaluation of professional education faculty includes contributions to teaching, scholarship, and service.
 - e. Evaluations are used systematically to improve teaching, scholarship, and service of the professional education faculty.
- D. Standard 4: Governance and Capacity. The professional education program demonstrates the governance and capacity to prepare candidates to meet professional, state, and institutional standards.
1. The professional education program is clearly identified and has the responsibility, authority, and personnel to develop, administer, evaluate, and revise all education programs. Indicators of the achievement of this standard shall include the following:
 - a. The professional education program has responsibility and authority in the areas of education faculty selection, tenure, promotion, and retention decisions; recruitment of candidates; curriculum decisions; and the allocation of resources for professional education program activities.
 - b. The program has a long-range plan that is regularly monitored to ensure the ongoing vitality of the professional education programs as well as the future capacity of its physical facilities.
 - c. Candidates, school faculty in partnering school divisions, adjunct faculty, and other members of the professional community are actively involved in the policy-making and advisory bodies that organize and coordinate programs of the professional education program.
 - d. Policies and practices of the professional education program are nondiscriminatory and guarantee due process to faculty and candidates.
 2. The professional education program has adequate resources to offer quality programs that reflect the mission of the professional education program and support teaching and scholarship by faculty and candidates. Indicators of achievement of this standard shall include the following:
 - a. The size of the professional education program, the number of candidates, and the number of faculty, administrators, clerical and technical support staff support the consistent delivery and quality of each program offered.
 - b. Facilities, equipment, technology, and other budgetary resources are sufficient for the operation and accountability of the professional education program.
 - c. Resources are allocated to programs in a manner that allows each program to meet its anticipated outcomes.

- d. The institution provides training in and access to education-related electronic information, video resources, computer hardware, software, related technologies, and other similar resources to higher education faculty and candidates.
3. The professional education program shall ensure that full, part-time, and adjunct faculty are provided with appropriate resources such as office space, access to technology, teaching aids, materials and other resources necessary to ensure quality preparation of school personnel.

Part VII
Competencies for Endorsement Areas

Article 1
General Competencies

8VAC20-542-70. Competencies for endorsement areas.

A. The professional education program develops, maintains, and continuously evaluates high quality professional education programs that are collaboratively designed and based on identified needs of the preK-12 community. Candidates in education programs for teachers demonstrate competence in the core academic content areas that they plan to teach. The indicator of the achievement of this standard shall include the following:

Candidates 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.

B. All teacher education programs in early/primary 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.

Article 2
Early/Primary Education, Elementary Education, and Middle Education

8VAC20-542-80. 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 growth and development (birth through adolescence). 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. 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 issues related to but not limited to attention deficit disorders, gifted education including the use of multiple criteria to identify gifted students, substance abuse, child abuse, and family disruptions.

2. Curriculum and instructional procedures.

a. Early/primary education preK-3 or elementary education preK-6 curriculum and instructional procedures. Skills in this area shall contribute to an understanding of the principles of learning; the application of skills in discipline-specific methodology; communication processes; selection and use of materials, including media and computers; 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; 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. The teaching methods, including for limited English proficient students, gifted and talented students , and those students with disabling conditions, shall be appropriate for the level of endorsement (preK-3 or preK-6) and be tailored to promote student academic progress and effective preparation for the Standards of Learning assessments. Study in methods of improving communication between schools and families, ways of increasing family involvement in student learning at home and in school , the Standards of Learning, and Foundation Blocks for Early Learning shall be included. Early childhood educators must understand the role of families in child development and in relation to teaching educational skills. They must demonstrate knowledge and skills in communicating with families regarding the social and instructional needs of children. 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. 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 Board of Education in consultation with the 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 instructional procedures. Skills in this area shall contribute to an understanding of the principles of learning; the application of skills in discipline-specific methodology; communication processes; selection and use of materials, including media and computers; 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. The teaching methods, including for limited English proficient students , gifted and talented students , and students with disabling conditions, shall be appropriate for the middle education endorsement and be tailored to promote student academic progress and effective preparation for the Standards of Learning assessments. Study in methods of improving communication between schools and families, ways of increasing family involvement in student learning at home and in school, and the Standards of Learning shall be included. Demonstrated proficiency in the use of educational technology for instruction also 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 Board of Education in consultation with the 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.

c. Classroom and behavior management. Skills in this area shall contribute to an understanding and application of classroom and behavior management techniques , classroom community building, 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 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 of self discipline. The link between classroom and behavior management and students' ages must be understood and demonstrated in techniques used in the classroom.

d. Foundations of education: 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 in education. The historical, philosophical, and sociological foundations of the instructional design based on assessment data (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) must be addressed.

e. Reading.

(1) Early/primary preK-3 and elementary education preK-6 – language acquisition and reading. Skills listed for these endorsement areas represent the minimum competencies that a beginning teacher shall 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.

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, concept of print, phonics, fluency, vocabulary development, and comprehension strategies. Additional skills shall include proficiency in writing strategies, as well as the ability to foster appreciation of a variety of literature and independent reading.

Knowledge of typical language development, components and sequence of literacy development, and the connection between language development and literacy must be evident in coursework. Knowledge and skills in specific methods by which adults elicit and foster the components of language development must be included.

(2) Middle education – language acquisition and reading in the content areas. Skills in this area shall be designed to impart an understanding of comprehension skills in all content areas, including a repertoire of questioning strategies, summarizing and retelling skills, and strategies in literal, interpretive, critical, and evaluative comprehension, as well as the ability to foster appreciation of a variety of literature and independent reading.

(3) Supervised classroom experience. The student teaching experience should provide for the prospective teacher to be in classrooms full time for a minimum of 300 clock hours (including pre- and post-clinical experiences) with at least 150 clock hours spent supervised in direct teaching activities (providing direct instruction) at the level of endorsement. 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 teaching experience. A fully licensed, experienced teacher shall be available in the school building to assist a beginning teacher employed through the alternate route.

8VAC20-542-90. Early childhood for three- and four-year-olds (add-on endorsement).

The program in early childhood education for three- and four-year-olds shall ensure that the candidate has demonstrated the following competencies:

1. Understanding child growth and development, with a specific focus on three- and four-year-olds, including:
 - a. Knowledge of characteristics and developmental needs of three- and four-year-olds, including the ability to recognize indicators of atypical development, in the domains of 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- and four-year-olds, including practices that are:
 - a. Appropriate to the child's age and stage of development;
 - b. Appropriate for children with a wide range of individual differences in abilities, interests, and behavioral styles; and
 - c. Appropriate for the child's cultural background and experience.
3. Understanding health, safety, 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, injury prevention, 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 family preferences;
 - d. Skills for communicating with families about health and dietary concerns;
 - e. Community resources that support healthy living; 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 and stage-appropriate methods for assessing and documenting development;
 - 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 facilitating positive reciprocal relationships with children for teachers, families and communities, including mutual respect, communication strategies, collaborative linkages among families, and community resources, and 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 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, and encourage participation in exploration and play;
 - b. Provide curriculum experiences that facilitate learning goals in content areas and provide opportunities to acquire concepts and skills that are precursors to academic content taught in elementary school;
 - c. Adapt tasks to the child's zone of proximal development;

- d. Nurture children's development through experiences, relationships and active engagement in play;
 - e. Select materials/equipment, arrange physical space, and plan schedules/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, calm approaches, respect for diversity 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 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.

8VAC20-542-100. 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 processes to support learners in achievement of the Virginia Standards of Learning in English, mathematics, history and social science, science, and computer/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, 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 shall 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 children, including children with disabilities, gifted children, children with limited proficiency in English, 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, apply quantitative and qualitative research; and
 - j. The ability to use technology as a tool for teaching, learning, research, and communication.
2. Knowledge and skills.
- a. Reading/English. Understanding of the content, knowledge, skills, and processes for teaching the 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 and screening 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 tailor instruction for acceleration, intervention, remediation, and flexible skill-level groupings.
 - (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;
 - (d) Demonstrate the ability to promote creative thinking and expression, as through storytelling, drama, choral/oral reading, etc.
 - (3) Reading/literature. The individual shall:
 - (a) Be proficient in explicit phonics instruction, including an understanding of sound/symbol relationships, syllables, phonemes, morphemes, decoding skills, and word attack skills;
 - (b) Be proficient in strategies to increase vocabulary/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 both fiction and nonfiction text predicting, retelling, summarizing and 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; and
 - (g) Understand the importance of promoting independent reading by selecting fiction and nonfiction books, at appropriate reading levels.
 - (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 sharing;
- (b) Be proficient 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 the ability to teach the writing process: plan, draft, revise, edit, and share in the narrative, descriptive, 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 the 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, their structure, basic operations, and properties;
- (b) Elementary number theory, ratio, proportion and percent;
- (c) Algebra: operations with monomials and polynomials; algebraic fractions; linear and quadratic equations and inequalities, 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 form of functions;
- (d) Geometry: geometric figures, their properties, relationships, Pythagorean Theorem; deductive and inductive reasoning; perimeter, area, and surface area of two- and three-dimensional figures; coordinate and transformational geometry; and constructions;
- (e) Probability and statistics: permutations and combinations; experimental and theoretical probability; prediction; graphical representations including box-and-whisker plots; measures of central tendency, range, and normal distribution; and
- (f) Computer science: terminology, simple programming, and software applications.

(2) Understanding of the sequential nature of mathematics.

(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 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 use calculators and computers in the teaching and learning of mathematics.

c. History and social sciences.

(1) Understanding of the knowledge, skills, and processes of history and the social science disciplines as defined in the 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 American's constitutional republic, 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 critical thinking skills in helping them to understand:

(a) The relationship between past and present;

(b) The use of primary sources such as artifacts, letters, photographs, and newspapers;

(c) How events in history are shaped both by the ideas and actions of people;

(d) Diverse cultures and shared humanity;

(e) Civic participation in a democracy; and

(f) The relationship between history, literature, art, and music.

d. Science.

- (1) Understanding of the knowledge, skills, and processes of the earth, life, and physical sciences as defined in the 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:
 - (a) The role of science in explaining and predicting events and phenomena; and
 - (b) The science skills of data analysis, measurement, observation, prediction, and experimentation.
- (3) Understanding of the knowledge, skills, and processes for an active elementary science program, including the ability to:
 - (a) Design instruction reflecting the goals of the Virginia Science Standards of Learning;
 - (b) Conduct research projects and experiments in a safe environment;
 - (c) Organize key science content into meaningful units of instruction;
 - (d) Adapt instruction to diverse learners using a variety of techniques;
 - (e) Evaluate instructional materials, instruction, and student achievement; and
 - (f) Incorporate instructional technology to enhance student performance in science.
- (4) Understanding of the content, processes, and skills of the Earth sciences, biology, chemistry, and physics supporting the teaching of elementary school science as defined by the Virginia Science Standards of Learning and equivalent to academic course work in each of these core science areas.
- (5) Understanding of the core scientific disciplines to ensure:
 - (a) The ability to teach the processes and organizing concepts common to the natural and physical sciences; and
 - (b) Student achievement in science.
- (6) Understanding of the contributions and significance of science, including:
 - (a) Its social and cultural significance;
 - (b) The relationship of science to technology; and
 - (c) The historical development of scientific concepts and scientific reasoning.

8VAC20-542-110. 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, and processes to support learners in achievement of the Virginia Standards of Learning in English, mathematics, history and social science, science, and computer/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, 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 and behavior management skills through methods that shall 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 children, including children with disabilities, gifted children, and children with limited proficiency in English, 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.

2. Knowledge and skills.

a. Reading/English. Understanding of the content, knowledge, skills, and processes for teaching the Virginia Standards of Learning for English including: oral language (speaking and listening), reading, writing, and literature, 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 and screening 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 tailor instruction, for acceleration, intervention, remediation and flexible skill-level groupings.

(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, as through storytelling, drama, choral/oral reading, etc.

(3) Reading/literature. The individual shall:

- (a) Be proficient in explicit phonics instruction, including an understanding of sound/symbol relationships, syllables, phonemes, morphemes, decoding skills, and word attack skills;
- (b) Be proficient in strategies to increase vocabulary/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, summarizing, clarifying, and associating the unknown with what is known;
- (e) Demonstrate the ability to develop comprehension skills in all content areas;
- (f) Demonstrate the ability to foster appreciation of a variety of literature; and
- (g) Understand the importance of promoting independent reading by selecting fiction and nonfiction books, at appropriate reading levels.

(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 sharing;
- (b) Be proficient 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 the ability to teach the writing process: plan draft, revise, edit, and share in the narrative, descriptive, 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, writing, and research.

b. Mathematics.

(1) Understanding of the mathematics relevant to the content identified in 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 manipulatives should be used within the following content:

- (a) Number systems, their structure, basic operations, and properties;
- (b) Elementary number theory, ratio, proportion and percent;
- (c) Algebra: operations with monomials and polynomials; algebraic fractions; linear and quadratic equations and inequalities, 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 form of functions;
- (d) Geometry: geometric figures, their properties, relationships, Pythagorean Theorem; deductive and inductive reasoning; perimeter, area, and surface area of two- and three-dimensional figures; coordinate and transformational geometry; and constructions;
- (e) Probability and statistics: permutations and combinations; experimental and theoretical probability; prediction; graphical representations including

box-and-whisker plots; measures of central tendency, range, and normal distribution; and

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

(2) Understanding of the sequential nature of mathematics.

(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 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 use calculators and computers in the teaching and learning of mathematics.

c. History and social sciences.

(1) Understanding of the knowledge, skills, and processes of history and the social sciences disciplines as defined in the 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, 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 critical thinking skills in helping them to understand:
- (a) The relationship between past and present;
 - (b) The use of primary sources such as artifacts, letters, photographs, and newspapers;
 - (c) How events in history are shaped both by the ideas and actions of people;
 - (d) Diverse cultures and shared humanity;
 - (e) Civic participation in a democracy; and
 - (f) The relationship between history, literature, art, and music.
- d. Science.
- (1) Understanding of the knowledge, skills, and processes of the earth, life, and physical sciences as defined in the 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:
- (a) The role of science in explaining and predicting events and phenomena; and
 - (b) The science skills of data analysis, measurement, observation, prediction, and experimentation.
- (3) Understanding of the knowledge, skills, and processes for an active elementary science program including the ability to:
- (a) Design instruction reflecting the goals of the Virginia Science Standards of Learning;
 - (b) Conduct research projects and experiments in a safe environment;
 - (c) Organize key science content into meaningful units of instruction;
 - (d) Adapt instruction to diverse learners using a variety of techniques;
 - (e) Evaluate instructional materials, instruction, and student achievement; and
 - (f) Incorporate instructional technology to enhance student performance in science.
- (4) Understanding of the content, processes, and skills of the Earth sciences, biology, chemistry, and physics supporting the teaching of elementary school science as defined by the Virginia Science Standards of Learning and equivalent course work reflecting each of these core science areas.
- (5) Understanding of the core scientific disciplines to ensure:
- (a) The ability to teach the processes and organizing concepts common to the natural and physical sciences; and
 - (b) Student achievement in science.
- (6) Understanding of the contributions and significance of science including:

- (a) Its social and cultural significance;
- (b) The relationship of science to technology; and
- (c) The historical development of scientific concepts and scientific reasoning.

8VAC20-542-120. 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 for grades 6-8;
- b. The use of appropriate methods, including direct instruction, 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 shall 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 with limited proficiency in the English 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. 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;

- b. Understanding of and knowledge in grammar, usage, and mechanics and its integration in writing;
 - c. Understanding and the nature and development of language and its impact on vocabulary development and spelling;
 - d. Understanding of and knowledge in techniques and strategies to enhance reading comprehension and fluency;
 - e. Understanding of and knowledge in the instruction of speaking, and listening, and note taking; and
 - f. Knowledge of varied works from current and classic young adult literature appropriate for English instruction of fiction, nonfiction, and poetry.
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 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 (Declaration of American Independence, the general principles of the Constitution of the United States, the Virginia Statute of Religious Freedom, the charters of April 10, 1606, May 23, 1609, and March 12, 1612, of The Virginia Company, 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; 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 between 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 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; patterns, functions, and algebra;

c. Understanding of the sequential nature of mathematics and the mathematical structures inherent in the content strands;

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

e. Understanding of the history of mathematics, including the contributions of various individuals and cultures toward the development of mathematics, and the role of mathematics in culture and society;

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

g. Understanding of the role of technology and the ability to use graphing utilities and computers in the teaching and learning of mathematics;

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

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

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

5. Science.

a. Understanding of the knowledge, skills, and processes of the Earth, life, and physical sciences as defined in the 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 of science in explaining and predicting events and phenomena; and

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

c. Understanding of the knowledge, skills, and 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;

(2) Conduct research projects and experiments;

- (3) Implement safety rules/procedures and ensure that students take appropriate safety precautions;
 - (4) Organize key science content into meaningful units of instruction;
 - (5) Adapt instruction to diverse learners using a variety of techniques;
 - (6) Evaluate instructional materials, instruction, and student achievement; and
 - (7) Incorporate instructional technology to enhance student performance in 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 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 concepts common to the natural and physical sciences; and
 - (3) Student achievement in science.
- f. Understanding of the contributions and significance of science to include:
- (1) Its social and cultural significance;
 - (2) The relationship of science to 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

8VAC20-542-130. 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 may be taught in integrated coursework or modules:

1. Human growth and development (birth through adolescence). 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. 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 issues related to but not limited to attention deficit disorders, gifted education including the use of multiple criteria to identify gifted students, substance abuse, child abuse, and family disruptions.
2. Curriculum and instructional procedures. Skills in this area shall contribute to an understanding of the principles of learning; the application of skills in discipline-specific methodology; communication processes; selection and use of materials, including media and computers; 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. Teaching methods appropriate for limited English proficient students; exceptional students, including gifted and talented and those with disabling conditions ; and appropriate for the level of endorsement sought shall be included. Teaching methods shall be tailored to promote student academic progress and effective preparation for the Standards of Learning assessments. Methods of improving communication between schools and families and ways of increasing family involvement in student learning at home and in school and the Standards of Learning shall be included. Demonstrated proficiency in the use of educational technology for instruction also 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 Board of Education in consultation with the Department of Social Services that are relevant to the specific teacher licensure routes. Curriculum and instructional procedures 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. Classroom and behavior management. Skills in this area shall contribute to an understanding and application of classroom and behavior management techniques 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 behavioral, cognitive, affective, social and ecological theory and practice.

4. Foundations of education. 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 in education. The historical, philosophical, and sociological foundations of the instructional design based on assessment data (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) must be addressed.

5. Reading.

a. Adult education, preK-12, and secondary grades 6-12 – reading in the content area. Skills in this area shall be designed to impart an understanding of comprehension skills in all content areas, including a repertoire of questioning strategies, summarizing and retelling skills, and strategies in

literal, interpretive, critical, and evaluative comprehension, as well as the ability to foster appreciation of a variety of literature and independent reading.

b. Special education – Language acquisition and reading. Skills listed for these endorsement areas represent the minimum competencies that a beginning teacher shall 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.

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, concept of print, phonics, fluency, vocabulary development, and comprehension strategies. Additional skills shall include proficiency in writing strategies, as well as the ability to foster appreciation of a variety of literature and independent reading.

6. Supervised classroom experience. The student teaching experience should provide for the prospective teacher to be in classrooms full time for a minimum of 300 clock hours (including pre- and post-clinical experiences) with at least 150 clock hours spent supervised in direct teaching activities (providing direct instruction) in the endorsement area sought. 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 experience in a school library media setting. Individuals seeking an endorsement in an area of special education shall complete the supervised classroom 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 teaching experience. A fully licensed, experienced teacher shall be available in the school building to assist a beginning teacher employed through the alternate route.

8VAC20-542-140. Adult education.

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

1. Understanding of the nature or psychology of the adult learner or adult development;
2. Understanding of the knowledge, skills, and processes needed for the selection, evaluation, and instructional applications of the methods and materials for adult basic skills including:
 - a. Curriculum development in adult basic education or GED instruction;
 - b. Beginning reading for adults;
 - c. Beginning mathematics for adults;
 - d. Reading comprehension for adult education;
 - e. Foundations of adult education; and
 - f. Other adult basic skills instruction.

3. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing; and
4. One semester of supervised successful full-time (or an equivalent number of hours of part-time experience) teaching of adults.

8VAC20-542-150. Adult English as a second language (add-on endorsement).

The program in adult English as a second language shall ensure that the candidate 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;
3. Knowledge in adult language acquisition;
4. Knowledge of assessment methods in adult English as a second language instruction;
5. Skills in teaching the adult learner;
6. Understanding of the effects of socio-cultural variables in the instructional setting;
7. Skills in teaching a variety of adult learning styles;
8. Proficiency in cross-cultural communication;
9. Proficiency in speaking, listening, and reading; and
10. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-160. 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 agriculture to the economy of the community, the state, and the nation, including:
 - a. An awareness and appreciation for agriculture;
 - b. Knowledge of the occupational opportunities in agriculture and related fields;
 - c. Knowledge of the U.S. food and fiber system; and
 - d. Knowledge of the contributions of agriculture to the economy of the state and nation.
2. Understanding of 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. Understanding of 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 small companion animals.
4. Understanding of the knowledge, skills, and processes involved in agricultural mechanics, including:
- a. Safe operation, repair, and maintenance of equipment, tools, and machinery used in agriculture;
 - b. Setting up and adjusting agriculture machinery;
 - c. Basic knowledge of a set of hand tools, measuring devices, and testing equipment used in agriculture;
 - d. Basic knowledge of energy transfer systems used in agriculture; and
 - e. Properties of metals used in tools and equipment.
5. Understanding of agricultural economics, including the various markets, international trade, government policies, and the operation and management of various agricultural businesses.
6. Understanding of the knowledge, skills, and processes involved in natural resources, including:
- a. Care, management, and conservation of soil, air, water, and wildlife; and
 - b. Production and management of the forest.
7. Understanding of the importance and processes necessary for community resource development, including:
- a. Fundamentals of the community development process;
 - b. Knowledge of public and private programs and resources available;
 - c. Knowledge of the promotion of community development; and
 - d. Knowledge of civic organizations and their purposes.
8. Knowledge of and the ability to teach:
- a. How the biological, physical, and applied sciences relate to practical solutions of agricultural problems;
 - b. Leadership development skills; and
 - c. Agricultural competencies needed by secondary students to be successful in continuing their education and entering a related occupation.
9. Knowledge and skills necessary to teach leadership skills, organize and manage an effective co-curricular student organization (FFA) and implement the organization's activities as an integral part of instruction.
10. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.
11. Understanding of and proficiency in instructional technology and microcomputer applications.

8VAC20-542-170. 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; and
 - c. The basic accounting cycle of source documents, verifications, analyzing, recording, posting, trial balances, and preparing financial statements.
2. Knowledge and skills in economics necessary to:
 - a. Communicate basic economic principles as applied to the American economic system; and
 - b. Apply basic economic principles to consumerism.
3. Knowledge and skills in 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) Knowledgeable in 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/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) Knowledgeable about and skilled in the areas of money management, recordkeeping, and banking needed for sound financial decision making; and
 - (2) Understanding of the basic concepts of economics, insurance, credit, 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/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. 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 technologies (e.g., touch keyboarding*, speech recognition, handwriting recognition, personal digital assistants (PDAs) and other hand-held devices, touch screen or mouse, scanning, and other emerging input technologies) to enter, manipulate, and format text and data. *Touch keyboarding is required.
 - g. Database management systems. Ability to use, plan, develop, and maintain database management systems.
 - h. Programming and application development. Ability to help students design, develop, test, and implement 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; and
 - (2) Facilitate students' ability to use, evaluate, and deploy communications and networking 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.
5. Career development.
- a. Experience in a supervised career in business and information technology through cooperative education, internship, shadowing, mentorship, and/or work experience; and

- b. Ability to provide instruction in self-awareness as it relates to career exploration and development, career research, workplace expectation, and career planning.
6. 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.
7. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.
8. Knowledge and skills necessary to apply basic mathematical operations to solve business problems.

8VAC20-542-180. 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 developmental processes of childhood, preadolescence, adolescence, and adulthood/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;
4. Knowledge of the management of resources to achieve individual and family goals at different stages of the life span;
5. Knowledge of the sociological, psychological, and physiological aspects of clothing and textiles for individuals and families;
6. Knowledge of the management of families, 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 skills, organize and manage an effective co-curricular student organization and implement the organization's activities as an integral part of instruction;
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; and
12. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-190. 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/occupational laboratory for laboratory simulations/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.

8VAC20-542-200. Career and technical education – industrial cooperative training (add-on endorsement).

The program in industrial cooperative training (ICT) 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. Understanding of the competencies necessary for effective organization and management of laboratory instruction;

5. Understanding of the competencies necessary for making physical, social, and emotional adjustments in multicultural student-teacher relationships;
6. Understanding of the competencies necessary for developing and utilizing systematic methods and instruments for appraising and recording student progress in the vocational classroom;
7. Understanding 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. Understanding of the competencies necessary to assist students in job placement and in 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. Understanding 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. Understanding of the competencies necessary to organize and manage an effective student organization; and
13. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-210. Career and technical education – marketing education.

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

1. Knowledge of marketing, merchandising, marketing mathematics, communication theory and techniques, advertising and sales promotion, personal selling, and management through a variety of educational and work experiences;
2. Knowledge of planning, developing, and administering a comprehensive program of marketing education for high school students and adults;
3. Knowledge of organizing and using a variety of instructional methods and techniques for teaching youths and adults;
4. Knowledge of conducting learning programs that include a variety of career objectives and recognize and respond to individual differences in students;
5. Knowledge of assisting learners of different abilities in developing skills needed to qualify for further education and employment;
6. Knowledge of acquiring knowledge of career requirements and opportunities in marketing, merchandising, and management;
7. 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;
8. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing; and
9. Knowledge of utilizing current technological applications as these relate to marketing functions.

8VAC20-542-220. Career and technical education – technology education.

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

1. Understanding and utilization of technology, including the human activities of:
 - a. Designing and developing technological systems;
 - b. Determining and controlling the behavior of technological systems;
 - c. Utilizing technological systems; and
 - d. Assessing the impacts and consequences of technological systems.
2. Understanding of technological knowledge, including:
 - a. The nature and evolution of technology;
 - b. Technological concepts and principles; and
 - c. Technological resources, impacts, consequences, and linkages with other fields.
3. Understanding and utilization of the major systems of technology, including the:
 - a. Synthesis of the processes for creating, encoding, transmitting, receiving, decoding, storage, and retrieval of information using communication systems in a global information society;
 - b. Application of the principles and processes characteristic of contemporary and future production systems, including the research, engineering design and testing, planning, organization, resources, and distribution; and
 - c. Integration and organization of transportation systems, including land, sea, air, and space as a means of transporting people, goods, and services in a global economy.
4. Understanding and utilization of the knowledge, skills, and processes for teaching in a laboratory environment, including:
 - a. Laboratory safety rules, regulations, processes and procedures;
 - b. Ability to organize technological content into effective instructional units;
 - c. Ability to deliver instruction to diverse learners;
 - d. Ability to evaluate student achievement, curriculum materials and instructional processes;
 - e. Ability to incorporate new and emerging instructional technologies to enhance student performance; and
 - f. Understanding the concepts and procedures for developing a learner's technological literacy.
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.

8VAC20-542-230. 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/or 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 vocational 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 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; and
13. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-240. Career and technical education – vocational special needs (add-on endorsement).

The program in vocational special needs (add-on endorsement) shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of vocational special needs programs and services; characteristics of students who are disadvantaged, disabled, and gifted; and program development, implementation, and evaluation.
2. Understanding of instructional methods and resources in career-vocational, community-based, and transition programs for targeted populations in career and technical education, including:

- a. Use of learning and teaching styles to plan and deliver instruction;
 - b. Use of vocational assessment results to plan individual instruction strategies;
 - c. Ability to plan and manage a competency-based education system;
 - d. Ability to adapt curriculum materials to meet special student needs;
 - e. Use of a variety of classroom and behavior management techniques to develop an enhanced learning environment;
 - f. Use of different processes to improve collaboration with colleagues, parents, and the community; and
 - g. Ability to plan learning experiences that prepare individuals for transition to more advanced education and career development options.
3. Understanding of the planning, delivery, and management of work-based education programs such as community surveying, cooperative education, simulation, directed observation, shadowing, mentoring, and internship.
 4. Understanding 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.
 5. Understanding of career/life planning procedures, transitioning processes and procedures, and career-search techniques.
 6. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-250. 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 structured program and algorithm design, and data structures;
3. Knowledge of programming and evaluating programs in at least two widely used, high-level, structured programming languages;
4. Knowledge of programming languages including definition, structure, and comparison;
5. Knowledge of the functions, capabilities, and limitations of computers;
6. Knowledge of mainframe, minicomputer, and microcomputer systems and their applications;
7. An ability to use currently available software for word processing, calculation/spreadsheet, database management, and communications; and
8. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-260. 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 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 and production, cultural context and dance history, judgment and criticism, 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, including history of dance;
 - f. Knowledge and understanding of artistic copyright laws;
 - g. Knowledge of assessment strategies to foster, support, and enhance student dance arts learning;
 - h. Knowledge of related areas of the fine arts, such as music, theater arts, and the visual arts; and
 - i. 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.

8VAC20-542-270. Driver education (add-on endorsement).

The program in driver education shall ensure that the candidate 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 Curriculum and Administrative Guide for Driver Education in Virginia including:
 - a. Coordination and scheduling of classroom and in-car instruction;
 - b. Skill and content knowledge assessment;
 - c. Student safety and other legal issues;
 - d. The juvenile licensing process;
 - e. Motor vehicle section of the Code of Virginia;
 - f. Vehicle procurement and equipment requirements; and
 - g. Instructional technologies.

2. Basic content knowledge needed to understand and teach classroom and in-car driver education 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. Vehicle control skills;
 - d. Interaction with other highway users (pedestrians, animals, motorcycles, bicycles, trucks, buses, trains, trailers, motor homes, ATVs, and other recreational users);
 - e. Time, space, visibility and risk management skills;
 - f. Alcohol and other drugs and driving;
 - g. Passive and active restraint systems;
 - h. Vehicle maintenance;
 - i. Risk reducing behaviors (i.e., aggressive driving, fatigue and distracted driving);
 - j. Natural laws and driving;
 - k. Adverse driving conditions and handling emergencies; and
 - l. Planning a safe trip.
3. Basic content knowledge needed to understand and teach the driver education laboratory phase including:
 - a. Simulation and other instructional technologies;
 - b. Multiple-car range;
 - c. Route planning;
 - d. Basic and evasive maneuvers;
 - e. Vehicle control from instructor's seat;
 - f. Manual transmission; and
 - g. Administration of the driver's license road skills examination and procedures for licensing students with disabilities.
4. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-280. 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;
2. Skills necessary to teach the writing process and the different forms of writing (narrative, descriptive, expository, persuasive, and informational) and to employ available technology;
3. Knowledge of grammar, usage, and mechanics and their integration in writing;
4. Understanding of the nature and development of language including vocabulary appropriate to the topic, audience, and purpose;

5. Knowledge of reading strategies and techniques used to enhance reading comprehensive skills;
6. Knowledge of speaking and listening skills;
7. Knowledge of varied works from British, American, world, and ethnic/minority literature appropriate for English instruction; and
8. The ability to provide experiences in communication arts, such as journalism, dramatics, debate, forensics, radio, television, films and other media.

8VAC20-542-290. 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. Knowledge of general linguistics and English linguistics;
2. Skills in elementary and secondary teaching methods and student assessment for English as a second language;
3. Skills in the teaching of reading to include the five areas of reading instruction: phonemic awareness, phonics, fluency, vocabulary and text comprehension as well as the similarities and differences between reading in a first language and reading in a second language;
4. Knowledge of the effects of socio-cultural variables in the instructional setting;
5. Proficiency in spoken and written English;
6. Knowledge of another language and its structure; and
7. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-300. 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. 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 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 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; and

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

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 (i) current methodologies for teaching Latin at the elementary and secondary levels; (ii) lesson planning, scope and sequencing of material, instructional strategies and assessment under the guidance of an experienced Latin teacher; and

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

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 non-American Sign Language users;

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, types of signs, orientation on the body, 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 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 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; and
 - g. Understanding of and proficiency in English grammar, usage, and mechanics and their integration in writing.
2. Participation in opportunities for significant study of the linguistics of American Sign Language and immersion experiences in the deaf culture.

8VAC20-542-310. Gifted education (add-on endorsement).

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

1. Understanding of principles of the integration of gifted education and general education, including:
 - a. Strategies to encourage the interaction of gifted students with students of similar and differing abilities; and
 - b. Development of activities to encourage parental and community involvement in the education of the gifted, including the establishment and maintenance of an effective advisory committee.
2. Understanding of the characteristics of gifted students, including:
 - a. Varied expressions of advanced aptitudes, skills, creativity, and conceptual understandings;
 - b. Methodologies that respond to the affective (social-emotional) needs of gifted students; and
 - c. Gifted behaviors in special populations (i.e., those who are culturally diverse, economically disadvantaged, or physically disabled).
3. Understanding of specific techniques to identify gifted students using diagnostic and prescriptive approaches to assessment, including:
 - a. The selection, use, and evaluation of multiple assessment instruments and identification strategies;
 - b. The use of both subjective and objective measures to provide relevant information regarding the aptitude/ability or achievement of potentially gifted students;
 - c. The use of authentic assessment tools such as portfolios to determine performance, motivation/interest and other characteristics of potentially gifted students;
 - d. The development, use, and reliability of rating scales, checklists, and questionnaires by parents, teachers and others;

- e. The evaluation of data collected from student records such as grades, honors, and awards;
 - f. The use of case study reports providing information concerning exceptional conditions; and
 - g. The structure, training, and procedures used by the identification and placement committee.
4. Understanding and application of a variety of educational models, teaching methods, and strategies for selecting materials and resources that ensure:
 - a. Academic rigor through the development of high-level proficiency in all core academic areas utilizing the Virginia Standards of Learning as a baseline;
 - b. The acquisition of knowledge and development of products that demonstrate creative and critical thinking as applied to learning both in and out of the classroom; and
 - c. The development of learning environments that guide students to become self-directed, independent learners.
 5. Understanding and application of theories and principles of differentiating curriculum designed to match the distinct characteristics of gifted learners to the programs and curriculum offered to gifted students, including:
 - a. The integration of multiple disciplines into an area of study;
 - b. Emphasis on in-depth learning, independent and self-directed study skills and metacognitive skills;
 - c. The development of analytical, organizational, critical, and creative thinking skills;
 - d. The development of sophisticated products using varied modes of expression;
 - e. The evaluation of student learning through appropriate and specific criteria; and
 - f. The development of advanced technological skills to enhance student performance.
 6. Understanding of contemporary issues and research in gifted education, including:
 - a. The systematic gathering, analyzing, and reporting of formative and summative data; and
 - b. Current local, state, and national issues and concerns.
 7. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.
 8. The program shall include a practicum that shall include a minimum of 45 instructional hours of successful teaching experiences with gifted students in a heterogeneously grouped (mixed ability) classroom and a homogeneously grouped (single ability) classroom.

8VAC20-542-320. 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.
2. Understanding basic human anatomy and physiology needed to teach quality health and physical education.
3. Understanding of the basic scientific principles under girding human movement as they apply to:
 - a. Health-related fitness (flexibility, muscular strength, cardiovascular endurance, and body composition); and
 - b. Skill-related fitness (coordination, agility, power, balance, speed and reaction).
4. Basic understanding of the administration of a health and physical education program, including:
 - a. Instruction;
 - b. Student safety and other legal issues;
 - c. Assessment; and
 - d. Its role in comprehensive school health.
5. Understanding of the knowledge, skills, and processes for teaching health education, including:
 - a. Personal health and fitness;
 - b. Mental and emotional health;
 - c. Nutrition, body image and weight management;
 - d. Tobacco, alcohol, and other drugs;
 - e. Safety and emergency care (first aid, CPR, universal precautions);
 - f. Injury prevention and rehabilitation;
 - g. Consumer health and information access;
 - h. Communicable and noncommunicable diseases prevention and treatment;
 - i. Environmental health;
 - j. Community health and wellness; and
 - k. Violence prevention, resistance skills and conflict mediation.
6. Understanding of the knowledge, skills, and processes for teaching physical education, including:
 - a. Sequential preK-12 instruction in a variety of movement forms that include:
 - (1) Cooperative activities;
 - (2) Outdoor and adventure activities;
 - (3) Rhythms and dance; and
 - (4) Team and individual activities;
 - b. Activities for the physically and mentally challenged; and
 - c. Activities designed to help students understand, develop, and value personal fitness.
7. Understanding of and ability to teach:
 - a. The relationship between a physically active lifestyle and health;
 - b. The cultural significance of dance, leisure, competition, and sportsmanship; and

- c. The use of new and emerging instructional technology.
8. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-330. 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 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 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 (Declaration of American Independence, the general principles of the Constitution of the United States, the Virginia Statute of Religious Freedom, the charters of April 10, 1606, May 23, 1609, and March 12, 1612, of the Virginia Company, and the Virginia Declaration of Rights); 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, 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 between cultural diversity and national unity; and

- (7) The difference between a democracy and a republic.

- 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, and economic contributions of selected civilizations in Africa, Asia, Europe, and the Americas;

- (5) The culture and 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 revolution of the 17th and 18th centuries;
- (7) The sources, results, and influences of the American and French revolutions;
- (8) The social consequences of the Industrial Revolution and its impact on politics and culture;
- (9) The global influence of European ideologies of the 19th and 20th centuries (liberalism, republicanism, social democracy, Marxism, nationalism, Communism, Fascism, and Nazism); and
- (10) The origins, effects, aftermath and significance of the two world wars, the Korean and Vietnam conflicts, and the Post-Cold War Era.

c. Civics/government and economics.

- (1) The essential characteristics of limited and unlimited 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) Values and principles of the American constitutional republic;
- (7) The structures, functions, and powers of local and state government;
- (8) Importance of citizen participation in the political process in local and state government;
- (9) Local government and civics instruction specific to Virginia;
- (10) The structures, functions, and powers of the national government;
- (11) The role of the United States in foreign policy and national security;
- (12) The structure of the federal judiciary;
- (13) The structure and function of the United States market economy as compared with other economies;
- (14) Knowledge of the impact of the government role in the economy and individual economic and political freedoms;
- (15) Knowledge of economic systems in the areas of productivity and key economic indicators; and
- (16) The analysis of global economic trends.

d. Geography.

- (1) Use of maps and other geographic representations, tools, and technologies to acquire, process, and report information;
- (2) Physical and human characteristics of places;
- (3) Relationship between human activity and the physical environment;
- (4) Physical processes that shape the surface of the earth;
- (5) Characteristics and distribution of ecosystems on the earth;
- (6) Characteristics, distribution, and migration of human populations;
- (7) Patterns and networks of economic interdependence;
- (8) Processes, patterns, and functions of human settlement;

- (9) How the forces of conflict and cooperation influence the division and control of the earth's surface;
 - (10) How physical systems affect human systems;
 - (11) Changes that occur in the meaning, use, distribution, and importance of resources; and
 - (12) Applying geography to interpret the past and the present and to plan for the future.
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 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;
 - i. The importance of primary documents and the potential problems with second-hand accounts; and
 - j. How scientific and technological advances affect the workplace, healthcare, and education.
3. Understanding of the use of the content and processes of history and social sciences instruction, including:
- a. Fluency in historical analysis skills;
 - b. Skill in debate, discussion, and persuasive writing;
 - c. The ability to organize key social science content into meaningful units of instruction;
 - 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; and
 - f. The ability to incorporate appropriate technologies into social science instruction.
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 sufficient 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;
 - c. Student achievement in the social sciences; and
 - d. An understanding of the media influence on contemporary America.

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

8VAC20-542-340. Journalism (add-on endorsement).

The program in journalism (add-on endorsement) shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the history and functions of journalism in American culture including the value of freedom of speech and press and the complexity of legal and ethical issues;
2. Understanding of the knowledge of and experience in theory and practice of both print and nonprint media including design and layout production and the use of technology; and
3. Possession of skills in journalistic management and the processes of interviewing and writing, including news articles, features, ad copy, obituaries, reviews, editorials, and captions; their differences and the ability to analyze and evaluate journalism.

8VAC20-542-350. Keyboarding (add-on endorsement).

The program in keyboarding (add-on endorsement) shall ensure that the candidate 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; and
3. Ability to provide instruction for current procedures in formatting documents.

8VAC20-542-360. Library media preK-12.

The program in library media preK-12 shall ensure that the candidate has demonstrated the following competencies:

1. Proficiency in selecting, evaluating, organizing, and processing materials and equipment;
2. Proficiency in the production and use of a variety of media (print and nonprint);
3. Proficiency in organizing, managing, and evaluating media programs;
4. Proficiency in applying the principles of curriculum planning, learning, and teaching as they relate to informational skills and to the role of the library-media specialist as a resource person and as a member of the educational team;
5. Understanding of the knowledge, skills, and processes of the issues surrounding ethical access and use of information, including copyright, intellectual freedom, privacy, and security; and
6. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-370. 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 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; calculus; and discrete mathematics;
3. Understanding of the sequential nature of mathematics 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 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 of the role of technology and the ability to use graphing utilities and computers in the teaching and learning of mathematics;
9. Understanding of and the ability to select, adapt, 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; and
12. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-380. Mathematics – Algebra I (add-on endorsement).

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

1. Understanding of the mathematics relevant to the content identified in the Mathematics Standards of Learning and how the standards provide the foundation for teaching middle level mathematics through Algebra I. The use of technology shall be used in enhancing the student's ability to develop concepts, compute, solve problems, and apply mathematics in practical applications with the mathematics content, 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; algebraic fractions; 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 form 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 and standard integration and differentiation;
 - e. Linear algebra: matrices, vectors, and linear transformations;
 - f. Measurement systems, including U.S. customary and metric;
 - g. 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- and three-dimensional figures; coordinate and transformational geometry; and constructions;
 - h. Probability and statistics: experimental and theoretical probability; prediction; graphical representations, including box-and-whisker plots; and measures of central tendency, range, standard deviation, and simple distributions;
 - i. Discrete mathematics: symbolic logic, sets, permutations and combinations, functions that are defined recursively, and linear programming; and
 - j. Computer science: terminology, simple programming, and software applications.
2. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-390. 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 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, 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, in score reading, in teaching musical courses and in 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 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.
 5. Knowledge of a comprehensive program of music education based upon sound philosophy, content, and methodology for teaching in elementary, middle, and secondary schools.
 6. Observation and professional laboratory experiences with pupils in elementary, middle, and secondary schools, including instruction of instrumental groups.
 7. Specialization on a musical instrument and functional teaching knowledge on each of the string, brass, woodwind, and percussion instruments.
 8. Competency in 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, with knowledge of vocal techniques in rehearsing and conducting combined instrumental and vocal groups.
 9. Knowledge and understanding of artistic copyright laws.
 10. Knowledge and understanding of safety, including performance and studio.
 11. Knowledge of assessment strategies to foster, support, and enhance student music learning.
 12. Knowledge of related areas of the fine arts, such as dance arts, theatre arts, and the visual arts.
 13. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-400. 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 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, 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, in score reading, in teaching musical courses, and in 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 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.
 5. Knowledge of a comprehensive program of music education based upon sound philosophy, content, and methodology for teaching in elementary, middle, and secondary schools.
 6. Observation and professional laboratory experiences with pupils at elementary, middle, and secondary levels, including instruction of choral groups.
 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 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, with knowledge of instrumental techniques in rehearsing and conducting combined vocal and instrumental school groups.
 9. Knowledge and understanding of artistic copyright laws.
 10. Knowledge and understanding of safety, including performance and studio.
 11. Knowledge of assessment strategies to foster, support, and enhance student music learning.
 12. Knowledge of related areas of the fine arts, such as dance arts, theatre arts, and the visual arts.
 13. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-410. Science – biology.

The program in biology shall ensure that the candidate demonstrates the following competencies:

1. Understanding of the knowledge, skills, and processes of the four core science disciplines as defined in the 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; and
 - c. Role of observation, measurement, data, and evidence in verifying and validating scientific concepts and principles.

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;
 - b. Conduct research projects and experiments;
 - c. Implement laboratory safety rules/procedures and ensure that students take appropriate safety precautions;
 - d. Organize key biological content into meaningful units of instruction;
 - e. Adapt instruction to diverse learners using a variety of techniques;
 - f. Evaluate student achievement, instructional materials, and teaching practices; and
 - g. Incorporate instructional technology to enhance student performance.
4. Understanding of the content, processes, and skills of biology, equivalent to an undergraduate degree in biology, with course work in genetics/molecular biology, botany, zoology, anatomy/physiology, and ecology.
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 processes and organizing concepts common to the natural and physical sciences; and
 - c. Student achievement in biology.
6. Understanding of the contributions and significance of biology, including:
 - a. Its social and cultural significance;
 - b. The relationship of biology and other sciences to 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.

8VAC20-542-420. Science – chemistry.

The program in chemistry shall ensure that the candidate demonstrates the following competencies:

1. Understanding of the knowledge, skills, and processes of the four core science disciplines as defined in the 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; and
 - c. Role of observation, measurements, data, and evidence in verifying and validating scientific concepts and principles.
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;
 - b. Conduct research projects and experiments;
 - c. Implement laboratory safety rules/procedures and ensure that students take appropriate safety precautions;
 - d. Organize key chemistry content 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 chemistry, equivalent to an undergraduate degree in chemistry, with course work in inorganic chemistry, organic chemistry, physical chemistry, and analytical chemistry.
 5. Understanding of basic physics, biology, the Earth sciences, and mathematics (including statistics and calculus) to ensure:
 - a. The placement of chemistry in an appropriate interdisciplinary context;
 - b. The ability to teach the processes and organizing concepts common to the natural and physical sciences; and
 - c. Student achievement in chemistry.
 6. Understanding of the contributions and significance of chemistry, including:
 - a. Its social and cultural significance;
 - b. The relationship of chemistry and other sciences to 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.

8VAC20-542-430. Science – Earth science.

The program in Earth science shall ensure that the candidate demonstrates the following competencies:

1. Understanding of the knowledge, skills, and processes of the four core science disciplines as defined in the 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; and
 - c. Role of observation, measurement, data, and evidence in verifying and validating scientific concepts and principles.
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;
 - b. Conduct research projects and experiments;

- c. Implement laboratory safety rules/procedures and ensure that students take appropriate safety precautions;
 - d. Organize key Earth science content into meaningful units of instruction;
 - e. Adapt instruction to diverse learners using a variety of techniques;
 - f. Evaluate student achievement, instructional materials, and teaching practices; and
 - g. Incorporate instructional technology to enhance student performance.
4. Understanding of the content, processes, and skills of Earth science, equivalent to an undergraduate degree in geology (or a related area), with course work in geology, oceanography, meteorology, and astronomy.
 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 processes and organizing concepts common to the natural and physical sciences; and
 - c. Student achievement in Earth science.
 6. Understanding of the contributions and significance of Earth science, including:
 - a. Its social and cultural significance;
 - b. The relationship of Earth science and other sciences to 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.

8VAC20-542-440. Science – physics.

The program in physics shall ensure that the candidate demonstrates the following competencies:

1. Understanding of the knowledge, skills, and processes of the four core science disciplines as defined in the 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; and
 - c. Role of observation, measurement, data, and evidence in verifying and validating scientific concepts and principles.
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;
 - b. Conduct research projects and experiments;
 - c. Implement laboratory safety rules/procedures and ensure that students take appropriate safety precautions;

- d. Organize key physics content 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 physics, equivalent to an undergraduate degree in physics, with course work in mechanics, electricity and magnetism, and optics.
 5. Understanding of basic chemistry, biology, the Earth sciences, and mathematics (including statistics and calculus) to ensure:
 - a. The placement of physics in an appropriate interdisciplinary context;
 - b. The ability to teach the processes and organizing concepts common to the natural and physical sciences; and
 - c. Student achievement in physics.
 6. Understanding of the contributions and significance of physics, including:
 - a. Its social and cultural significance;
 - b. The relationship of physics and other sciences to 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.

8VAC20-542-450. Special education early childhood (birth through age 5).

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. Trends for service delivery to the birth-through-age-five population;
 - b. An overview of early childhood special education;
 - c. Historical perspective of special education; and
 - d. Social development issues.
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/or individualized family service plan (IFSP); and
 - e. Disciplinary practices, policies and procedures and alternative placements/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.
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/emotional, and language.
5. Understanding of 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.
7. Understanding of and experiences with the medical aspects of young children with disabling and at-risk conditions and the management of neurodevelopmental and motor disabilities, including emergency care and the role of health care professionals in the lives of individuals with disabilities.
8. Skills in consultation, case management, and collaboration, 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. Integration with nondisabled peers;
 - d. Transition facilitation; and
 - e. Training, managing, and monitoring paraprofessionals.
9. Understanding of normal child growth and development from birth through age five.
10. Understanding of the theories and techniques of family-centered intervention, including:
 - a. Multicultural issues and influence; and
 - b. Family issues.
11. Understanding of the standards of professionalism.
12. Completion of supervised experiences at the preschool level in a variety of settings, including but not limited to home-based, school-based, and community-based.

8VAC20-542-460. Special education hearing impairments preK-12.

The program in special education hearing 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 the following:
 - a. Characteristics of children and youth with disabilities: developmental and cognitive;
 - b. Characteristics of individuals with hearing impairments, including socio-cultural influences and health-related problems; and
 - c. Foundations of the education and culture of persons with hearing impairments.
2. Understanding of the foundation of the legal aspects associated with students with disabilities and students with hearing 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/programs in schools.
3. Understanding of the foundation of assessment and evaluation with an emphasis on individuals who are hearing impaired, including:
 - a. Administering, scoring, and interpreting assessments, including norm-referenced, criterion-referenced, and curriculum-based individual and group assessments;
 - b. Interpreting assessments for eligibility, placement, and program uses;
 - c. Techniques to collect, record, and analyze information from observing students;
 - d. Diagnostic instruction using assessment data;
 - e. Techniques for recognizing capacity and diversity and its influence on student assessment and evaluation; and
 - f. Using data from student program evaluation.
4. Understanding of service delivery, classroom 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/literacy skills;
 - e. The use of technology;
 - f. Classroom and behavior management, including behavior support systems and individual planning;
 - g. Methods and procedures for teaching persons with hearing impairments;
 - h. Instructional programming and modifications of curriculum to facilitate integration of students with disabilities into the continuum of programs and services with peers without disabilities;

- i. Individual and group behavior management techniques; and
 - j. Career and vocational aspects of individuals with disabilities, including persons with hearing impairments, in society.
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. Involving families in the education of their children with disabilities; and
 - d. Cooperating with community agencies and resources.
 6. Understanding of speech, language, and hearing development, including:
 - a. Speech and language development and the effects of disabling conditions and cultural diversity on typical language development;
 - b. The effects of hearing impairments and cultural diversity on language development;
 - c. Anatomy of speech structures, auditory and visual mechanisms, production, transmission and psychophysical characteristics of sound; and
 - d. General and specific effects of hearing impairment on production and reception of speech.
 7. Understanding of audiology, including:
 - a. Diagnosis in hearing evaluation, testing procedures and characteristics of amplification devices and their application to the instructional processes; and
 - b. Individual, group amplification systems, cochlear implant systems and other assistive/augmentative communication devices with emphasis on utilization in educational environments.
 8. Understanding of communication modalities to include various modalities of communication, including cued speech, speech reading, verbal communication, and demonstrated proficiency in sign language communication.
 9. Understanding of the standards for professionalism.
 10. Completion of supervised classroom experiences at the elementary and secondary levels with students who have hearing impairments.

8VAC20-542-470. Special education adapted 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 following core competencies to prepare children and youth for participation in the general education curriculum and within the community to the maximum extent possible. The candidate shall also 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, emotional development and their relationship to the various disabilities);
 - (4) Medical aspects of disabilities;
 - (5) The dynamic influence of the family system and cultural/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/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 management of instruction and behavior.
- a. An understanding and application of the foundation of assessment and evaluation related to best special education practice, including:
- (1) Ethical issues and responsibilities in the assessment of individuals with disabilities;
 - (2) Procedures for screening, prereferral, referral, and eligibility determinations;
 - (3) Factors that may influence assessment findings such as cultural, behavioral, and learning diversity;
 - (4) 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; and
 - (5) Synthesis and interpretation of assessment findings for eligibility, program planning, and program evaluation decisions.
- b. An understanding and application of service delivery, curriculum, and instruction of students with disabilities, including:
- (1) Classroom organization and curriculum development;
 - (2). Scope and sequence of the general education curriculum;
 - (3) Complex nature of language acquisition and reading (reading competencies in Professional studies requirements): Reading, special

education – language acquisition and reading: 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, an understanding of sound/symbol relationships, explicit phonics instruction, syllables, phonemes, morphemes, decoding skills, word attack skills, and a knowledge of how phonics, syntax, and semantics interact. Additional skills shall include proficiency in a wide variety of comprehension strategies, as well as the ability to foster appreciation of a variety of literature and independent reading;

(4) Complex nature of numeracy acquisition and the sequential nature of mathematics;

(5) Alternative ways to teach content material including curriculum adaptation and curriculum modifications;

(6) Procedures to develop, provide, and evaluate instruction consistent with students' individual needs;

(7) Strategies to promote successful integration of students with disabilities with their nondisabled peers;

(8) Use of technology to promote student learning; and

(9) Structure and organization of general education classrooms and other instructional settings representing the continuum of special education services (to include field experiences).

c. An understanding and application of classroom and behavior management techniques and individual interventions, including techniques that:

(1) Promote emotional well-being and teach and maintain behavioral conduct and skills consistent with norms, standards, and rules of the educational environment;

(2) Address diverse approaches based upon behavioral, cognitive, affective, social and ecological theory and practice;

(3) Provide positive behavioral supports; and

(4) Are based on functional assessment of behavior.

d. The ability to prepare students and work with families to promote successful student transitions throughout the educational experience to include postsecondary training, employment, and independent living that addresses an understanding of long-term planning, career development, life skills, community experiences and resources, self-advocacy and self-determination, guardianship, and legal considerations.

3. Collaboration.

a. Skills in consultation, case management, and collaboration, including:

(1) Coordination of service delivery with related service providers, general educators, and other professions in collaborative work environments to include:

(a) Understanding the Standards of Learning (SOL), the structure of the curriculum, and accountability systems across K-12;

(b) Understanding and assessing the organization and environment of general education classrooms across the K-12 setting;

- (c) Implementation of collaborative models, including collaborative consultation, co-teaching, and student intervention teams;
 - (d) Procedures to collaboratively develop, provide, and evaluate instructional and behavioral plans consistent with students' individual needs;
 - (e) Understanding the roles and responsibilities of each member of the collaborative team; and
 - (f) Application of effective communication 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 adapted curriculum K-12 shall ensure through course work 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 characteristics, learning and support needs of students with disabilities (K-12), whose cognitive impairments or adaptive skills require adaptations to the general curriculum, including, but not limited to, students with:
 - (1) Moderate to severe mental retardation or developmental delay;
 - (2) Autism;
 - (3) Multiple disabilities;
 - (4) Traumatic brain injury; and
 - (5) Sensory impairments as an additional disability to those referenced above.
- b. Knowledge of characteristics shall include:
 - (1) Medical, 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 implementation.

- a. Apply knowledge of 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, accommodations, placement, and teaching methodology;
- (3) Demonstrate the use of assessment, evaluation, and other information to develop and implement individual educational planning and group instruction with students with disabilities in an aligned curriculum across the K-12 grade levels, including:
 - (a) Functional behavior assessment;
 - (b) behavioral intervention plans incorporating positive behavioral supports;
 - (c) Least restrictive environment and inclusion models;
 - (d) General education curriculum adaptation and modification;
 - (e) IEP implementation linking to standards of learning general curriculum;
 - (f) Transition between grade levels, settings, and environments;
 - (g) Communication methods and systems;
 - (h) Assistive technology applications and instruction;
 - (i) Community integration;
 - (j) Vocational skill development;
 - (k) Instructional strategies;
 - (l) Knowledge of community service systems; and
 - (m) Essential life skills for independent home and community living.

3. Transitioning.

- a. Demonstrate the ability to prepare students and work with families to provide successful student transitions throughout the educational experience to include postsecondary training, employment, and independent living that addresses an understanding of long-term planning, career development, life skills, community experiences and resources, self-advocacy, and self-determination, guardianship and legal considerations.
 - (1) Skills in consultation, case management, and collaboration for students with varying degrees of disability severity.
 - (a) Coordinate service delivery with general educators, related service providers, and other providers;
 - (b) Awareness of community resources agencies and strategies to interface with community agencies when developing and planning IEPs;
 - (c) Knowledge of related services and accommodations that pertain to postsecondary transitions that increase student access to postsecondary education and community resources; and
 - (d) Ability to coordinate and facilitate meetings involving parents, students, outside agencies, and administrators.
 - (2) 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.

- (3) Recognize uses of technology and seek out technology at postsecondary settings that shall aid the student in their education, work, and independent living.
- (4) 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.
- (5) Knowledge of person-centered planning strategies to promote student involvement in planning.
- (6) Knowledge of generic skills that lead to success in school, work and community, including time management, preparedness, social interactions, and communication skills.
- (7) Understand social skill development and the unique social skills deficits and challenges associated with disabilities:
 - (a) Assesses social skill strengths and needs;
 - (b) Plans and uses specialized social skills strategies.
- (8) Knowledge of use and implementation of vocational assessments to encourage and support students' self-advocacy and self-determination skills.
- (9) Knowledge of legal issues surrounding age of majority and guardianship.

C. Completion of supervised classroom experiences with students with disabilities and an adapted curriculum K-12.

8VAC20-542-480. 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 following core competencies to prepare children and youth for participation in the general education curriculum and within the community to the maximum extent possible. The candidate shall also 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, 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, emotional development and their relationship to the various disabilities);
 - (4) Medical aspects of disabilities;
 - (5) The dynamic influence of the family system and cultural/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/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 management of instruction and behavior.
 - a. An understanding and application of the foundation of assessment and evaluation related to best special education practice, including:
 - (1) Ethical issues and responsibilities in the assessment of individuals with disabilities;
 - (2) Procedures for screening, prereferral, referral, and eligibility determinations;
 - (3) Factors that may influence assessment findings such as cultural, behavioral, and learning diversity;
 - (4) 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; and
 - (5) Synthesis and interpretation of assessment findings for eligibility, program planning, and program evaluation decisions.
 - b. An understanding and application of service delivery, curriculum, and instruction of students with disabilities, including:
 - (1) Classroom organization and curriculum development;
 - (2) Scope and sequence of the general education curriculum;
 - (3) Complex nature of language acquisition and reading (reading competencies in professional studies requirements): Reading, special education – language acquisition and reading: 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, an understanding of sound/symbol relationships, explicit phonics instruction, syllables, phonemes, morphemes, decoding skills, word attack skills, and a knowledge of how phonics, syntax, and semantics interact. Additional skills shall include proficiency in a wide variety of comprehension strategies, as well as the ability to foster appreciation of a variety of literature and independent reading;
 - (4) Complex nature of numeracy acquisition and the sequential nature of mathematics;

- (5) Alternative ways to teach content material including curriculum adaptation and curriculum modifications;
 - (6) Procedures to develop, provide, and evaluate instruction consistent with students' individual needs;
 - (7) Strategies to promote successful integration of students with disabilities with their nondisabled peers;
 - (8) Use of technology to promote student learning; and
 - (9) Structure and organization of general education classrooms and other instructional settings representing the continuum of special education services (to include field experiences).
- c. An understanding and application of classroom and behavior management techniques and individual interventions, including techniques that:
- (1) Promote emotional well-being and teach and maintain behavioral conduct and skills consistent with norms, standards, and rules of the educational environment;
 - (2) Address diverse approaches based upon behavioral, cognitive, affective, social and ecological theory and practice;
 - (3) Provide positive behavioral supports; and
 - (4) Are based on functional assessment of behavior.
- d. The ability to prepare students and work with families to promote successful student transitions throughout the educational experience to include postsecondary training, employment, and independent living that addresses an understanding of long-term planning, career development, life skills, community experiences and resources, self-advocacy and self-determination, guardianship, and legal considerations.

3. Collaboration.

- a. Skills in consultation, case management, and collaboration, including:
 - (1) Coordination of service delivery with related service providers, general educators, and other professions in collaborative work environments to include:
 - (a) Understanding the Standards of Learning (SOL), the structure of the curriculum, and accountability systems across K-12;
 - (b) Understanding and assessing the organization and environment of general education classrooms across the K-12 setting;
 - (c) Implementation of collaborative models, including collaborative consultation, co-teaching, and student intervention teams;
 - (d) Procedures to collaboratively develop, provide, and evaluate instructional and behavioral plans consistent with students' individual needs;
 - (e) Understanding the roles and responsibilities of each member of the collaborative team; and
 - (f) Application of effective communication 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 course work and field experiences in a variety of settings that the candidate seeking endorsement in special education general curriculum 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 who are accessing the general education curriculum at the elementary, middle, and high school levels, including but not limited to, students with:

- (1) Learning disabilities;
- (2) Emotional disturbance;
- (3) Mental retardation;
- (4) Developmental delay;
- (5) Autism;
- (6) Other health impaired;
- (7) Traumatic brain injury; and
- (8) Multiple disabilities.

b. Knowledge of characteristics shall include:

- (1) Age-span/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 implementation.

a. Apply knowledge of 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, and teaching methodology for students with disabilities who are accessing the general education curriculum and the standards of learning; and
- (3) 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, including:

- (a) Identify and apply differentiated instructional methodologies including systematic instruction, multisensory approaches, learning cognitive strategies, study skills, diverse learning styles, and technology use;
- (b) Teach skills and remediate deficits in academic areas at the elementary, middle, and secondary levels;
- (c) Provide explicit instruction of reading and math at appropriate developmental/grade level in a systematic and cumulative manner to students with disabilities who are accessing the general education curriculum;
- (d) Knowledge and understanding of the scope and sequence of the standards of learning at the elementary, middle, and secondary levels;
- (e) Promote the potential and capacity of individual students to meet high academic, behavioral, and social expectations;
- (f) Design alternative ways to teach content material including modifying curriculum in both directive and nondirective methodologies;
- (g) Use assistive and instructional technology in order to access the general education curriculum;
- (h) Implement and evaluate group management techniques and individual interventions that teach and maintain emotional, behavioral and social skills; and
- (i) Implement and monitor IEP specified accommodations within the general education classroom.

3. Transitioning.

- a. Demonstrate the ability to prepare students and work with families to provide successful student transitions throughout the educational experience to include postsecondary training, employment, and independent living that addresses an understanding of long-term planning, career development, life skills, community experiences and resources, self-advocacy, and self-determination, guardianship and legal considerations.
 - (1) Skills in consultation, case management, and collaboration for students with varying degrees of disability severity.
 - (a) Coordinate service delivery with general educators, related service providers, and other providers;
 - (b) Awareness of community resources agencies and strategies to interface with community agencies when developing and planning IEPs;
 - (c) Knowledge of related services and accommodations that pertain to postsecondary transitions that increase student access to postsecondary education and community resources;
 - (d) Ability to coordinate and facilitate meetings involving parents, students, outside agencies, and administrators.
 - (2) 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.
 - (3) Recognize uses of technology and seek out technology at postsecondary settings that shall aid the student in their education, work, and independent living.

(4) 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:

(a) Knowledge of person-centered planning strategies to promote student involvement in planning;

(b) Knowledge of generic skills that lead to success in school, work and community, including time management, preparedness, social interactions, and communication skills.

(5) Understand social skill development and the unique social skills deficits and challenges associated with disabilities:

(a) Assesses social skill strengths and needs;

(b) Plans and uses specialized social skills strategies.

(6) Knowledge of use and implementation of vocational assessments to encourage and support students' self-advocacy and self-determination skills.

(7) Knowledge of legal issues surrounding age of majority and guardianship.

C. Completion of supervised classroom experiences with students with disabilities and the general curriculum K-12.

8VAC20-542-490. Special education 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. Characteristics of children and youth with disabilities: developmental and cognitive;
 - b. Language development and the effects of disabling conditions and cultural diversity on language development; and
 - c. Characteristics of individuals with visual impairments, including impact of visual impairment on infants' and children's growth and development, child and adolescent emotional and social development, and family interaction patterns.
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/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. Interpreting assessments for eligibility, placement, and program uses;
 - c. Techniques to collect, record and analyze information;
 - d. Diagnostic instruction using assessment data;
 - e. Techniques for recognizing capacity and diversity and its influence on student assessment and evaluation;
 - f. Using data from student program evaluation; and
 - g. Low vision practices and procedures, that include assessment and instructional programming for functional vision.
4. Understanding of service delivery, classroom and behavior management, and instruction, including:
 - a. The application of current research;
 - b. Classroom organization and curriculum development;
 - c. Curriculum adaptations and accommodations;
 - d. The development of language/literacy skills;
 - e. The use of technology;
 - 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 integration of students with disabilities programs and services with peers without disabilities;
 - i. Individual and group behavior management techniques;
 - j. Career and vocational aspects of individuals with disabilities, including persons with visual impairments, in society, 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 disabilities; and
 - d. 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 on both a Braille writer and a "slate and stylus"; and
 - b. Knowledge of other codes, including Nemeth, music code, and computer Braille.

7. Understanding of anatomy, physiology, and diseases of the eye and the educational implications.
8. Understanding of the standards of professionalism.
9. Completion of supervised classroom experiences at the elementary and secondary levels with students who have visual impairments.

8VAC20-542-500. Speech communication (add-on endorsement).

The program in speech communication shall ensure that the candidate 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 of and proficiency in effective communication, including interpersonal communication, the art of persuasion, oral interpretation, group discussion, mass communication, public speaking, and debate; and the ability to critique such communication interactions; and
4. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-510. Theater arts preK-12.

The program in theater arts preK-12 shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes of the theater arts discipline as defined in the Virginia Standards of Learning and how these provide a necessary foundation integral to teaching theater arts.
2. Understanding of the knowledge, skills and processes for teaching theater 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 theater arts education;
 - b. Knowledge and understanding for teaching theatre arts, including: performance and production, cultural context and theatre history, judgment and criticism, and aesthetics;
 - c. Directing;
 - d. Technical theater, including lighting, set design, stage craft, costuming, makeup, and safety;
 - e. Performance, including acting and acting styles;
 - f. Dramatic literature;
 - g. The relationship of theater and culture and the influence of theater on past and present cultures, including the history of theater;

- h. Knowledge and understanding of artistic copyright laws;
 - i. Knowledge and understanding of safety, including performance and studio;
 - j. Knowledge of assessment strategies to foster, support, and enhance student theatre arts learning;
 - k. Knowledge of related areas of theater arts, such as art, dance arts, music, 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.

8VAC20-542-520. 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, 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, and crafts;
 - d. Knowledge and understanding for teaching the visual arts, including: visual communication and production, cultural context and art history, judgment and criticism, 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, theater arts, photography, and other expressive arts;
 - g. Knowledge and understanding of technological and artistic copyright laws;
 - h. Knowledge and understanding of safety, including use of toxic art material in various aspects of studio and classroom work;
 - i. Knowledge of assessment strategies to foster, support, and enhance student visual arts learning; and
 - j. 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.

Article 4
Administration and Supervision and Personnel Support

8VAC20-542-530. Administration and supervision preK-12.

1. The program in administration and supervision preK-12 shall ensure that the candidate has demonstrated the following competencies:

a. Knowledge understanding, and application of planning, assessment, and instructional leadership that builds collective professional capacity, including;

(1) Principles of student motivation, growth, and development as a foundation for age- and grade-appropriate curriculum, instruction, and assessment;

(2) Collaborative leadership in gathering and analyzing data to identify needs to develop and implement a school improvement plan that results in increased student learning;

(3) Planning, implementation, and refinement of standards-based curriculum aligned with instruction and assessment;

(4) 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;

(5) Incorporation of differentiated and effective instruction that responds to individual learner needs including appropriate response to cultural, ethnic, and linguistic diversity;

(6) Integration of technology in curriculum and instruction to enhance learner understanding;

(7) Identification, analysis, and resolution of problems using effective problem-solving techniques;

(8) Communication of a clear vision of excellence, linked to mission and core beliefs that promotes continuous improvement consistent with the goals of the school division.

b. Knowledge understanding, and application of systems and organizations, including;

(1) Systems theory and the change process of systems, organizations and individuals, using appropriate and effective adult learning models;

(2) Aligning organizational practice, division mission, and core beliefs for developing and implementing strategic plans;

(3) Information sources and processing, including data collection and data analysis strategies;

(4) Using data as a part of ongoing program evaluation to inform and lead change;

(5) Developing a change management strategy for improved student outcomes;

(6) Developing empowerment strategies to create personalized learning environments for diverse schools;

(7) Effective communication skills including consensus building, negotiation, and mediation skills.

c. Knowledge understanding and application of management and leadership skills that achieve effective and efficient organizational operations, including;

(1) Alignment of curriculum and instruction and assessment of the educational program to achieve high academic success at the school and division/district level;

(2) 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;

(3) 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;

(4) Principles and issues related to fiscal operations of school management;

(5) Principles and issues related to school facilities and use of space and time;

(6) Legal issues impacting school operations and management;

(7) Technologies that support management functions;

(8) Application of data-driven decision making to initiate and continue improvement in school and classroom practices and student achievement.

d. Knowledge understanding and application of the conditions and dynamics impacting a diverse school community, including;

(1) Emerging issues and trends within school/community relations;

(2) Working collaboratively with staff, families, and community members to secure resources and to support the success of a diverse population;

(3) Developing appropriate public relations and public engagement strategies and processes;

(4) Principles of effective two-way communication, including consensus building and negotiation skills;

(5) Integration of technology to support communication efforts.

e. Knowledge understanding and application of the purpose of education and the role of professionalism in advancing educational goals, including;

(1) Historically and philosophically grounded philosophy of education that reflects commitment to principles of honesty, fairness, caring, and equity in day-to-day professional behavior;

(2) 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;

(3) Reflective understanding of theories of leadership and their application to decision-making in the school setting;

(4) Intentional and purposeful effort to model professional, moral, and ethical standards as well as personal integrity in all interactions;

(5) 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.

f. Knowledge understanding and application of basic leadership theories and influences that impact schools including;

- (1) Concepts of leadership including systems theory, change theory, learning organizations and current leadership theory;
 - (2) Historical leadership theories including organizational theory, motivational theory, political and social systems theory to practical situations;
 - (3) Identify and respond to internal and external forces and influences on a school;
 - (4) Identify and apply the processes of educational policy development at the state, local, and school level; and
 - (5) Identify and demonstrate ways to influence educational policy development at the state, local, and school level.
- g. Embedded learning strategies for improved student learning totaling at least 120 clock hours including;
- (1) Experiential activities that complement, implement, and parallel the university curriculum;
 - (2) Activities that emphasize student work with practical application that shall take place in the internship, the practicum field experience, as well as throughout the university program.
2. Complete a minimum of 320 clock hours of a deliberately structured and supervised internship that provides exposure to multiple sites (elementary, middle, high, central office, agency) with diverse student populations. These experiences shall be an integral component of a Virginia Board of Education approved preparation program. The internship shall be focused on learning for all students and shall occur in a public school or accredit nonpublic school; and
3. 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.)

8VAC20-542-540. Mathematics specialist for elementary and middle education.

A. A mathematics specialist is a teacher in the elementary 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 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 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 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 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 of the role of technology and the ability to use graphing utilities and computers in the teaching and learning of mathematics;
9. Understanding of and the ability to select, adapt, 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. Understanding of leadership skills needed to improve mathematics programs at the school and division levels, including the needs of high 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; and
13. Understanding of and proficiency in grammar, usage, and mechanics and their integration in writing.

8VAC20-542-550. Reading specialist.

The reading specialist program shall ensure that the candidate 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, phoneme awareness, letter recognition, decoding, fluency, vocabulary, reading levels, comprehension; and
 - b. Demonstrate expertise in the ability to use diagnostic data to tailor instruction for acceleration, intervention, remediation, and flexible skill-level groupings.
2. Oral communication. The candidate shall:

- a. Demonstrate expertise in the knowledge, skills, and processes necessary for teaching oral language (speaking and listening);
 - 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; and
 - e. Demonstrate the ability to promote creative thinking and expression, as through storytelling, drama, choral/oral reading, etc.
3. Reading/literature. The candidate shall:
- a. Demonstrate expertise in explicit phonics instruction, including an understanding of sound/symbol relationships, syllables, phonemes, morphemes, decoding skills, 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, summarizing, clarifying, and associating the unknown with what is known;
 - 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 reflectively by selecting quality literature, including fiction and nonfiction, at appropriate reading levels.
4. Writing. The candidate shall:
- a. Demonstrate expertise 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 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 and specialization. The candidate shall:

- a. Demonstrate an understanding of child 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 organize and supervise the reading program within the classroom, school, or division;
- i. Demonstrate effective communication skills in working with a variety of groups, including parents, teachers, administrators, community leaders, etc.; and
- j. Demonstrate knowledge of current research and exemplary practices in English/reading.

8VAC20-542-560. School counselor preK-12.

The school counselor preK-12 program shall ensure that the candidate has demonstrated the following competencies:

1. The ability to support students by cooperatively working with parents/guardians and teachers.
2. Understanding of the principles and theories of human growth and development throughout the lifespan and their implications for school guidance and counseling.
3. Understanding of the social and cultural foundations of education and their implications for school guidance and 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/social development.
6. Understanding of the knowledge, skills, and processes for providing developmental group guidance, including:
 - a. Academic development;
 - b. Career development; and
 - c. Personal/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;
 - d. Consultation; and
 - e. Staffing patterns.
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 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 guidance and counseling programs.

8VAC20-542-570. School psychology.

The school psychology program shall ensure that the candidate has demonstrated the following competencies:

1. Knowledge, skills, and processes for assessing students' cognitive abilities, academic performance, interpersonal emotional/social functioning, and sensory-motor functioning.
2. Understanding of the knowledge, skills, and processes for direct and indirect intervention, including:
 - a. Counseling on an individual, group, or family basis;
 - b. Consulting with administrators, teachers, parents, and other professionals about student problems and appropriate change strategies; and
 - c. Designing and implementing behavior change programs.
3. Psychological foundations of human functioning (biological bases of behavior; cultural diversity; infant, child, and adolescent development; personality theory; human learning; and social bases of behavior) to ensure student academic achievement and student growth and development.
4. Educational foundations of schooling (education of exceptional learners, instructional and remedial techniques, and organization and operations of schools) to ensure effective collaboration with other school professionals.
5. Statistics and research design.
6. School psychology profession, including:
 - a. History and foundations of school psychology;
 - b. Legal and ethical issues;
 - c. Professional issues and standards; and

- d. Role and function of the school psychologist.

8VAC20-542-580. 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. Counseling on an individual, group, or family basis;
 - b. Consulting with administrators, teachers, parents, and other professionals about student problems and appropriate change strategies; and
 - c. Networking with school programs and community agencies to provide essential services for families and children.
2. Understanding of child development, psychopathology, social and environmental conditioning, cultural diversity and family systems.
3. Understanding of the knowledge, skills, and processes for effective casework practice.
4. Understanding of the organization and operations of school systems.
5. Understanding of the knowledge, skills, and processes involved with assessing and programming for exceptional students.
6. Understanding of the school social work profession, including:
 - a. History and foundations of school psychology;
 - b. Legal and ethical issues;
 - c. Professional issues and standards; and
 - d. The role and function of the school social worker.

8VAC20-542-590. Special education speech-language disorders preK-12.

A. The program in special education speech-language disorders preK-12 shall ensure that the candidate has demonstrated the following competencies:

1. Understanding of the knowledge, skills, and processes of communication, oral and written, as defined in the Virginia Standards of Learning and how these are interrelated in forming a sound foundation for the understanding of speech and language acquisition.
2. Understanding of the knowledge, skills and processes of:
 - a. Normal development and the use of speech, voice, hearing, and language;
 - b. Basic sciences (biology and physics) and the basic communication sciences (acoustics, physiological processes of speech, hearing and linguistics); and
 - c. Language acquisition and reading to include: phonemic awareness understanding of sound symbol relationships, phonics, syntax, semantics and comprehension of oral and written language.
3. Understanding of current principles, procedures, techniques, and instruments in:

- a. The evaluation of speech, language, voice and hearing;
 - b. Psycho-educational assessments; and
 - c. Research design.
4. Understanding of the knowledge, skills, and processes of:
 - a. Various types of disorders of speech, language, voice and hearing classifications, causes, and manifestations; and
 - b. Relationships among speech, language, voice and hearing problems, especially multiple disabling conditions.
 5. Understanding of the knowledge, skills, and processes for the use of:
 - a. Augmentation in the habilitation, prevention and rehabilitation of disorders of articulation.
 - b. The selection and use of evidenced based practices in the language, fluency, voice, resonance, and hearing.
 6. Understanding of the knowledge, skills, and processes of the evaluation and treatment of disorders of the oral and pharyngeal mechanisms as they relate to communication, including but not limited to dysphasia.
 7. A level of knowledge and skill in the use of:
 - a. Augmentative and alternative communication devices;
 - b. Modes of communication; and
 - c. Strategies and techniques that promote or facilitate communication.
 8. Understanding of the knowledge, skills, and processes of service delivery and instruction, including:
 - a. Organization and administration of public school programs to provide services for persons with speech-language disorders; and
 - b. Services available from related fields for those with communication disorders.
 9. Understanding of the knowledge, skills, and processes for educating special populations, including:
 - a. Historical perspective;
 - b. Characteristics of learners: developmental and cognitive;
 - c. Medical aspects;
 - d. Linguistic/multicultural aspects;
 - e. Family aspects; and
 - f. Program evaluation.
 10. Understanding of the knowledge, skills, and processes involved in the legal aspects associated with students with disabilities, including:
 - a. Legislative and judicial mandates related to special education;
 - b. Legal decisions related to persons with disabilities;
 - c. Advocacy and self-determination;
 - d. Guardianship;
 - e. Behavior management; and
 - f. Disciplinary practices, policies and procedures, and alternative placements/programs in schools.

11. The ability to understand and manage behavior, including:
 - a. Behavior support systems;
 - b. Individual planning; and
 - c. Research in current practice.
12. Understanding of the current knowledge and scope of the profession and sensitivity to issues of diversity.

B. Completion of 375 clock hours of direct client contact, of which 100 shall be in a supervised educational setting and a minimum of 200 clock hours shall be in speech-language pathology. These clinical clock hours shall be distributed in each of the following areas: diagnosis, management of language disorders, management of voice disorders, management of articulation disorders, management of fluency disorders, and audio logy.

8VAC20-542-600. 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/assessment, use of occupational and labor market information, and functional aspects of disability.
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. 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.
4. 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; and
 - e. Learning and functional skills assessment.