POLICY 2510
Foundations for High-Quality Developmentally Appropriate High School Programming
(Grades 9-12)

September 2025 Edition

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High School

Foundations for High Quality Developmentally Appropriate High School Programming (Grades 9-12)

The completion of high school coursework will prepare all students for post-secondary education, employment, enlistment, entrepreneurship, and everyday living. Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. The required courses outlined below build strong content knowledge and extend disciplines by engaging students in work of quality and substance. In Grades 9 and 10, students build foundational knowledge and skills. In Grades 11 and 12, students enter the personalized aspect of their Personalized Education Plan (PEP), focusing carefully on selected coursework that leads to successful completion of their personal and academic goals. Each student's coursework will be designed to lead directly to placement in entry-level, credit-bearing academic college courses, completion of an industry-recognized certificate or license, a workforce training program, or job placement. Students who do not demonstrate mastery of the approved content standards shall be provided extra assistance and time through personalized learning and support.

Graduation Requirements

22 total credits required — 12 Prescribed — 10 Personalized
Beginning with the 2024-2025 freshman cohort graduation requirements will increase to 23 credits with the addition of a prescribed credit in Personal Finance. 2024-2025 freshman cohort graduation requirements: 23 total credits, including 13 prescribed, and 10 personalized.

The state graduation requirements total 22 credits. For the 2024-2025 freshman cohort, the state graduation requirement is 23 credits. See the High School Programming Chart for specific credits required for graduation.

The County Board of Education Members (CBEM) have the authority to increase graduation requirements for schools in their counties. The county Superintendent shall notify the West Virginia Department of Education (WVDE) of any changes in requirements beyond the state requirements.

Prescribed Credits — The required credit courses that are specifically prescribed to meet high school graduation requirements.

Personalized Course Credit Options — Courses that may be personalized by student and school staff to meet graduation requirements based on the student's post-secondary plans.

Advanced Placement®

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of the National Collegiate Athletic Association (NCAA), Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

Advanced Placement® (AP®) is a program that offers college-level courses and exams to high school students. Students who take AP® classes and obtain qualifying scores on the exams can earn college credit or placement in many universities and colleges.

When choosing an equivalent AP® course to replace one of the required credits or an elective option in social studies and science, please be mindful of the following:

Social studies courses typically address periods of time or topics. Students should not receive credit for both U.S. Studies Comprehensive and AP® U.S. History as the standards for these courses address the same period of time and content. However, when scheduling AP® science courses, students may need to take Biology and/or Chemistry prior to being enrolled in AP® Biology and/or AP® Chemistry. As Biology/Chemistry and AP® Biology/AP® Chemistry standards do not overlap, students may receive credit for both.

AP® Courses with a Lab Experience

The College Board's lab requirement states that 25% of the instructional experience should take place in a laboratory setting with an emphasis on inquiry-based investigations that provide students with opportunities to apply science practices. The AP® course, including the lab experience, should make up one final grade. Students should not receive separate grades and/or credit for the lab experience. The College Board advises that 25% of AP® instructional time be spent in hands-on laboratory work for science courses.

Arts

Subject	Graduation Requirements	Personalized Course Options
The Arts **1 credit**	1 Personalized Credit Note: An AP®, Dual Credit, or IB® Arts course may be substituted for any Arts credit. The Arts *(Policy 2520.9)*	Courses Required to be Offered Four sequential courses in music (both choral and instrumental), visual art (general art and/or studio art), dance, theatre Additional Course Options Arts Offerings Arts College Courses The following CTE courses will fulfill the 1 credit Arts requirement: • Fundamentals of Illustration (1851) • Fundamentals of Graphic Design (1857) • Illustration (1861) • Graphic Design Applications (1859) • Ornamental Metal Work (1982) • Digital Imaging/Multimedia I (1431) • Drafting Techniques (1727) • Floriculture (0213) • Digital Photography (1515) • Millwork or Cabinet Making (2126 or 2127 or 2128 or 2129)

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

The Arts in high school builds upon the middle school arts experience and promotes a higher level of proficiency in performing a range of material or creating two- or three-dimensional artworks, analyzing and processing feedback, engaging in verbal and non-verbal communication, and maintaining integrity in responsible collaboration with peers. Students will develop problem solving and critical thinking skills independently and collaboratively as they engage in the common domains of The Arts – create, connect, explore, perform, relate, respond, and others specific germane to various arts disciplines. Through dance, music, theatre, and visual art, students acquire and develop lifelong abilities to become creators, consumers, and advocates of The Arts.

Counties may choose to offer a variety of arts courses to allow students to personalize this credit requirement. Counties and/or schools must create and have their local board of education approve additional arts course standards in order for the course to meet graduation requirements.

Career Technical Education (CTE)

Subject	Graduation Requirements	Personalized Course Options
Career and Technical Education	See section 6.3: Career and Technical Education Career Technical Education *(Policy 2520.13)*	Required to be Offered One CTE course that teaches parenting skills
		Recommendation Beginning with the 2023-2024 school year, counties shall expand career exploration and offer CTE courses and CTE programs of study in Grades 9 and 10.

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

Counties and/or schools must allow for mastery of the state-approved CTE content standards while ensuring industry certifications or licensing minute requirements are met. Counties must be mindful of transportation times to and from county and multi-county CTE centers when developing those schedules.

Drug-Free Work Zone

Counties offering state-approved CTE programs of study are encouraged to develop a random drug testing policy that applies to all CTE programs, with particular focus on the following:

Identified random drug testing programs of study:

- Allied Health Sciences*
- Animal Processing
- Automotive Technology
- Aviation Maintenance Technician
- Baking and Pastry
- Building Maintenance and Operations
- Career and Work Skills Training (CWST)
- Carpentry
- Collision Repair Technology
- Dental Assisting*
- Diesel Equipment Technology
- Early Childhood Classroom Assistant Teacher
- Electrical Technician
- Emergency and Firefighting Management Services
- Forest Industry
- HVAC Technician
- Industrial Equipment Maintenance
- Industrial Robotics
- JRTOC
- Machine Tool Technology
- Manufacturing: Production and Design
- Masonry
- Millwork and Cabinetmaking
- Pet Grooming
- Plumbing
- Power Equipment Systems
- Power, Structural and Technical Systems
- Pre-Cosmetology
- ProStart Restaurant Management
- Robotics
- Sports Medicine*
- Therapeutic Services*
- Welding

All students who are enrolled in a state-approved CTE program of study aspiring to achieve a county/school issued drug-free certificate and/or to meet the criteria for the Governor's Workforce Credential must pass a minimum of two drug screenings, not less than 30 days apart, offered by the school during the students' senior year.

Computer Science

Subject	Graduation Requirements	Personalized Course Options
Computer Science	Technology and Computer Science *(Policy 2520.14)*	Course Required to be Offered One course in Computer Science
		Additional Course Options Computer Science in the Modern World AP® Computer Science Courses Information Technology (IT) Information Management Web Development Other courses based on student need and interest CTE Computer Science/IT Courses County-created Computer Science/IT Courses College Computer Science Courses

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

In West Virginia high schools, students build upon their middle school foundations in computer science by diving deeper into computer systems, networks, and algorithms. They engage in more complex problem solving, programming, and cybersecurity practices, which are critical for both college and career readiness. This advanced instruction not only equips students with practical technical skills but also fosters responsible and ethical computing practices, aligning with the evolving demands of the modern workforce.

It is the responsibility of all educators to teach the West Virginia College- and Career-Readiness Standards (WVCCRS) for Technology and Computer Science throughout the 9-12 classroom experience. Technology-infused activities may extend the learning environment beyond the normal school day or setting and instill strong digital citizenship skills in students. Computer science is a discipline through which students develop an understanding of computational thinking, networking, data analysis, programming, and the societal impacts of computing.

In addition to the WVCCRS for Technology and Computer Science, all high schools must offer at least one Computer Science course.

Computer Science Graduation Requirement

Per West Virginia House Bill 2411 (signed in the 2025 Regular session), beginning with the 2027–2028 freshman cohort 1 full credit in Computer Science will be required (a list of allowable courses is under development).

- All students shall meet the full 1-credit requirement during their 8th, 9th, 10th, 11th, or 12th grade year.
- Upcoming revisions to Policy 2510 will reflect this increase in graduation requirements.

Approved Statewide Waiver Computer Science

House Bill 2411 (2025 Regular Session) requires that beginning with students entering Grade 9 in the 2027-2028 school year, a public high school student shall be required to earn one unit of credit in a high school computer science course before the student graduates. The one credit required may be earned in Grades 8-12. The computer science course offered by a public high school is required to be of high quality and meet or exceed the curriculum standards established by the WVBE. The bill also requires the WVBE to make a list of course options available to all public schools that may be used to meet the computer credit graduation requirement. Approval of this waiver allows counties and students time to prepare for compliance with the computer science graduation requirement.

Community Readiness

Community Readiness	Counties may allow students with the most significant cognitive disabilities to earn 4 credits in Community Readiness Training aligned with the post-secondary goals in the student IEP.

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

Students with disabilities may earn four Community Readiness credits as their four personalized credits as outlined in Policy 2510: Assuring Quality of Education: Regulations for Education Programs. These personalized programs of study are recommended through an Individualized Education Program (IEP) Team for some students, typically those with the most significant cognitive disabilities, and are created by each district to provide guidance in the development of employment, training/education, and independent living skills. The four courses have an increasing focus on employment opportunities and the skills needed to be successful in those settings, including options for training and/or further education. The courses also address independent living skills and community integration to support students as they become responsible and productive citizens.

Driver Education

Subject	Graduation Requirements	Personalized Course Options
Driver Education	Driver Education *(Policy 2520.8)*	Course Required to be Offered One course in Driver Education

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

Driver Education provides students with the knowledge and skills to operate a motor vehicle safely and efficiently. Additionally, students will gain the knowledge to enable them to make wise decisions as responsible drivers.

All secondary schools are required to offer an approved, comprehensive driver education course at no cost to students. The course may be offered in summer school in addition to the regular instructional term.

In those counties where sufficient public secondary school driver education courses are not available to meet all requests for the course, county boards of education shall, as quickly as possible, make sufficient courses available to fill those requests.

The WVDE offers a Driver Education Authorization Permit to assist counties in meeting personnel needs for this requirement. For more information contact the WVDE Office of Academic Support.

Dual Credit

Dual Credit Policy	CBEM shall adopt a policy (W. Va. Code §18B-1-1) that allows students to earn credit for completion of college courses and other advanced courses outside the school setting. Dual credit policies and revisions must be reviewed by the WVDE. If dual credit courses are used to meet graduation requirements, the alignment documentation must be reviewed by the WVDE. Counties must annually update dual credit course offerings in the online dual credit application.

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

Dual credit courses offer students a unique and valuable opportunity to earn both high school and college credit simultaneously, giving them a head start on their postsecondary education. These courses allow students to challenge themselves academically while gaining exposure to college-level material and expectations. Additionally, dual credit courses help students develop important skills like time management, critical thinking, and self-discipline, all of which are essential for success in higher education and beyond.

Dual credit provides students enrollment in both high school and college coursework. Such coursework must meet both the specified course content standards for secondary course offerings and the college course requirements.

It is the responsibility of the school/county to ensure the college course syllabus aligns to the high school course for which dual credit is earned. Students must be provided the opportunity to master 100% of both the high school course standards as well as the college course content. In order for students to use dual credit courses in place of graduation requirements, the county dual credit policy must be submitted to the WVDE Office of Academic Support for approval by the West Virginia Board of Education (WVBE). A policy template can be found on the WVBE policy webpage at *http://wvde.state.wv.us/policies/*.

Counties are required to update the Dual Credit course offerings on the dual credit application at *https://wveis.k12.wv.us/dual-credit-courses*.

Embedded Credit

Embedded Credit Policy	CBEM are encouraged to establish policy which permits a student who masters the approved content standards for a credit-bearing high school course that are embedded within a second course to receive credit for both courses. If these embedded credit courses are used to meet graduation requirements, the county policy and alignment documentation must be reviewed by the WVDE and approved by the WVBE.

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

By implementing embedded credit, students will have continued opportunities to complete both rigorous academic and career technical education courses/concentrations and receive high-quality instruction that will allow them to work toward mastery of all content standards. The intent of embedded credit is not to create a time-shortened high school experience but rather to provide flexible opportunities for students to participate in advanced academic and career technical education courses.

All embedded credit policies must include the following provision: Students will receive high quality instruction that will allow them to work toward mastery on 100% of the content standards for all embedded credit courses approved by the WVDE Division of Instruction & Career Engagement.

In order for students to use embedded credit courses in place of graduation requirements, the county embedded credit policy must be submitted to the WVDE Office of Academic Support for approval by the West Virginia Board of Education (WVBE). A policy template can be found on the WVBE policy webpage, *http://wvde.state.wv.us/policies/*.

CTE Embedded Credit Courses

Scheduling Embedded Credit Courses - When scheduling students into Embedded Credit courses, it is recommended schools add additional periods to students' schedules while enrolled in the embedded credit course to allow students and parents/guardians to track grades and course completion. School and/or county personnel can also utilize the "Combined Reports" tab in WVEIS 2.0 to see a full schedule with courses from both the CTE center and the home high school.

Transcribing Embedded Credit Courses — CTE completers in WVDE approved embedded programs of study may receive embedded credit for Transition English Language Arts for Seniors, Transition Mathematics for Seniors, and in some cases Advanced Mathematical Modeling or Computer Science and Mathematics. Students who are enrolled in and successfully complete an appropriate CTE Program of Study and successfully complete a virtual math or English embedded credit supplemental course or other appropriate supplemental math or English instructional program to address the missing Math or ELA course standards, will be awarded the credit for transition ELA and/or Math. Local counties/

schools can decide when to transcribe the embedded credit. Schools who require a mathematics credit every year of high school, may want to consider continuing to transcribe the embedded math credit senior year.

Correctly coding embedded credit courses — When two teachers are collaborating to deliver the embedded credit, it is very important that courses be properly entered into WVEIS to ensure the course is properly documented on transcripts in such a way that it will be recognized by a two- or four-year college/university. Updated WVEIS extension: Specialized Learning-02-Embedded Credit

Transition English Language Arts for Seniors - WVEIS Code 4013

- Note that NCAA may not approve this course; however, counties/schools can individually apply for NCAA approval. Students are responsible for verifying that their course selection will support their eligibility as student-athletes as defined by the NCAA.
- Students earning embedded credit for Transition ELA for Seniors may not be scheduled in any other senior level ELA course at the home high school per Policy 2510.

Transition Math for Seniors - WVEIS Code 3052

- Students are responsible for verifying that their course selection will support their eligibility as student-athletes as defined by the NCAA. The NCAA does not recognize Algebra I Support, Math I Lab, or Transition Mathematics for Seniors as credit-bearing courses for admission. Schools and technical centers are responsible for determining which math courses have been approved by the NCAA.
- Students earning embedded credit for Transition Math for Seniors may not be scheduled in Transition Math for Seniors at the home high school per Policy 2510.

Advanced Mathematical Modeling - WVEIS Code 3025

- Students earning embedded credit for Advanced Mathematical Modeling may not be scheduled in Advanced Mathematical Modeling at the home high school per Policy 2510.

Computer Science and Mathematics - WVEIS Code 3161

- This course must be taught by a certified mathematics teacher to receive one of the personalized mathematics credits towards graduation.
- Students earning embedded credit for Computer Science and Mathematics may not be scheduled in Computer Science and Mathematics at the home high school per Policy 2510.

Awarding Grades- Credit will be awarded at the end of a particular course or multiple courses where the credit is embedded. Students must receive an actual letter grade they cannot receive a pass/fail. Grades earned in CTE program of study courses may be different than the grades awarded in Embedded Math or ELA courses.

Embedded Credit Virtual Components

- The staff from the WVDE Division of Instruction and Career Engagement have created virtual components to support CTE and comprehensive high school teachers assisting students in mastering the required standards for mathematics and ELA embedded credit in CTE programs of study. These virtual components are designed to address the West Virginia College- and Career-Readiness Standards.
- Counties/schools offering embedded credit who do not have certified Math or ELA teachers available, are required to utilize the mini-virtual courses beginning with the 2022-2023 Grade 9 cohort.

- Counties/schools offering embedded credit who have certified Math or ELA teachers available, may decide to utilize the mini-virtual courses to support Math and ELA instruction.
- **Cost:** Provided free through the WVDE.
- **Access to Course:** West Virginia Virtual School through D2L, for registration information contact the WVDE.
- **Teacher of Record:** County Math or ELA teacher currently working with embedded credit in CTE courses.
- **Grading and Transcription:** Transition Math or English Language Arts for Seniors will be transcribed with the grade the students receive for the online course. Teachers have the ability to add to the virtual course.
- **More Information:** The county teachers at the CTE centers or Comprehensive High Schools employed to assist with embedded credit will remain as the teacher of record for these mini-virtual courses and will still be responsible for supporting the Mathematic and ELA standards embedded into the actual CTE courses.
- **Updated WVEIS extension for virtual courses:**
  - Environment-04-County Virtual, curriculum leased through WVLearns (formerly 'Q' courses)
  - Specialized Learning-02-Embedded Credit

English Language Arts (ELA)

Subject	Graduation Requirements	Personalized Course Options
English Language Arts (ELA) 4 credits	3 Prescribed Credits English 9 English 10 English 11 1 Additional Personalized Credit from Course Options Note: An AP®, Dual Credit, or International Baccalaureate (IB®) ELA course may be substituted for an equivalent ELA credit. English Language Arts *(Policy 2520.1A)*	Courses Required to be Offered One credit from English 12 or Transition English Language Arts for Seniors or Creative Writing and Reading or Technical English Language Arts Additional Course Options English Language Arts College Courses County-created and Approved English Language Arts Courses based on student need and interest ensuring state standards for English are met.

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

The high school ELA experience is a literacy-rich environment and provides numerous opportunities to read, discuss, and write in response to complex texts appropriate for Grades 9-12. Students are given opportunities to engage with a balance of both literary and informational texts and to write for a variety of purposes and audiences, including an even distribution of argumentative, informative, and narrative writing. Students in Grades 9-12 will continue to enhance their skills in a developmentally appropriate progression toward proficiency.

Personalized ELA Credit Options
Students may choose one of the following courses to fulfill the personalized credit: English 12 OR Transition English Language Arts for Seniors OR Creative Writing and Reading OR Technical English Language Arts OR equivalent AP®, IB, or dual credit courses. These courses all contain the same standards; therefore, students may only receive credit for one.

English 12
The Grade 12 ELA experience is a literacy-rich environment and provides numerous opportunities to read, discuss, and write in response to complex texts appropriate for Grade 12. Students are given opportunities to engage with a balance of both literary and informational texts and to write for a

variety of purposes and audiences, including an even distribution of argumentative, informative, and narrative writing. Students in Grade 12 will continue to enhance their skills, culminating in their developmentally appropriate progression toward proficiency.

Creative Writing and Reading
Creative Writing and Reading fulfills the fourth course credit option in English Language Arts for graduation. Standards for this course emphasize analytical reading and the creation of a body of student's original work as a reflection of growth and development in the student's writing craft over time. Students engage in rigorous examination of prose, poetry, and drama through the application of multiple critical lenses. Special attention is given to studying literary structures and elements beyond the scope of foundational English Language Arts courses.

Technical English Language Arts
Technical English Language Arts fulfills the fourth course credit option in English Language Arts for graduation. The standards for this course are found in Policy 2520.1A, West Virginia College- and Career-Readiness Standards. Technical English Language Arts is designed to enhance students' communication skills through relevant, industry-specific contexts for reading, writing, speaking/listening, and language. Students engage in rigorous examination of technical and career related texts through real and simulated professional discourse experiences.

Transition English Language Arts for Seniors
Transition English Language Arts for Seniors focuses on a set of specific English Language Arts standards for students who have not met the college- and career-readiness benchmark on the SAT School Day or other nationally recognized college admissions assessments. These standards are in Policy 2520.1A, West Virginia College- and Career-Readiness Standards for English Language Arts.

Health

Subject	Graduation Requirements	Personalized Course Options
Health **1 credit**	1 Prescribed Credit Health 9-12 Wellness Education *(Policy 2520.5)*	Additional Course Options Health College Courses Dual Credit Courses

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

High school health education programs provide students with the knowledge and skills needed to lead healthy lifestyles. Students have the opportunity to obtain, interpret, and understand basic health information and services. Health literacy develops critical thinking and problem-solving skills, producing self-directed learners, effective communicators, and responsible, productive citizens.

According to W. Va. Code, all health courses must:

- Include the administration of the Health Education Assessment Project (HEAP) to all students enrolled in high school health education
- Include instruction in the prevention, transmission, and spread of HIV/AIDS and other STDs/STIs

An opportunity shall be afforded to the parent and/or guardian of a child subject to instruction in the prevention, transmission, and spread of AIDS and other STDs/STIs to examine the course curriculum requirements and materials to be used in such instruction. The parent or guardian may exempt such child from participation in such instruction by giving notice to that effect in writing to the school principal.

In the subject of wellness education in any of the Grades 6 through 12, as considered appropriate by the county board, instruction shall include at least 60 minutes of instruction for each student on the dangers of opioid use, the additive characteristics of opioids, and safer alternatives to treat pain.

County Boards of Education are required to provide at least 30 minutes of instruction on the proper administration of cardiopulmonary resuscitation (CPR) and the psychomotor skills necessary to perform CPR to all students prior to high school graduation.

Mathematics

Subject	Graduation Requirements	Personalized Course Options
Mathematics **4 credits** Note: Beginning with the 2024-2025 freshman cohort, Math I Lab and Algebra I Support will no longer count toward a mathematics graduation requirement. Beginning with the 2023-2024 school year, counties may offer one credit of Introduction to Mathematical Application (Grades 9-12). Students may take Data Science as a personalized mathematics credit.	2 Prescribed Credits Algebra I or Math I Geometry or Math II 2 Additional Personalized Credits from Course Options Note: An AP®, Dual Credit, or IB® Mathematics course may be substituted for an equivalent Mathematics credit. Mathematics *(Policy 2520.2B)*	Courses Required to be Offered Algebra II/Math III Trigonometry/Pre-calculus/Math IV, Applied Statistics, Transition Mathematics for Seniors Additional Course Options Introduction to Mathematical Applications AP® Computer Science A Advanced Mathematical Modeling Calculus Statistics Quantitative Reasoning Mathematics college courses Computer Science and Mathematics County-created and Approved Math Courses higher than Math III or Algebra II Financial Algebra/Mathematics Data Science

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

Mathematics is essential for success in post-secondary education, employment, enlistment, entrepreneurship, and everyday living. The prescribed mathematics credit courses provide students with the opportunity to learn and explore math concepts related to the number system, algebra, functions, geometry, modeling, and probability and statistics to be college- and career-ready and prepared to study more advanced mathematics. The personalized mathematics credit courses enhance a child's mathematics experience with course options aligned to their post-secondary goals.

All students complete four credits of mathematics; however, a student's enrollment in a mathematics course for each year of high school must be determined by county policy.

Guidance Concerning Institutions of Higher Education and High School Graduation Requirements

Four credits of mathematics are required for high school graduation. Two credits of mathematics are prescribed; students must complete either Algebra I and Geometry or Math I and Math II. Two credits of mathematics are personalized; students should carefully choose mathematics courses that best meet their individual interests and needs. Informed decisions regarding choice of personalized mathematics courses should include the student, his or her parent and/or guardian, the teacher advisor, and the school counselor. Districts are encouraged to work with their mathematics leadership, teachers, and curriculum coordinators to design course sequences that best meet the abilities and needs of their students.

Students should check with their specific higher education institutions regarding mathematics requirements needed for admission. Undergraduate admission to four-year colleges and universities, as well as the Promise Scholarship, may require the completion of Algebra II/Math III.

Algebra II/Math III

- Algebra II and Math III are no longer separate courses
- Algebra II/Math III is the updated course with revised standards
- The course code for Algebra II/Math III is 3072

Trigonometry/Pre-calculus/Math IV

- Trigonometry/Pre-calculus and Math IV are no longer separate courses
- Trigonometry/Pre-calculus/Math IV is the updated course with revised standards
- The course code for Trigonometry/Pre-calculus/Math IV is 3073

Introduction to Mathematical Applications

- Students in Grades 9-12 are eligible to take this course
  - This is the only mathematics course that students may be enrolled in prior to Algebra I or Math I
- This course is a personalized course option
- This course is a career-based mathematics course option

Math I Lab or Algebra I Support

- Beginning with the 2024-25 freshman cohort, Math I Lab and Algebra I Support no longer count toward a mathematics graduation credit requirement
- Counties may continue to offer this course as an elective course
  - Counties must create and approve local standards prior to awarding credit

Math III Technical Readiness (TR) and Math IV TR

- Math III TR is no longer a mathematics course
  - Any student enrolled in Math III TR for original credit after the 2023-24 school year will not earn a credit for the purposes of high school graduation
- Students who received a Math III TR credit in the 2023-24 school year must be enrolled in Math IV TR during the 2024-25 school year
- Higher education institutions and the Promise Scholarship will not recognize Math III TR and Math IV TR as two distinct mathematics credits for the purpose of college admission

Transition Mathematics for Seniors

- This course counts as a fourth mathematics credit
- This course contains a specific set of standards for students who have not met college- and career-readiness benchmarks on SAT School Day or other nationally recognized college admissions assessments
- This course prepares college-bound students for credit bearing post-secondary mathematics courses

AP Computer Science A and Computer Science and Mathematics

- These courses must be taught by a certified mathematics teacher in order for students to receive one of the personalized mathematics credits towards graduation

Applied Statistics

- This course is designed to provide engaging, everyday experiences in statistical reasoning and support students in preparation for the SAT School Day

Data Science

- Data Science is an interdisciplinary field where mathematical principles and scientific methods are applied to datasets using technology and computing skills to solve problems
- This course is designed to provide an opportunity for students to explore applications of mathematics, statistics, and computer science
- Standards for this course are found in *Appendix A* of this document

Information Concerning the NCAA Requirements

Students are responsible for verifying that their course selection will support their eligibility as student-athletes as defined by the NCAA. Algebra I Support, Math I Lab, and Transition Mathematics for Seniors do not meet the requirements for NCAA eligibility. The school is responsible for communicating to students and parents and/or guardians which mathematics courses meet NCAA eligibility requirements.

Personal Finance

Subject	Graduation Requirements	Personalized Course Options
Personal Finance **1 Credit** Beginning with the 2024-2025 freshman cohort, Personal Finance is a required credit	1 Prescribed Credit Personal Finance (1451) West Virginia Career-Readiness Programs of Study/Standards for Career Technical Education *(Policy 2520.13)*	*Note: While the Personal Finance credit will go into effect with the 2024-2025 freshman cohort, counties may choose to implement this requirement early. Students must take this course during their junior or senior year.*

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

Personal Finance Graduation Requirement and Credentialing Guidance

In accordance with the passage of West Virginia Senate Bill 283 on March 26, 2025, updates to WVBE Policy 2510 are required to incorporate the amendments outlined in the legislation. Recognizing that schools are currently scheduling students for the 2025–2026 school year, the WVDE is providing the following guidance to ensure consistency and compliance.

Personal Finance Graduation Requirement

Per Policy 2510, beginning with the 2024-2025 freshman cohort, graduation requirements increase to 23 credits, including 1 full credit in Personal Finance, (Course Code 1451).

- All students shall meet the full 1-credit requirement during their 8th, 9th, 10th, 11th, or 12th grade year.

Educator Credentialing and Course Eligibility

Business teachers with any of the following endorsements are eligible to teach Personal Finance (Course Code 1451): 0064, 0400, 0419, 0500, 0519, 0560, 0561, 0600, 0603, 0605, 7721, 7722 and History teachers that met the June 30, 2024, deadline to obtain the Personal Finance Specialist Advanced Credential.

Certified teachers licensed to teach Grades 5–12 may pursue the Personal Finance Specialist Advanced Credential through one of two pathways:

- Completion of Finance University, a four-day, in-person training
- Completion of the Personal Finance Specialist Advanced Credential via WVDE E-Learning

Approved Statewide Waiver Personal Finance

Senate Bill 283 (2025 Regular Session) allows students to take the newly created personal finance course in Grades 8-10 in addition to Grades 11-12, as previously limited by statute. Additionally, it includes a provision allowing credits earned in Grades 8-10 during the 2024-2025 school year to be applied retroactively to meet the mandatory graduation requirement.

Personalized Education Plan (PEP)

Subject	Graduation Requirements	Personalized Course Options
Personalized Education Plan (PEP) 4 credits	4 Personalized credits 4 credits in a CTE Program of Study or 4 credits that lead to post-secondary goals	Each student's PEP will identify a career cluster and either a CTE program of study or course work that will lead directly to college placement, attainment of an industry-recognized certificate or license, a workforce training program, or job placement. Best practices encourage students to experience the following: an AP®, IB®, dual credit, and/or Advanced Career (AC) course with corresponding examination, 2 credits in one world language, an additional science, a computer science, an online/digital learning experience, Grow Your Own (GYO) WV Teaching Pathway, entrepreneurial experiences, and/or 4 credits culminating in acquisition of industry-recognized CTE credential focused on career aspirations.

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

Annual reviews of the PEP will include revisiting academic offerings, career plans, and review of various interests, learning styles, career and academic assessments to guide any changes to course selections. It is imperative that students verify high school course choices with their chosen post-secondary institution of learning.

Below are the two options for helping students to select their four personalized credits:

- State approved CTE programs of study
- Four courses aligned to their post-secondary goals

To support PEP development, it is recommended schools use the online PEP available within WVEIS 2.0. The PEP is developed in Grade 8 for Grades 9-10. High school counselors and/or teacher advisors need to work with students and parents/guardians to develop the PEP for Grades 11 and 12.

Schools must use a variety of career development resources and collaborative, integrated processes to ensure all students complete various career and academic assessments to guide course selections and revisions to the PEP. Schools must identify a source and process to document these various assessments in a portfolio system that connects exploration, self-discovery, career awareness, and planning activities with development and revisions to the PEP.

Physical Education

Subject	Graduation Requirements	Personalized Course Options
Physical Education (PE) 1 credit	1 Prescribed Credit PE 9-12, Integrated PE, or counties may choose to offer Extracurricular/ Interscholastic PE both graded and non-graded. Wellness Education *(Policy 2520.5)*	Additional Course Options JROTC I and II will fulfill the 1 credit PE requirement Dual Credit Courses Other PE courses based on student need and interest paired with the integrated online course

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

High school physical education programs focus on fitness, offer diverse movement patterns, develop motor skills, and emphasize lifetime activities. Students engage in a wide variety of competitive and non-competitive activities to maintain an active lifestyle.

According to W. Va. Code §18-2-7(a), all PE courses must:

- Engage students in moderate to vigorous-intensity physical activity (MVPA) for at least 50% of class time
- Include the administration of the FitnessGram® to all students

FitnessGram® Body Composition/Body Mass Index Assessment Guidance

Physical education teachers conducting Body Mass Index (BMI) assessments should adhere to all safeguards to minimize potential harm and maximize benefits by establishing a safe and supportive environment for all students. Adequate time should be allowed for screening to ensure appropriate assessment, confidentiality, and individual privacy. Proper notification should be given to parents to allow BMI calculation by the student's health care provider if they so choose. Utilization of the school nurse is also an acceptable practice. Confidentiality is key when reporting this information for FitnessGram® administration and reporting purposes.

Alternate Attainment of PE Credit

Counties have the flexibility to allow, at their discretion, students to receive PE credit in a variety of ways. If counties choose to offer alternate ways to deliver PE, it is recommended they create a policy outlining allowable options.

Integrated Physical Education (WVEIS 7949)

Integrated PE uses a blended learning approach which combines a free, abbreviated online PE course available through the West Virginia Virtual School (WVVS), instructed by a school or county-provided

PE teacher, with a physically active credit-bearing elective course (e.g., weightlifting, show choir, dance). Students will receive a credit and a grade for both PE and the physically active course.

Extra-curricular/Interscholastic Physical Education Graded (WVEIS 7949)
This option allows students to earn PE credit by combining an extracurricular/interscholastic activity with the free, online Integrated PE course available from the WVVS and administered by a local PE teacher of record. The PE teacher will issue a grade for this course.

Extra-curricular/Interscholastic Physical Education Non-Graded (WVEIS 7948)
This option allows students to earn PE credit using an extra-curricular/interscholastic activity. The course must be transcribed as non-graded if the county chooses to utilize this option. When transcribing non-graded Extra-curricular PE in a student's credits, leave Credits Attempted, Grade Mark, Grade Points, and Weighted Grade Points blank. This ensures that the student will get credit, but the course will not impact their GPA.

Extracurricular Activities — Activities that are not part of the required instructional day or curricular offerings but are under the supervision of the school. School facilities may be used for athletics, non-instructional assemblies, social programs, entertainment, and other similar activities. All rules and policies that apply to the instructional day also apply to extracurricular activities (Policy 2436.10).

Please see *Appendix B* for transcribing guidance.

Science

Subject	Graduation Requirements	Personalized Course Options
Science **3 credits**	2 Prescribed Credits Earth and Space Science Biology 1 Additional Personalized Credit from Course Options Note: An AP®, Dual Credit, or IB® Science course may be substituted for an equivalent science credit. Science *(Policy 2520.3C)*	Courses Required to be Offered Chemistry Human Anatomy and Physiology Physics Physical Science Additional Course Options Environmental Science Forensics Science college courses Computer Science – GIS County-created and Approved Science Courses CTE Courses: AC Energy and Power (Courses 1-4) Animal and Plant Biotechnology CASE Principles of Agriculture Science-Plant Principles of Engineering Human Body Systems Natural Resources Management Therapeutic Services (Courses I, II, and III) CASE Food Science and Safety

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

Students will engage in active inquiries, investigations, and hands-on activities at least 50% of the instructional time as they develop and demonstrate conceptual understandings along with research and laboratory skills described in the standards and indicators for science. Safety instruction is integrated into all activities, and students will implement safe procedures and practices when manipulating equipment, materials, organisms, and models.

Three-dimensional learning provides opportunities for students to engage actively and purposefully with the practices of scientists and engineers and apply the science connecting concepts to deepen their understanding of science phenomena across science disciplines.

Engineering is integrated throughout the content as students solve problems within the constraints

they are given. Additionally, educators may choose to teach engineering separate from the other science topics to address computer science, robotics, or other technological processes used for solving problems.

Research indicates extending the instruction beyond the classroom to the community and the environment has led to several positive impacts, from improving academic performance, to enhancing critical thinking skills, to developing personal growth and life-building skills including confidence, autonomy, and leadership. In addition, several studies show that environmental education increases civic engagement and positive environmental behaviors.

Students must take at least three science courses for graduation. It is recommended that students planning to attend institutions of higher education take additional science courses based on admission requirements and career interest.

Physical Science is recommended as the third personalized science credit for students not pursuing a career in science, technology, engineering, or math (STEM). Students intending to pursue a career in STEM are encouraged to take Chemistry as their third science course, followed by Physics their senior year, as this provides an opportunity for deeper understanding of the physical sciences and prepares them for more in-depth studies.

The West Virginia Higher Education Policy Commission (WVHEPC) recognizes all science courses within Policy 2510 as lab sciences for purposes of college admission; however, students should check with their identified institutions of higher education (IHE) for specific admission requirements.

Social and Emotional Advisory System for Student Success

Social and Emotional Advisory System for Student Success	Required Through a Comprehensive School Counseling System, high schools will implement a continuous advisory system that provides students with meaningful supportive relationships and maximizes each student's personalized learning experience. The advisory system will be evidence- and standards-based to include the development of each student's PEP, career portfolio, social skills that enhance school success, and build competent, engaged citizens.

Clarifying Information, Instructional Supports, and Requirements

To better equip students for lifelong success, students will have the opportunity to build relationships with trusted adults, explore post-secondary opportunities, and develop the necessary social-emotional skills to become competent, engaged citizens. Students will learn skills included in the domains of personal and social development, academic and learning development, career and life planning, and global citizenship.

Per WVBE Policy 2510, all West Virginia high schools are required to implement a Social and Emotional Advisory System for Student Success which provides students with meaningful supportive relationships and maximizes students' personalized learning experiences. An adult advocate, advisor, or mentor will work to support students' learning, goal setting, career planning, and personal growth. The advisory system will be evidence- and standards-based to systemically address the West Virginia College- and Career-Readiness Dispositions and Standards for Student Success (WVCCRDSSS), career portfolios, and the teaching of other skills that enhance school success and build competent global citizens. Evidence-based best practices encourage students to remain with the same advisor throughout their high school experience, if possible, to ensure each student has the opportunity to develop a meaningful and supportive relationship with a trusted adult. This continuity promotes school connectedness, personalization of each student's learning experience, and Personalized Education Plan (PEP) development, which begins in the 8th grade. Advisories should meet consistently for at least 30 minutes per session.

Comprehensive School Counseling Program

A comprehensive school counseling program (CSCP) is required to be in place in every West Virginia school. Schools are required to develop/revise their CSCP plan annually to ensure continuous improvement and address current student needs. The CSCP is an integral part of the total school program and is aligned with the school's mission, vision, and strategic plan. The CSCP provides universal prevention for all students, targeted interventions for at-risk students, and intensive interventions for the most at-risk students. Tools to develop and deliver a CSCP may be found on the WVDE School Counseling webpage.

The WVCCRDSSS represent the foundational standards for school counseling programs in West Virginia. School leadership teams, in conjunction with school counselor(s), will design a systematic process for embedding the WVCCRDSSS into courses, cocurricular activities, and extra-curricular activities, while involving all staff and engaging community professionals, when appropriate.

Career Education Integration

Career exploration, development, preparation, and decision making will be a structured, ongoing embedded process that is multi-faceted occurring continuously throughout grades 9-12 for all students. Career education/development should not be taught as a single class that limits career awareness activities to one grading period. Schools should use a variety of methods (course integration, online exploratory activities, community professionals, and career days) and multiple resources to expose students to career opportunities where all staff assist students to explore the career clusters during the instructional day. To facilitate structured, on-going experiences for career exploration and post-secondary planning it is recommended that schools utilize free West Virginia specific resources aligned with the career clusters.

School counselors and/or teacher advisors will use each student's career awareness activities when developing students' PEPs. School counselors and/or teacher advisors will assist students and their parents/guardians to utilize their various interests and career and academic assessments to guide educational planning and career choices. Career exploration activities will be documented in each student's personalized career portfolio that is transportable throughout the student's middle and high school career.

Portfolio

Counties or schools will identify portfolio components, the source, and the process for development, and maintenance of cumulative career portfolios for all students in each school in Grades 6-12. Portfolios can be electronic, hardcopy, or both. It is recommended that schools select a portfolio system that is portable in that it remains with the student throughout his or her educational career.

Social Studies

Subject	Graduation Requirements	Personalized Course Options
Social Studies **4 credits**	3 Prescribed Credits World Studies or an AP® Social Studies Course United States (US) Studies* or U.S. Studies Comprehensive, or AP® U.S. History Civics (includes personal finance) or AP® Government and Politics** 1 Additional Personalized Credit from Course Options Note: Students who take U.S. Studies must utilize Contemporary Studies as their Personalized Credit unless they are utilizing JROTC Courses I-IV. **Students who utilize AP® Government and Politics or Dual Credit Civics must be provided instruction in the personal finance standards found in Civics. Beginning with the 2024-2025 freshman cohort Personal Finance will be removed from Civics to become a separate graduation requirement. Social Studies *(Policy 2520.4)*	Courses Required to be Offered Contemporary Studies Economics Geography World Studies Additional Course Options AP® Social Studies Courses IB® Social Studies Courses Financial Literacy Psychology Social Studies college courses Dual Credit Courses Sociology JROTC (Courses I-IV) County-created and Approved Social Studies Courses

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

High school social studies classrooms promote an understanding of civics, economics, geography, and history. Students develop problem solving and critical thinking skills both independently and collaboratively by engaging in informed inquiry. College- and career-readiness is supported as students acquire and further develop their abilities to be critical consumers of information. Students also learn to use valid sources when writing and speaking.

Guidance Concerning Institutions of Higher Education and High School Graduation Requirements

Students who complete U.S. Studies Comprehensive or AP® U.S. History may choose from a variety of personalized course options that best align with their interests and post-secondary goals.

Junior Reserve Officers' Training Corps (JROTC)

Successful completion of JROTC I (WVEIS course 1065), II (WVEIS course 1066), III (WVEIS course 1080), and IV (WVEIS course 1081) fulfills the personalized social studies credit. While this meets Policy 2510 graduation requirements, this may not meet specific IHE admissions requirements.

Social Studies Assessments

W. Va. Code §18-2-9 requires the administration of a cumulative U.S. History and Civics test prior to high school graduation. It is mandatory for students to take the U.S. History exam at the end of their last U.S. History course (AP® U.S. History, U.S. Studies Comprehensive, or Contemporary Studies). Additionally, the civics exam, which also meets the citizenship test requirement, must be taken at the end of Civics or AP® Government and Politics prior to graduation.

The Social Studies Assessment Monitoring Application allows districts to track the status of students required to take the U.S. History and Civics assessments. Superintendents, directors, and principals have access to the application by using their single sign-on (SSO) credentials. Administrators have access to view students by their WVEIS ID numbers, grade, testing year, and the status of the testing (yes, they have taken the test/no, they have not). Administrators must request a score report for the U.S. history and civics assessments if the test is being used as a classroom grade.

All students in Grades 9-12 will access the assessment through Webtop using their Office 365 credentials. Depending on how scores are utilized, counties should consider testing all students on the same day. While the U.S. History and Civics (citizenship) exams are not formal summative assessments, these exams address specific topics as outlined in W. Va. Code §18-2-9. Only the classroom accommodations, as prescribed on an IEP, should be provided on these exams.

The window for the U.S. history and civics exams for both the fall and spring semester is announced at the beginning of each school year. If a school needs a braille test for these exams, please contact the WVDE as soon as possible. The classroom teacher may administer the U.S. History and Civics exam to their own students. Anyone administering the exams must sign the appropriate confidentiality agreement and email a scanned copy to the WVDE.

Celebrate Freedom Week

W. Va. Code §18-2-9 requires county boards of education to establish a full week recognized as "Celebrate Freedom Week" during the regular school year:

(e) A full week of classes during the week selected by the county board of education shall be recognized as "Celebrate Freedom Week." The purpose of Celebrate Freedom Week is to educate students about the sacrifices made for freedom in the founding of this country and the values on which this country was founded. Celebrate Freedom Week must include appropriate instruction in each social studies class which: (1) Includes an in-depth study of the intent, meaning and importance of the Declaration of Independence, the Emancipation Proclamation and the Constitution of the United States with an emphasis on the Bill of Rights; (2) Uses the historical, political and social environments surrounding each document at the time of its initial passage or ratification; and (3) Includes the study of historical documents to firmly establish the historical background leading to the establishment of the provisions of the Constitution and Bill of Rights by the founding fathers for the purposes of safeguarding our Constitutional republic. The requirements of this subsection are applicable to all public, private, parochial, and denominational schools located within this state. Nothing in this subsection creates a standard or requirement subject to state accountability measures.

World Languages

Subject	Graduation Requirements	Personalized Course Options
World Languages	World Languages *(Policy 2520.7)*	Recommended College- and Career-Readiness Course Options: Most four-year colleges and universities require the completion of at least two credits of the same world language before or during post-secondary studies. Students need to consult with their post-secondary educational institutions concerning world language requirements.
		Courses Required to be Offered Three levels of one world language Students who demonstrate proficiency in two languages (English and one additional) can receive the Seal of Biliteracy.
		Additional Course Options Other world languages and additional levels based on student need and interest AP® World Language World Language college courses

Clarifying Information, Instructional Supports, and Requirements

Students should consult with their chosen post-secondary educational/training institution and scholarship program requirements when choosing course options and electives. Additionally, it is imperative that students review post-secondary program entrance requirements, including requirements of NCAA, Promise, other scholarships, and admissions to specific institutions, various majors, honors programs, etc.

World language learning is an essential part of a student's high school education. The study of a second language advances a student's cognitive abilities and social skills, including critical thinking, problem-solving, resource management, systems thinking, interpersonal communication, and personal qualities such as persistence and resilience. In addition to Career and Technical Education, studying a world language provides students with employability skills needed in the workplace. Bilingual students achieve greater success in a variety workplaces, allowing students to become global citizens and culturally competent contributors to the economy on a larger scale.

The WVCCRS for World Languages make clear that the primary goal of all world language study must be communicative proficiency. To achieve this, the focus in the classroom must shift from the traditional teaching about the language to learning to spontaneously create with the language. Students must have ample opportunity within and beyond the classroom setting to hear and read the language, as well as to interact and present with it.

Instruction of language and culture should be integrated. Culture is introduced daily through the language, allowing students to not only know about the culture, but more importantly, to learn how to behave appropriately in cultural situations.

The world language program cultivates globally competent students through the intentional development of learning pathways that will allow students to acquire linguistic and cultural competencies. The program should be standards-based and focused on developing proficiency in the target language. Thematic units provide scaffolded student learning experiences and opportunities to interact with authentic sources:

- The overall language competency of the learner is measured through performance-based tasks that evaluate how well students communicate in a variety of formative and summative performance tasks.
- The classroom is student-centered, and instruction focuses on meaningful communication.
- The target language is the medium of instruction. The teacher uses the target language a minimum of 90% of the time.
- Students acquire language through authentic cultural contexts.
- Students use language to reinforce core content.
- Students experience the language for listening, speaking, reading, and writing.
- Students participate in learning activities which vary in length, content, and format.
- Students use language individually, in paired groups, in small groups, and in whole-class instruction.
- Language acquisition is facilitated through the teacher's use of visuals, gestures, pictures, manipulatives, and technologies.
- Students are provided the opportunity to self-assess their language competencies and cultural interactions.

West Virginia Seal of Biliteracy

The West Virginia Seal of Biliteracy was adopted in 2020 and implemented during the 2021-2022 academic year. The Seal of Biliteracy is a nationally recognized award presented to high school students that demonstrate a high level of proficiency in English and at least one other language. Students are responsible for any cost associated with testing that is not covered by the school or school system. Students who attain the Seal of Biliteracy may receive college credit. Students should check with their IHE to determine if credit is available for attaining the Seal of Biliteracy. In addition, having the Seal of Biliteracy can assist students with their post-secondary goals.

West Virginia Virtual School

Clarifying Information, Instructional Supports, and Requirements

Counties are required to offer a full-time virtual option for students in Grades 6-12. In addition, it is recommended that all students complete an online learning experience during Grades 9-12. This recommendation can be met through the West Virginia Virtual School (WVVS). The WVVS helps bridge the barriers of time, distance, and inequities for all West Virginia students by providing access to online courses aligned to the WVCCRS. Online teachers with the WVVS have West Virginia certification in the content area. Courses through the WVVS assure consistent, high-quality education for the students of West Virginia.

Registration for the WVVS is automated through the master schedule in WVEIS. To be placed in a virtual course, school administration will follow directions in the WVEIS manual for a West Virginia Virtual School enrollment. Students will automatically be placed in the course overnight. Students have 10 calendar days to begin a course. Students who remain in a course beyond 14 calendar days are committed to completing the course. Any student removed after day 14 must receive a WF. If a school does not have a certified teacher for the course due to staffing loss such as death, retirement or Family and Medical Leave Act (FMLA), special arrangements can be made by contacting the WVVS office.

Final grades for the course are issued by the certified WVVS teacher. The local school facilitator of the course is responsible for reporting grades for WV Virtual School courses to the appropriate school personnel to be entered into the WVEIS data system. In accordance with W. Va. Code, no changes can be made to the online course grade by local school personnel.

County Virtual Instruction Programs (§18-5F-1-6) — As per W. Va. Code §18-5F-1 et seq., a CBEM or a multi-county consortium may create a virtual instruction program for one or more schools serving any composition of grades Kindergarten through 12 by adopting a policy to create the program. When there is a multi-county consortium, CBEM in the consortium shall adopt a policy creating the virtual instruction program. Students enrolled in a county's virtual instruction program are subject to the same state assessment requirements as other students in the district. Students who participate in county virtual instruction programs have the same rights as students in the brick-and-mortar classrooms in terms of school academic and sporting events.

Students enrolled in a county's virtual instruction program are included in the net enrollment of the district in which the student resides and used for the purpose of calculating and receiving state aid. These funds can be used to support the county virtual instructional program. West Virginia Code (§18-5F-1-6) was not meant to replace the WVVS but to allow counties to have the flexibility to allow students to take all or some of their classes virtually. Counties may use courses through WVVS for their online program, write their own courses, or write a policy enabling the county to contract with one or more third-party course providers. Counties are required to review all online courses from an outside course provider to ensure each course aligns with the WVCCRS for the specific course/grade level instruction. Counties must also verify that all teachers have a valid West Virginia teaching certification.

Appendix A: Mathematics Standards

Data Science

All West Virginia teachers are responsible for classroom instruction that integrates content standards and objectives and mathematical habits of mind. Data Science provides students an opportunity to integrate mathematics, statistics, and computer science to analyze and interact with data. Data Science is an interdisciplinary field where mathematical principles and scientific methods are applied to datasets using technology and computing skills to solve problems. It relies heavily on the mathematical and statistical reasoning that is developed during prior courses and contextualizes those concepts with computational solutions. Students will engage with data through cycles of exploration, visualization, analysis, communication, and application. Mathematical habits of mind, which should be integrated in these content areas, include: making sense of problems and persevering in solving them, reasoning abstractly and quantitatively; constructing viable arguments and critiquing the reasoning of others; modeling with mathematics; using appropriate tools strategically; attending to precision, looking for and making use of structure; and looking for and expressing regularity in repeated reasoning. Students will continue developing mathematical proficiency in a developmentally-appropriate progression of standards. Continuing the skill progressions from previous courses, the following chart represents the mathematical understandings that will be developed:

<table>
<tr><th>Explore Data</th><th>Visualize Data</th></tr>
<tr><td>Develop questions that can be answered by exploring multivariable data sets.
Explore implications of complex data sets, collection methods, and privacy concerns.</td><td>Use technology to generate a visualization appropriate to the data set to explore the data and generate questions.</td></tr>
<tr><th>Analyze Data</th><th>Communicate Using Data</th></tr>
<tr><td rowspan="2">Choose appropriate statistics, understanding how algorithms can be used to calculate these values.
Use the shape of distributions to determine probabilities of situations leading to decision-making.
Fit multiple regression models; compare the strength of each model; and use the appropriate regression model to make predictions.</td><td>Represent findings to a particular audience using the relevant interdisciplinary language of mathematics and data science.</td></tr>
<tr><td>Application of Data Science
Utilize a coding language to store, analyze, and model with data.
Describe the application of artificial intelligence, machine learning, and natural language processing to data science.
Complete a capstone project using techniques learned throughout the course.</td></tr>
</table>

Numbering of Standards

The following Mathematics Standards will be numbered continuously. The following ranges relate to the clusters found within Data Science:

Explore Data	
Ask and develop questions, collect data; and consider ethics and bias.	Standards 1-5
Research issues, access multivariable data, and clean data.	Standards 6-9
Visualize Data	
Display data.	Standards 10-15
Analyze Data	
Choose appropriate statistical values.	Standards 16-17
Fit bivariate data to functions using regression.	Standards 18-20
Understand the use of algorithms in statistical tests.	Standards 21-22
Understand probability in relation to decision-making.	Standards 23-24
Communicate Using Data	
Compare distributions.	Standards 25-26
Evaluate claims.	Standards 27-28
Report conclusions in multiple formats.	Standard 29
Applications of Data Science	
Understand security and ethics.	Standards 30-31
Explore artificial intelligence.	Standards 32-35
Utilize a coding language.	Standards 36-41
Apply data science to a capstone project.	Standard 42

Explore Data

Cluster	**Ask and develop questions; collect data; and consider ethics and bias.**
M.DSHS.1	Describe techniques for locating and collecting small- and large-scale data sets.
M.DSHS.2	Recognize a question that can be explored or answered using data science, including statistical questions.
M.DSHS.3	Use technology to informally describe the shape, variability, and center of a distribution of data.
M.DSHS.4	Determine possible sources of statistical bias in a study and how such bias may affect the ability to generalize the results and evaluate a variety of resources used to collect data for accuracy, perspective, credibility, relevance, and privacy concerns.

M.DSHS.5	Understand that random sampling tends to produce representative samples that support valid inferences and generalizations about a population.

Cluster	**Research issues, access multivariable data, and clean data.**
M.DSHS.6	Explore and understand real-world issues and problems using multivariable data sets to hypothesize solutions.
M.DSHS.7	Access data from a variety of sources and apply mathematical concepts and models to solve problems in mathematics and other disciplines.
M.DSHS.8	Using programming techniques and spreadsheet capabilities, clean, store, analyze, and model with data sets.
M.DSHS.9	Compare techniques (e.g., sorting, statistics, searching) for analyzing multivariable data sets.

Visualize Data

Cluster	**Display data.**
M.DSHS.10	Use appropriate tools to represent data visually.
M.DSHS.11	Use appropriate tools and multiple representations to represent and model relationships of quantitative multivariable data consisting of at least four variables.
M.DSHS.12	Describe visual patterns in quantitative data such as clustering, outliers, positive or negative association, linear association, and nonlinear association (e.g., determine form, strength, and direction).
M.DSHS.13	Visualize categorical data using appropriate models such as mosaic plots, stacked bar graphs, etc. Recognize possible associations and data trends.
M.DSHS.14	Use methods of geospatial analysis to graphically or spatially represent natural phenomena.
M.DSHS.15	Understand the use of simulation to compare probabilities from a model to observed frequencies; explain possible sources of discrepancy.

Analyze Data

Cluster	Choose appropriate statistical values.
M.DSHS.16	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
M.DSHS.17	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).

Cluster	Fit bivariate data to functions using regression.
M.DSHS.18	Use technology to create a regression for data that suggests a linear association. Compute the correlation coefficient, coefficient of determination, and residual plot, and interpret the results in the context of the problem.
M.DSHS.19	Fit a function to the data that does not suggest a linear association; use algebraic re-expression of the function to fit the data to solve problems in the context of the situation.
M.DSHS.20	Interpret key features such as intercepts, rate of change, and turning points of models in the context of the data.

Cluster	Understand the use of algorithms in statistical tests.
M.DSHS.21	Examine existing algorithms and describe connections to algebraic and statistical functions, sets, and logic.
M.DSHS.22	Develop algorithms in order to solve mathematical problems.

Cluster	Understand probability in relation to decision-making.
M.DSHS.23	Use the concepts of independent events and conditional probabilities to calculate and interpret outcomes of chance events to make data-informed decisions. Recognize and explain the concepts of conditional probability and independence to multiple audiences and contexts.
M.DSHS.24	Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages, using the area beneath the curve to make estimations of frequencies. Instructional Note: Emphasize that only some data are well described by a normal distribution.

Communicate Using Data

Cluster	Compare distributions.
M.DSHS.25	Assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability (e.g., The mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability on either team; on a dot plot, the separation between the two distributions of heights is noticeable).
M.DSHS.26	Analyze and communicate the benefits and limitations of data visualization tools to solve a real-world problem.

Cluster	Evaluate claims.
M.DSHS.27	Distinguish between correlation and causation. Instructional Note: The important distinction between a statistical relationship and a cause-and-effect relationship is the focus.
M.DSHS.28	Evaluate claims based on data reports gathered from a variety of sources such as the media, scientific journals, census data, etc.

Cluster	Report conclusions in multiple formats.
M.DSHS.29	Report results using an appropriate format (digital presentation, verbal, textual, etc.) and to a particular audience using the relevant language of mathematics and data science. Use data displays and interpret results in terms of the question studied.

Application of Data Science

Cluster	Understand security and ethics.
M.DSHS.30	Explore various legal and ethical standards for data ownership and the implications of the standards to the study and application of data science.
M.DSHS.31	Describe and understand how data is collected from both individuals and groups of individuals, shared, and used.

Cluster	**Explore artificial intelligence.**
M.DSHS.32	Know and identify examples of real-world or societal machine learning applications.
M.DSHS.33	Describe basic machine learning concepts such as training a model and evaluating model performance.
M.DSHS.34	Know and identify examples of natural language processing and its connection to mathematics and probability.
M.DSHS.35	Review ethical issues and the impact of machine learning and natural language processing.

Cluster	**Utilize a coding language.**
M.DSHS.36	Evaluate the appropriateness of programming languages and applications as they relate to data science.
M.DSHS.37	Select a programming language to explore, display, and analyze data.
M.DSHS.38	Identify types of information that can be stored as variables, classify variables, and utilize variables in programs that store data in appropriate ways (e.g., Booleans, characters, integers, floating points, strings).
M.DSHS.39	Interpret relational and logical expressions of level-appropriate complexity using comparison and Boolean operators.
M.DSHS.40	Create programming solutions by reusing existing code to perform analysis or retrieve data (e.g., libraries, APIs, publicly shared code).
M.DSHS.41	Write code or functions that can programmatically manipulate data sets (e.g., slice, merge, subset, sort, fit, summarize, analyze).

Cluster	**Apply data science to a capstone project.**
M.DSHS.42	Choose a problem or issue of interest. Throughout the program of study, research and use existing data set(s) to explore, visualize, analyze, and communicate findings to tell a data story.

Integrated Pathway

- High School Mathematics I
- High School Mathematics II

Mathematics – High School Mathematics I

All West Virginia teachers are responsible for classroom instruction that integrates content standards and the Mathematical Habits of Mind. Students in this course will focus on five critical domains that deepen and extend understanding of linear relationships, in part by contrasting them with exponential phenomena, and in part by applying linear models to data that exhibit a linear trend. Students in Mathematics 1 will use properties and theorems involving congruent figures to deepen and extend understanding of geometric knowledge from prior grades and develop connections between the algebraic and geometric ideas studied. The Mathematical Habits of Mind, which should be integrated in these content areas, include: making sense of problems and persevering in solving them; reasoning abstractly and quantitatively; constructing viable arguments and critiquing the reasoning of others; modeling with mathematics; using appropriate tools strategically; attending to precision; looking for and making use of structure; and looking for and expressing regularity in repeated reasoning. Students will continue developing mathematical proficiency in a developmentally-appropriate progression of standards. Continuing the skill progressions from previous courses, the following chart represents the mathematical understandings that will be developed:

Expressions and Equations	**Functions**
• Interpret algebraic expressions and transforming them purposefully to solve problems (e.g., in solving a problem about a loan with interest rate r and principal P, seeing the expression $P(1+r)^n$ as a product of P with a factor not depending on P).	• Understand contextual relationships of variables and constants (e.g., Annie is picking apples with her sister; The number of apples in her basket is described by n = 22t + 12, where it is the number of minutes Annie spends picking apples; what do the numbers 22 and 12 tell you about Annie's apple picking?).
Geometry: Basics of Geometry	**Geometry: Transformations and Congruence**
• Prove theorems about triangles and other figures (e.g., that the sum of the measures of the angles in a triangle is 180^o). • Use a rectangular coordinate system and build on understanding of the Pythagorean Theorem to find distances (e.g., find the area and perimeter of a real-world shape using a coordinate grid and Google Earth).	• Given a transformation, work backwards to discover the sequence that led to the transformation. • Given two quadrilaterals that are reflections of each other, find the line of that reflection.
Statistics and Probability	
• Use linear regression techniques to describe the relationship between quantities and assess the fit of the model (e.g., use the high school and university grades for 250 students to create a model that can be used to predict a student's university GPA based on his high school GPA).	

Numbering of Standards

The following Mathematics Standards will be numbered continuously. The following ranges relate to the clusters found within High School Mathematics I:

Expressions and Equations	
Interpret the structure of expressions and equations in terms of the context they model.	Standards A1HS.1-2
Extend the properties of exponents to rational exponents.	Standards A1HS.3-4
Write expressions in equivalent forms to solve problems.	Standard A1HS.5
Create equations that describe numbers or relationships.	Standards A1HS.7-9
Solve equations and inequalities in one variable.	Standard A1HS.10
Solve systems of equations.	Standards A1HS.12-14
Represent and solve equations and inequalities graphically.	Standards A1HS.16-18
Functions	
Understand the concept of a function and use function notation.	Standards A1HS.19-21
Interpret functions that arise in applications in terms of a context.	Standard A1HS.22
Analyze functions using different representations.	Standards A1HS.23-25
Build a function that models a relationship between two quantities.	Standards A1HS.26-27
Build new functions from existing functions.	Standard A1HS.28
Construct and compare linear and exponential models and solve problems.	Standard A1HS.29
Geometry: Basics of Geometry	
Experiment with transformations in the plane.	Standard GHS.1
Identify and utilize inductive and deductive reasoning.	Standard GHS.2
Prove geometric theorems.	Standard GHS.3
Use coordinates to prove simple geometric theorems algebraically.	Standard GHS.4
Make geometric constructions.	Standard GHS.5
Geometry: Transformations and Congruence	
Experiment with transformations in the plane.	Standards GHS.6-9
Understand congruence in terms of rigid motions.	Standards GHS.10-13
Use coordinates to prove simple geometric theorems algebraically.	Standards A1HS.30-31, GHS.16
Statistics and Probability	
Summarize, represent, and interpret data on a single count or measurement variable.	Standards A1HS.32-34
Summarize, represent, and interpret data on two categorical and quantitative variables.	Standard A1HS.35
Interpret linear models.	Standards A1HS.36-37

Expressions and Equations

Cluster	**Interpret the structure of expressions and equations in terms of the context they model.**
M.A1HS.1	Interpret linear and exponential expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients. Interpret complicated expressions by viewing one or more of their parts as a single entity. Interpret the parameters in a linear function or exponential function of the form $f(x) = a*b^x$ in terms of a context.
M.A1HS.2	Use the structure of exponential expressions to identify ways to rewrite them.

Cluster	**Extend the properties of exponents to rational exponents.**
M.A1HS.3	Explain the connections between expressions with rational exponents and expressions with radicals using properties of exponents. Extend from application of properties of exponents for expressions with integer exponents.
M.A1HS.4	Rewrite expressions involving radicals, including simplifying, and rational exponents using the properties of exponents.

Cluster	**Write expressions in equivalent forms to solve problems.**
M.A1HS.5	Choose and produce an equivalent form of linear and exponential expressions to reveal and explain properties of the quantity represented by the expression through connections to a graphical representation of the function. • Use the properties of exponents to transform expressions in exponential functions. For example, the expression 1.15^t can be rewritten as $(1.15^{1/12})^{12t} \approx 1.012^{12t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%. Instructional Note: It is important to balance conceptual understanding and procedural fluency in work with equivalent expressions. For example, development of skill in factoring and completing the square goes hand-in-hand with understanding what different forms of a quadratic expression reveal.

Cluster	**Create equations that describe numbers or relationships.**
M.A1HS.7	Create equations and inequalities in one variable, representing linear and exponential relationships, and use them to solve problems. In the case of exponential equations, limit to situations with integer inputs.
M.A1HS.8	Create equations in two or more variables, representing linear and exponential relationships between quantities. In the case of exponential equations, limit to situations with integer inputs.

M.A1HS.9	Represent constraints by linear equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context.

Cluster	**Solve equations and inequalities in one variable.**
M.A1HS.10	Solve linear equations, including equations with coefficients represented by letters, simple exponential equations that rely only on application of the laws of exponents, and compound linear inequalities in one variable.

Cluster	**Solve systems of equations.**
M.A1HS.12	Analyze and solve pairs of simultaneous linear equations. a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. b. Solve simple cases by inspection. (e.g., 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.) c. Solve real-world and mathematical problems leading to two linear equations in two variables. (e.g., given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.)
M.A1HS.13	Understand and demonstrate ways to manipulate a system of two equations and two variables while preserving its solution set.
M.A1HS.14	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables. Include examples of solution sets with no solutions, an infinite number of solutions, and one solution.

Cluster	**Represent and solve equations and inequalities graphically.**
M.A1HS.16	Recognize that the graph of a linear or exponential equation in two variables is the set of all its solutions plotted in the coordinate plane.
M.A1HS.17	Explain why the x-coordinates of the points where the graphs of the linear and/or exponential equations y = f(x) and y = g(x) intersect are the solutions of the equation f(x) = g(x); find the solutions approximately (e.g., using technology to graph the functions, make tables of values or find successive approximations).
M.A1HS.18	Graph the solutions of a linear inequality in two variables as a half-plane and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Functions

Cluster	Understand the concept of a function and use function notation.
M.A1HS.19	Use multiple representations of linear and exponential functions to recognize that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. Develop function notation utilizing the definition of a function to represent situations both algebraically and graphically.
M.A1HS.20	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.
M.A1HS.21	Recognize arithmetic and geometric sequences are functions, sometimes defined recursively, whose domain is a subset of the integers (e.g., the Fibonacci sequence is defined recursively by $f(0) = f(1) = 1$, $f(n+1) = f(n)+ f(n-1)$ for $n \geq 1$).

Cluster	Interpret functions that arise in applications in terms of a context.
M.A1HS.22	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of quantities, and sketch graphs showing key features given a verbal description of the relationship. Relate the domain of a function to its linear and exponential graphs and, where applicable, to the quantitative relationship it describes. Key features of linear and exponential graphs include: intercepts; and intervals where the function is increasing, decreasing, positive, or negative.

Cluster	Analyze functions using different representations.
M.A1HS.23	Graph linear and exponential functions expressed symbolically and show key features of the graph. a. For linear functions, focus on intercepts. b. For exponential functions, focus on intercepts and end behavior. Instructional Note: Provide opportunities for students to graph and show key features by hand and using technology.
M.A1HS.24	Compare properties of two linear or exponential functions each represented in a different way, such as algebraically, graphically, numerically in tables, or from verbal descriptions.
M.A1HS.25	Write a function defined by a linear or exponential expression in different but equivalent forms to reveal and explain different properties of the function. Use the properties of exponents to interpret expressions in exponential functions.

Cluster	Build a function that models a relationship between two quantities.
M.A1HS.26	Write linear and exponential functions that describe a relationship between two quantities. a. Determine an explicit expression, a recursive process, or steps for calculation from a context. b. Combine standard function types using arithmetic operations.
M.A1HS.27	Construct linear and exponential functions, including explicit forms of arithmetic and geometric sequences to model situations, given a graph, a description of a relationship, or given input-output pairs (include reading these from a table).

Cluster	Build new functions from existing functions.
M.A1HS.28	Identify the effect on the graphs of linear and exponential functions, f(x), with f(x) + k, for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology.

Cluster	Construct and compare linear, quadratic, and exponential models and solve problems.
M.A1HS.29	Distinguish between situations that can be modeled with linear functions and with exponential functions. a. Prove that linear functions grow by equal differences over equal intervals; exponential functions grow by equal factors over equal intervals. b. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another. c. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.

Geometry: Basics of Geometry

Cluster	Experiment with transformations in the plane.
M.GHS.1	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.

Cluster	Identify and utilize inductive and deductive reasoning.
M.GHS.2	Construct and justify the validity of a logical argument. a. Identify the converse, inverse, and contrapositive of a conditional statement. b. Translate a short, verbal argument into symbolic form. c. Use Venn diagrams to represent set relationships. d. Use inductive and deductive reasoning.

Cluster	Prove geometric theorems.
M.GHS.3	Use appropriate methods of proof to prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent.

Cluster	Use coordinates to prove simple geometric theorems algebraically.
M.GHS.4	Find the point on a directed line segment between two given points that partitions the segment in a given ratio.

Cluster	Make geometric constructions.
M.GHS.5	Make formal geometric constructions with a variety of tools and methods, such as a compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.: a. copying a segment; b. copying an angle; c. bisecting a segment; d. bisecting an angle; e. constructing perpendicular lines, including the perpendicular bisector of a line segment; and f. constructing a line parallel to a given line through a point not on the line.

Geometry: Transformations and Congruence

Cluster	Experiment with transformations in the plane.
M.GHS.6	Build on prior knowledge from rigid motions to: a. Represent transformations using geometric concepts in the plane. b. Describe transformations as functions that take points in the plane as inputs and give other points as outputs. c. Compare transformations that preserve distance and angle to those that do not.
M.GHS.7	Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.
M.GHS.8	Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.
M.GHS.9	Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, for example, graph paper, tracing paper, or geometry software. Describe a sequence of transformations that will carry a given figure onto another.

Cluster	Understand congruence in terms of rigid motions.
M.GHS.10	Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.
M.GHS.11	Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.
M.GHS.12	Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.
M.GHS.13	Use congruence criteria for triangles to solve problems and to prove relationships in geometric figures.

Cluster	Use coordinates to prove simple geometric theorems algebraically.
M.A1HS.30	Prove the slope criteria for parallel and perpendicular lines and use the slope criteria to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).
M.A1HS.31	Use coordinates to compute perimeters of polygons and areas of triangles and rectangles. Instructional Note: Using the distance formula provides practice with the distance formula and its connection with the Pythagorean theorem.
M.GHS.16	Use coordinates to prove simple geometric theorems about right triangles.

Statistics and Probability

Cluster	Summarize, represent, and interpret data on a single count or measurement variable.
M.A1HS.32	Select applicable representations to display data on the real number line (e.g., dot plots, histograms, and box plots).
M.A1HS.33	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation only as a tool to describe spread and not to explicitly find standard deviation) of two or more different data sets.
M.A1HS.34	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).

Cluster	Summarize, represent, and interpret data on two categorical and quantitative variables.
M.A1HS.35	Represent data on two quantitative variables on a scatter plot and describe how the variables are related. a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear and exponential models. b. Informally assess the fit of a function by plotting and analyzing residuals. Focus should be on situations for which linear models are appropriate. c. Fit a linear function for scatter plots that suggest a linear association.

Cluster	Interpret linear models.
M.A1HS.36	Interpret the rate of change and the constant term of a linear model in the context of the data. Use technology to compute and interpret the correlation coefficient of a linear fit.
M.A1HS.37	Distinguish between correlation and causation.

Mathematics – High School Mathematics II

All West Virginia teachers are responsible for classroom instruction that integrates content standards and the Mathematical Habits of Mind. Students in this course will focus on the need to extend the set of rational numbers, introducing real and complex numbers so that all quadratic equations can be solved. Students will explore the link between probability and data through conditional probability and counting methods, including their use in making and evaluating decisions. The study of similarity will lead students in Mathematics II to an understanding of right triangle trigonometry and connections to quadratics through Pythagorean relationships. Students will explore circles, with their quadratic algebraic representations. The Mathematical Habits of Mind, which should be integrated in these content areas, include: making sense of problems and persevering in solving them; reasoning abstractly and quantitatively; constructing viable arguments and critiquing the reasoning of others; modeling with mathematics; using appropriate tools strategically; attending to precision; looking for and making use of structure; and looking for and expressing regularity in repeated reasoning. Students will continue developing mathematical proficiency in a developmentally-appropriate progression of standards. Continuing the skill progressions from previous courses, the following chart represents the mathematical understandings that will be developed:

Expressions and Equations	**Functions**
• Solve a system consisting of a linear equation and a quadratic equation in two variables (e.g., find the intersection of the circle with a radius of 1 centered at the origin and the line $y = -3(x – 2)$; show your work both graphically and algebraically).	• Find an explicit algebraic expression or series of steps to model the context with mathematical representations (e.g., the total revenue for a company is found by multiplying the price per unit by the number of units sold minus the production cost; the price per unit is modeled by $p(n) = -0.5n^2 + 6$; the number of units sold is n; production cost is modeled by $c(n) = 3n + 7$; write the revenue function).
Geometry: Similarity and Trigonometry	**Geometry: Circles**
• Apply knowledge of trigonometric ratios and the Pythagorean Theorem to determine distances in realistic situations (e.g., determine heights of inaccessible objects using various instruments, such as clinometers, hypsometers, transits, etc.).	• Apply theorems about circles to describe the relationships of components of a circle or formed by a circle and to find arc lengths and areas of sectors of circles.
Geometry: Extending to Three Dimensions and Modeling	**Statistics and Probability**
• Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone.	• Work with probability and using ideas from probability in everyday situations (e.g., compare the chance that a person who smokes will develop lung cancer to the chance that a person who develops lung cancer smokes).

Numbering of Standards

The following Mathematics Standards will be numbered continuously. The following ranges relate to the clusters found within Mathematics:

Expressions and Equations	
Interpret the structure of expressions and equations in terms of the context they model.	Standards A1HS.1-2
Write expressions in equivalent forms to solve problems.	Standard A1HS.5
Perform arithmetic operations on polynomials.	Standard A1HS.6
Solve equations and inequalities in one variable.	Standard A1HS.11
Solve systems of equations.	Standard A1HS.15
Functions	
Interpret functions that arise in applications in terms of a context.	Standard A1HS.22
Analyze functions using different representations.	Standards A1HS.23-25
Build a function that models a relationship between two quantities.	Standard A1HS.26
Build new functions from existing functions.	Standard A1HS.28
Construct and compare linear, quadratic, and exponential models and solve problems.	Standard A1HS.29
Geometry: Transformation and Congruence	
Prove geometric theorems.	Standards GHS.14-15
Use coordinates to prove simple geometric theorems algebraically.	Standard GHS.16
Geometry: Similarity and Trigonometry	
Understand similarity in terms of similarity transformations.	Standard GHS.17-19
Prove theorems involving similarity.	Standards GHS.20-21
Define trigonometric ratios and solve problems involving right triangles.	Standards GHS.22-24
Apply trigonometry to general triangles.	Standards GHS.25-27
Geometry: Circles	
Understand and apply theorems about circles.	Standards GHS.28-29
Find arc lengths and areas of sectors of circles.	Standard GHS.30
Make geometric constructions.	Standards GHS.31-33
Geometry: Extending to Three Dimensions and Modeling	
Explain volume formulas and use them to solve problems.	Standards GHS.34-35
Visualize the relation between two-dimensional and three-dimensional objects and apply geometric concepts in modeling situations.	Standards GHS.36-37
Statistics and Probability	
Understand independence and conditional probability and use them to interpret data.	Standards GHS.38-42
Use the rules of probability to compute probabilities of compound events in a uniform probability model.	Standards GHS.43-46
Use probability to evaluate outcomes of decisions.	Standards GHS.47-48

Expressions and Equations

Cluster	**Interpret the structure of expressions and equations in terms of the context they model.**
M.A1HS.1	Interpret linear, exponential, and quadratic expressions that represent a quantity in terms of its context. a. Interpret parts of an expression, such as terms, factors, and coefficients. b. Interpret complicated expressions by viewing one or more of their parts as a single entity. c. Interpret the parameters in a linear function or exponential function of the form $f(x) = a*b^x$ in terms of a context.
M.A1HS.2	Use the structure of quadratic expressions to identify ways to rewrite them.

Cluster	**Write expressions in equivalent forms to solve problems.**
M.A1HS.5	Choose and produce an equivalent form of linear and quadratic expressions to reveal and explain properties of the quantity represented by the expression through connections to a graphical representation of the function. a. Factor a quadratic expression to reveal the zeros of the function it defines. b. Complete the square in a quadratic expression, when a=1 only, to reveal the maximum or minimum value of the function it defines. Instructional Note: It is important to balance conceptual understanding and procedural fluency in work with equivalent expressions. For example, development of skill in factoring and completing the square goes hand-in-hand with understanding what different forms of a quadratic expression reveal.

Cluster	**Perform arithmetic operations on polynomials.**
M.A1HS.6	Recognize that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials. Focus on linear or quadratic terms.

Cluster	**Solve equations and inequalities in one variable.**
M.A1HS.11	Solve quadratic equations in one variable by inspection (e.g., for $x^2 = 49$), taking square roots, factoring, completing the square when a=1 only, and the quadratic formula, as appropriate for the initial form of the equation. a. Recognize the concept of complex solutions when the quadratic formula gives complex solutions, write them as $a \pm bi$ for real numbers a and b. b. Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x - p)^2 = q$. Derive the quadratic formula from this method of completing the square.

Cluster	Solve systems of equations.
M.A1HS.15	Solve a simple system consisting of a linear equation and a quadratic equation in two variables graphically.

Functions

Cluster	Interpret functions that arise in applications in terms of a context.
M.A1HS.22	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of quantities, and sketch graphs showing key features given a verbal description of the relationship. Relate the domain of a function to its quadratic graph and, where applicable, to the quantitative relationship it describes. Key features of quadratic graphs include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximum or minimum; symmetry; and end behavior.

Cluster	Analyze functions using different representations.
M.A1HS.23	Graph quadratic functions expressed symbolically and show key features of the graph. For quadratic functions, focus on intercepts, maxima, minima, end behavior, and the relationship between coefficients and roots to represent in factored form. Instructional Note: Provide opportunities for students to graph and show key features by hand and using technology.
M.A1HS.24	Compare properties of two quadratic functions each represented in a different way, such as algebraically, graphically, numerically in tables, or from verbal descriptions.
M.A1HS.25	Write a function defined by a quadratic expression in different but equivalent forms to reveal and explain different properties of the function. Use the process of factoring and completing the square for a=1 only in a quadratic function to show zeros, extreme values, symmetry of the graph, the relationship between coefficients and roots represented in factored form and interpret these in terms of a context.

Cluster	Build a function that models a relationship between two quantities.
M.A1HS.26	Write quadratic functions that describe a relationship between two quantities. a. Determine an explicit expression, a recursive process, or steps for calculation from a context. b. Combine standard function types using arithmetic operations.

Cluster	Build new functions from existing functions.
M.A1HS.28	Identify the effect on the graphs of quadratic functions, g(x), with g(x) + k, k g(x), g(kx), and g(x + k) for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology.

Cluster	Construct and compare linear, quadratic, and exponential models and solve problems.
M.A1HS.29	Distinguish between situations that can be modeled with linear functions, with exponential functions, and with quadratic functions. Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly or quadratically. Extend the comparison of linear and exponential growth to quadratic growth.

Geometry

Cluster	Prove geometric theorems.
M.GHS.14	Use appropriate methods of proof to prove theorems about triangles and lines. Theorems include: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.
M.GHS.15	Use appropriate methods of proof to prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.

Cluster	Use coordinates to prove simple geometric theorems algebraically.
M.GHS.16	Use coordinates to prove simple geometric theorems about quadrilaterals and circles algebraically (e.g., derive the equation of a circle of given center and radius using the Pythagorean Theorem).

Geometry: Similarity and Trigonometry

Cluster	Understand similarity in terms of similarity transformations
M.GHS.17	Verify experimentally the properties of dilations given by a center and a scale factor. a. A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged. b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.

M.GHS.18	Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.
M.GHS.19	Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.

Cluster	**Prove theorems involving similarity.**
M.GHS.20	Use appropriate methods of proof to prove theorems about triangles involving similarity. Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.
M.GHS.21	Use similarity criteria for triangles to solve problems and to prove relationships in geometric figures. Use the Pythagorean Theorem and similarity criteria to derive and apply special right triangles to solve problems.

Cluster	**Define trigonometric ratios and solve problems involving right triangles.**
M.GHS.22	Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.
M.GHS.23	Explain and use the relationship between the sine and cosine of complementary angles.
M.GHS.24	Use trigonometric ratios and the Pythagorean Theorem to solve applied problems in right triangles.

Cluster	**Apply trigonometry to general triangles.**
M.GHS.25	Derive the formula A= 1/2 ab sin(C) for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.
M.GHS.26	Prove the Laws of Sines and Cosines extending the definitions of sine and cosine to obtuse angles.
M.GHS.27	Understand and apply the Law of Sines and the Law of Cosines to solve problems and to find unknown measurements in right and non-right triangles.

Geometry: Circles

Cluster	**Understand and apply theorems about circles.**
M.GHS.28	Prove that all circles are similar.
M.GHS.29	Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.

Cluster	Find arc lengths and areas of sectors of circles.
M.GHS.30	Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.

Cluster	Make geometric constructions.
M.GHS.31	Construct the inscribed and circumscribed circles of a triangle and prove properties of angles for a quadrilateral inscribed in a circle.
M.GHS.32	Construct a tangent line from a point outside a given circle to the circle.
M.GHS.33	Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.

Geometry: Extending to Three Dimensions and Modeling

Cluster	Explain volume formulas and use them to solve problems.
M.GHS.34	Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. Use dissection arguments, Cavalieri's principle, and informal limit arguments.
M.GHS.35	Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems, including how area and volume scale under similarity transformations.

Cluster	Make geometric constructions.
M.GHS.36	Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.
M.GHS.37	Use two- and three-dimensional geometric shapes and circles, their measures, and their properties to describe objects in real-world applications. a. Apply concepts of density based on area and volume in modeling situations. b. Apply geometric methods to solve design problems to satisfy given constraints.

Statistics and Probability

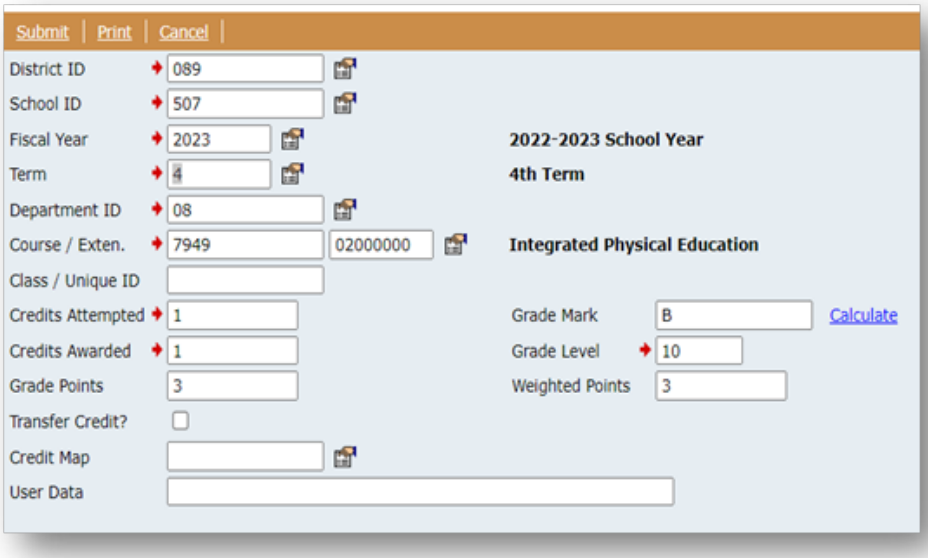
Cluster	Understand independence and conditional probability and use them to interpret data.
M.GHS.38	Describe events as subsets of a sample space using characteristics of the outcomes, or as unions, intersections, or complements of other events.
M.GHS.39	Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities. Use this characterization to determine if they are independent.

M.GHS.40	Recognize the conditional probability of A given B as P(A and B)/P(B), and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.
M.GHS.41	Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities.
M.GHS.42	Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.

Cluster	**Use the rules of probability to compute probabilities of compound events in a uniform probability model.**
M.GHS.43	Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A and interpret the answer in terms of the model.
M.GHS.44	Apply the Addition Rule, P(A or B) = P(A) + P(B) - P(A and B), and interpret the answer in terms of the model.
M.GHS.45	Apply the general Multiplication Rule in a uniform probability model, P(A and B) = P(A)P(BI A)= P(B)P(A I B), and interpret the answer in terms of the model.

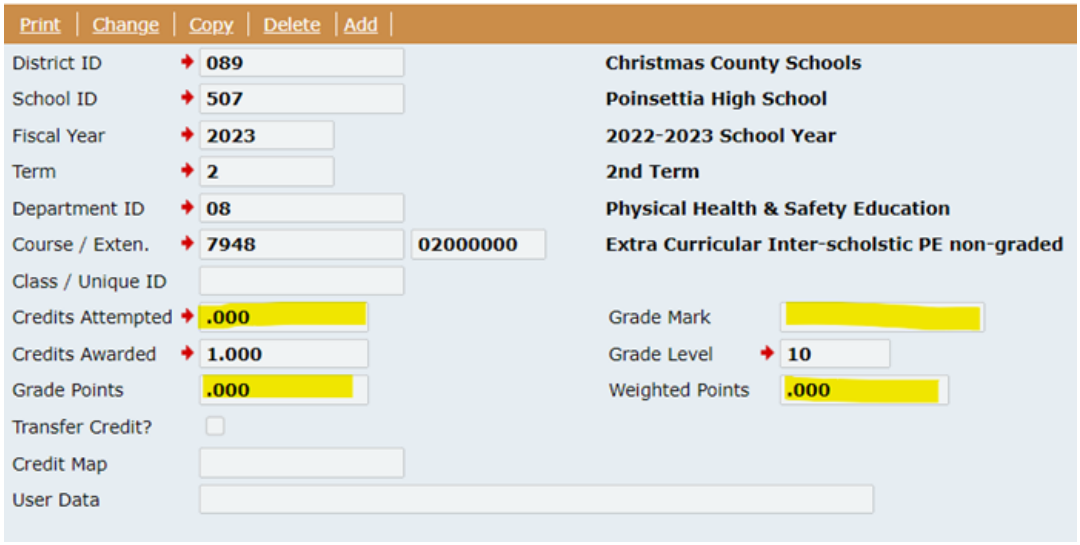
Appendix B: Transcribing Guidance

Integrated Physical Education (WVEIS 7949) Transcribing Guidance



Extra-curricular/Interscholastic Physical Education (WVEIS 7948)
Non-Graded Transcribing Guidance

When transcribing non-graded extra-curricular PE in a student's credits, **leave Credits Attempted, Grade Mark, Grade Points, and Weighted Grade Points blank**. This ensures that the student will get credit, but the course will not impact their GPA. This is what it will look like on the transcript.



2022-2023 School Year | Poinsettia High School	Course	Credits Awarded	Term Grades 1	2
AP English Literature & Composition	4042	.500	C	
Math IV	3018	.500	B	
Contemporary Studies	7011	.500	C	
Psychology	7321	.500	C	
Photography	3343	.500	B	
Band IV	3614	.500	A	
Extra Curricular Inter-scholstic PE non-graded	7948	1.000		
Career Exploration	762750	.750	A	A

JROTC/PE Guidance

Completion of JROTC I and JROTC II will fulfill the state PE requirement. Students completing JROTC I and JROTC II do not receive a PE credit in addition to JROTC I and JROTC II credits. This is not an embedded credit course.

Students in JROTC can still enroll in PE and receive PE credit upon successful completion of PE course requirements.

Michele L. Blatt
West Virginia Superintendent of Schools