

Policy 2520.14: West Virginia College- and Career-Readiness Standards for Technology and Computer Science
Comment Log
January 12, 2017 to February 10, 2017

Action Type
N: No Response - Negative
NA: Not Accepted + Positive
A: Accepted o Neutral

Date	Individual/Organization	Comments	Action/ Type	Rationale
§126-44N-1. General.				
2017-01-19 18:36:24	Mark Alvaro Teacher, Mathematics Monongalia County Board of Education Morgantown WV	These sections are so formalized that there is not much to suggest.	N/o	
2017-01-19 18:52:12	Trevin Edinger unknown null Elkins WV	In the state of West Virginia, Computer Science/Information Technology/etc is a valuable field of education that is consistently scaling all of the worlds infrastructures from healthcare to construction. Tomorrows workforce is todays students, and the domination of technology will continue too increase exponentially. If the students that are enrolled in West Virginias schools are not taught early a technological skill set(s) they will be lagging behind those who have had the chance to learn said skill set(s).	N/o	
2017-01-20 14:18:25	Alison Fluharty science teacher/ technology coordinator New Martinsville School	With the emphasis on technology in our students education, I feel that it is important for us to incorporate typing/keyboarding skills at the elementary level. We are focusing on the	A/o	Response 1: Utilization of keyboarding has been added to grades 3-5 to provide this foundational

	New Martinsville WV	end product without giving students the necessary skill to succeed. Many students struggle to transfer thoughts to written word because of their lack of keyboarding skills.		skill.
2017-01-30 15:23:20	Crystal Adkins Teacher AFT Rivesville Wv	This policy recommends adding a Computer Science course at the middle school level and three courses at the high school level. Two of the high school level courses may be counted also as a Math or Science credit.	N/o	Response 2: These are suggested elective courses. Counties still have the ability to create and utilize other computer science courses inclusive of those available through Career and Technical Education (CTE).
2017-01-31 15:06:01	Casby Meadows Teacher Mason County Career Center Point Pleasant WV	Computer Science is being taught in the Vocational programs across the state by certified Business teachers. This will but business teachers out of work throughout the state. This says there will be no cost. The cost will be that the computer labs will have to be updated to teach these classes and some labs will have to be added. While these classes are being taught by an unqualified instructor, they will be taking up lab time that other classes should be in the lab. Science and Mathematics is an in demand field in West Virginia, there are not enough certified Math and Science teachers to teach the required classes not to mention this elective class that they are unqualified to teach. While there are many Business teachers out there looking for jobs that are qualified. As Business teachers we are constantly updating or knowledge of the technology because	NA/-	See Response 2. Response 3: Teachers delivering a required math or science credit must be certified in that area. <i>Computer Science – Introduction to Geographic Information Systems</i> was created to count as a lab-based science credit and be delivered by a certified science teacher. <i>Computer Science & Mathematics</i> was created to count as one of the four required math credits and be delivered by a certified math teacher.

		job. I speak from personal experience because I have seen this idea put into action in my own county and IT WAS NOT SUCCESSFUL! In order for our students to be prepared for the future is to provide them with ALL the skills they need in order to meet that future as a prepared citizen. THE SKILL THAT THEY NEED IS KEYBOARDING!!!!!!!		
§126-44N-2 Purpose				
2017-01-19 18:36:24	Mark Alvaro Teacher, Mathematics Monongalia County Board of Education Morgantown WV	These sections are so formalized that there is not much to suggest.	N/o	
2017-01-19 18:52:12	Trevin Edinger unknown null Elkins WV	A Silicon Valley based company named Intel now dominates approximately 98% of the Cloud Technology Infrastructure. Cloud Technology is used anywhere from x-ray imagery to architecture simulations to banking and the world trade markets. These are a minuscule examples of what can be innovated with more computer oriented persons.	N/o	
§126-44N-3 Incorporated by Reference				
2017-01-19 18:36:24	Mark Alvaro Teacher, Mathematics Monongalia County Board of Education Morgantown WV	These sections are so formalized that there is not much to suggest.	N/o	
2017-01-30 19:07:17	Carrena Rouse President AFT Boone County Federation of Teachers	The business wored, in which our students must operate with proficiency, requires that our students be prepared and without the right curriculum such as computer science and	N/+	

	St. Albans West	keyboard accuracy		
§126-44N-4 Summary of the Content Standards				
2017-01-16 20:43:45	Denise Stalnaker Instructor Randolph Technical Center Elkins WV	<p>Many of these standards that are included in the new high school courses are standards that are in CTE computer classes. There is a great chance for duplication of service.</p> <p>What teachers will be permitted to teach the Computer Science in the Modern World class? It is not stated so can I teach that course if it is a required course? Can any teacher in any area teach it because a certain certification is not stated.</p>	NA/o	<p>See Response 2. See Response 3.</p> <p><i>Computer Science in the Modern World</i> is not a required course.</p> <p>Response 5: Currently Policy 5202 section 18.17 states “positions in instructional areas including, but not limited to theatre, dance, and computer science require no specific endorsement as referenced in the WVEIS course code manual, but do however, require the position to be filled by a person who holds a Professional Teaching Certificate.”</p>
2017-01-19 18:36:24	Mark Alvaro Teacher, Mathematics Monongalia County Board of Education Morgantown WV	These sections are so formalized that there is not much to suggest.	N/o	
2017-01-25	Carla Taylor	Where did PK standards go?	N/o	Response 6: Pre-K

08:37:47	PK Director Roane PK Collaborative Spencer WV			standards are housed in Policy 2520.15.
2017-01-30 15:23:20	Crystal Adkins Teacher AFT Rivesville Wv	Yes add these courses to count as math or science credit	N/+	
2017-02-09 11:04:23	Sonya Ashby Library Media Specialist Wood County Schools Washington WV	Content standards appear to be age-appropriate and tiered nicely as they extend into the upper grades.	N/+	
§126-44N-5 Severability				
2017-01-19 18:36:24	Mark Alvaro Teacher, Mathematics Monongalia County Board of Education Morgantown WV	These sections are so formalized that there is not much to suggest.	N/o	
2017-01-30 15:23:20	Crystal Adkins Teacher AFT Rivesville Wv	Helps those who struggle with advanced math but have an ability for technology. This would allow students to gain knowledge that they will be able to use in the work place.	N/+	
§Comment West Virginia College- and Career-Readiness Standards for Technology and Computer Science				
2017-01-14 19:08:26	Robert McPeak Teacher Ritchie County Schools Ellenboro WV	The WV CCR Standards for Technology and Computer Science appear to me to appropriate and feasible. I am glad to see that they do not specify specific programming languages or computer platforms. Teachers will be able to implement instruction using the technologies that are available to them in their school settings and using the skills and programming languages that they are familiar with. I am certified to teach computer science and I am	N/+	

		looking forward to doing so in the near future.		
2017-01-16 20:43:45	Denise Stalnaker Instructor Randolph Technical Center Elkins WV	<p>This past year Business Education teachers were required to take courses and training to get an additional endorsement on their license be to able to teach a course that the standards were written by business education instructors. Some of these educators have been teaching the courses they had to get endorsed for 6 or more years. This was FORCED upon them by the WVDE.</p> <p>Now math and science teachers get to create NEW courses with many of the standards from our business classes and NOT have to take any additional training. This is so WRONG! Most math and science teachers will not be qualified to teach these courses without additional training.</p> <p>In addition I do not see a single CTE person on the committee to write and develop these standards. CTE instructors are teaching networking, coding classes and Microsoft classes that standards are included in the math and science courses. These individuals are experts in the field of technology but were not included to help write standards for technology for the state.</p> <p>It is listed that there are no costs associated with these standards. How can that be true because the standards require that computers,</p>	NA/o	<p>See Response 2. See Response 3. See Response 4.</p> <p>Response 7: This is a revision of Policy 2520.14, 21st Century Learning Skills and Technology Tools, which already exists. No new cost is</p>

		<p>equipment and software needs to be available? So there will be costs to the counties and to schools to implement these courses.</p>		<p>associated with the delivery of the integrated technology standards. The requirement for high schools to offer a computer science course already exists. The elective courses in this policy are optional.</p>
<p>2017-01-18 08:21:16</p>	<p>Tonya Jennings Teacher Sissonville High School Sissonville WV</p>	<p>Business teachers are certified teachers just as math and science teachers. If the "coding" class is taught by a math or science teacher then a "required" math or science credit will be given. If coding is taught by a business teacher, no math or science credit is given. Isn coding, coding? Shouldn we give credit to the class no matter which certification teaches it? Often as a business teacher it is difficult to get students to value the class because it is not a "required credit". This practice is unfair and I see it happening once again with the new coding class. No matter who teaches the class, shouldn the same credit be awarded.</p> <p>Math/Science/Business= 1 required credit Digital Imaging taught by a business teacher = 1 elective credit Digital Photography taught by an art teacher = 1 art credit Personal Finance taught by a business teacher = 1 elective credit Personal Finance taught by a math teacher = 1 math credit</p>	<p>NA/o</p>	<p>See Response 2. See Response 3. See Response 4. See Response 5.</p>

		<p>Personal Finance taught by a social studies teacher = 1 history credit</p> <p>...Isn Accounting math? = 1 elective credit</p>		
<p>2017-01-19 05:30:19</p>	<p>Randy Revels Teacher Elkins High School Elkins WV</p>	<p>I am so happy to see West Virginia proposing Cumputer Science standards! As a current math teacher who teaches AP Computer Science, I am glad that there will be options for school systems that can send teachers to AP trainings. I have seen students that typically fear math delve deep into mathematical understanding using a passion of their own. This will open up so many gateways for our students and our state.</p>	N/+	
<p>2017-01-19 13:35:12</p>	<p>Peyton Computer Science Courses Elkins High School Elkins WV</p>	<p>As a Computer Science Major, I believe it is important to adopt a wide variety of programs and standards which allow students to investigate the field of Computer Science and Technology. Computer Science allows students to become familiar with technology and immerse themselves in new intellectual environments.</p>	N/+	
<p>2017-01-19 13:35:51</p>	<p>Jared Computer Science Courses Elkins High School Elkins WV</p>	<p>Computing is part of everything we do. Computing and computer technology are part of just about everything that touches our lives from the cars we drive, to the movies we watch, to the ways businesses and governments deal with us. Understanding different dimensions of computing is part of the necessary skill set for an educated person in the 21st century. Whether you want to be a scientist, develop the latest killer application, or just know what it really means when someone says he computer made a</p>	N/+	

		mistake, studying computing will provide you with valuable knowledge.		
2017-01-19 13:50:59	Lauren Wilmoth Elkins WV	<p>Ms. Butler:</p> <p>As a high school student currently taking a class in computer science, its exciting to see that new classes could be created in the subject. Computer science is important for any field, as computers are becoming a crucial part of our day-to-day lives. Its essential to West Virginias future that we have these classes in public school. The next generation will need them to succeed.</p> <p>I want to pursue a degree in engineering, where computer science is especially important. Having these classes at my high school would prepare me for computer science classes in college. I have several friends from other states that also want to pursue engineering. In their schools, courses like these are commonplace. Because West Virginia hasn yet implemented these classes, I feel as if I could be underprepared in comparison to my peers when I take computer science courses in college. All of my friends love their computer science classes and seem to have learned quite a lot. I hope I have a chance to enjoy them and learn too!</p> <p>Thank you for your time and consideration.</p>	N/o	
2017-01-19	Hayden	Mrs. Butler, I am writing to you as a student of	N/+	

13:53:07	Computer Science EHS Elkins WV	<p>Elkins High School. I feel very strongly about the fact that seemingly students have no control over their own education. There are always community polls and referendums about what happens to the schools but hardly ever do people ask what the students think. There isn't even a student option in the medium with which I am submitting this. Everytime a community member (who may not have had kids in the school system and has no requirement to have actually ATTENDED the school in which they are trying to amend) speaks out about the "injustices" being committed in our schools, they are praised. However, when a student offers suggestions as to things we could improve, they are told to "let the adults handle it". In fact, we took a survey last year about technology in our schools and I have yet to see any change be brought forth due to these results. I would like to take this opportunity to say that it is the 21st century, computers are as influential an invention as any. Computers have sent people to the moon, saved peoples lives, and even connected us with people who before were seemingly worlds away. So why is it that these life-changing inventions shouldn't be taught about in schools? Should the U.S. be more behind with our already lacking educational system? Should we not prepare our students for success in our technologically advanced society? Should we not know how to control a system that could one day drive our</p>		
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		own cars? Thank you for your time.		
2017-01-19 16:12:42	Josh Revels Science Teacher EHS Elkins WV	As a science teacher, I see Computer Science as a modern and evolving career field for students. The rigor and course material should be considered as a Math Credit.	N/+	
2017-01-19 18:36:24	Mark Alvaro Teacher, Mathematics Monongalia County Board of Education Morgantown WV	I would like to add in a few comments as a Computer Science teacher with 5 years of experience teaching AP Computer Science A, and 4 years experience leading students to develop iPhone and Android apps. Computer science education has been predicted to become as important as reading, writing , and arithmetic in the future (https://www.nytimes.com/2014/05/11/us/reading-writing-arithmetic-and-lately-coding.html?_r=0). As a society we are becoming more and more dependent on technology and for better or worse, jobs come with that dependency. Its predicted there will be a shortage of a million software engineers in the next decade in the US. These standards are so incredibly important for WV to grow as a state and cannot be blocked. Right now WV is only graduating less than an 8th of its demand in CS majors (https://code.org/promote/wv). This means many of our jobs will be left unfilled or will go to out of state graduates. How does this help our students? It was a wonderful start to get CTE involved in coding education, but the coding that they teach is not enough. It is not as rigorous as these standards, and it is not as firmly aligned with CS as it is with	N/+	

		programming. Approving these standards is just the first step, though. Computer science should become a required course, just like a foreign language, for all students in the state of WV.		
2017-01-19 19:36:20	Mollie Ferguson Teacher Elkins High School Elkins WV	Computer science is a growing field that provided many future job opportunities. Teaching our students to be proficient in their computer skills and allowing them to explore possible career pathways while still earning high school credit is a wonderful way to help our students explore that career pathway. Allowing the proposed high school courses to count as a third math or science is also a benefit for many students.	N/+	
2017-01-22 23:15:06	Walter King Former Elkins High School Student Elkins West	To whom it may concern, I would like to express how important it is to include computer science courses in the West Virginia school curriculum. I am a former Elkins High School Student who took two years of Advanced Placement Computer Science while I attended there. I took the AP test and passed with a four(out of five) and have received college credit for the course at my University. More importantly, gaining computer science skills prepared me for college and for working in the real world. My prior experience has assisted me in my college CS classes and afforded me the opportunity to work on the control system of a sounding rocket for a	N/+	

		<p>NASA competition that my university competes in. I also believe that having a background in computer science out of high school helped me get accepted to my university and also helped me to get an internship at the NASA IV&V Facility in Fairmont, WV this past summer.</p> <p>Please do understand that giving students, like myself, the opportunity to learn computer science skills in high school provides them with an invaluable advantage. Knowing how to code is essential to just about every technical profession out there (and many more non-technical professions as well). Additionally, even if a student never writes another line of code after highschool, the pillars of computer science--critical thinking, reasoning, and mathematics--will serve them well for the rest of their lives. I will be forever grateful that the West Virginia school system provided me with a knowledge of computer science. Please ensure that those who come after me can receive the same opportunities that I did.</p> <p>Sincerely,</p> <p>Walter E. King</p> <p>Contact: walterking103@gmail.com 304-940-9020</p>		
2017-01-25	Carla Taylor	Where did PK standards go?	N/o	See Response 6.

08:37:47	PK Director Roane PK Collaborative Spencer WV			
017-01-25 09:31:42	Jackie Gore Business Teacher Washington High School Charles Town WV	<p>CTE offers coding in our Web Page Publishing course and there is also a specific Computer Science Career Concentration in CTE. Why would a Math or Science teacher need to teach this and take away from our CTE completers?</p> <p>The pathway is described below.</p> <p>Computer Science Pathway REQUIRED COURSES (No Sequence Required) WVEIS Code 1408 Introduction to Computer Science 1410 Computer Science Principles 1412 Computer Science Applications And Select One Specialization 1414 Simulation and Modeling 1416 Artificial Intelligence 1418 Cybersecurity 1420 Capstone Course: Computational Problem Solving</p>	NA/o	<p>See Response 2. See Response 3. See Response 4.</p>
2017-01-25 16:13:29	Aaron Wellman Teacher Fort Gay Pk-8 Fort Gay WV	<p>Basic computer skills are sorely lacking in our most rural students, and other content teachers cannot effectively fit a CompSci curriculum into their workload. A dedicated computer science course - perhaps working toward Office 364 or Google tools certification - would help our schools soar!</p>	NA/o	<p>This is a revision of Policy 2520.14, 21st Century Learning Skills and Technology Tools, which already exists.</p> <p>Office 365 certifications are available to all high</p>

				schools and CTE centers through the Microsoft Imagine Academy at no cost to students or schools.
2017-01-29 16:44:23	Julie Yearego Business Education Teacher Liberty High School Clarksburg West	<p>As a secondary Business Education Teacher, while I applaud adding some flexibility for 3rd science and 4th math credits, I am shocked at the lack of demonstrative skills that must be present for an educator requirement of only a math or science teacher to teach computer science aspects without having to pass the computer science or technology education praxis, or at least have some very intensive training over the summers with additional accreditation demonstrating computer science proficiency, if these courses are to be effectively implemented.</p> <p>As we are getting students college and career ready - please remember that Business is and has been (2 to 1 in every other major) the number 1 college major and everyone will work for a business or have their own. Why Business Computer Applications are being removed as a requirement in most counties which is supposed to be taught by trained Business Education Teachers, and this recommendation of Computer Science in the Modern World is being touted to be a graduation requirement I do not understand? Correct me if I am wrong, but there is NO requirement that this new Computer Science in the Modern World for</p>	NA/o	See Response 2. See Response 3. See Response 4.

		<p>high school to have any specific certification - not certified business, technology or computer science teacher? It is an insult to those of us who work hard to keep up with technology advances, applications and credentialing to prove we are "worthy" and capable of training students properly, only to have courses like this introduced without any credentials required to teach an important and proposed required course such as this.</p> <p>We already offer Web Page Publishing (which introduces students to basic coding) and BCA I/II (Microsoft Office: Word, PowerPoint, Excel and Access) - whose Content Skill Sets duplicate many of the proposed skill sets of this Computer Science in the Modern World. Why are we re-inventing the wheel when already have CTE highly-qualified Business Teachers offering these courses. While I am supportive of efforts to teach computer science courses, this will most likely cannibalize training already offered in many schools. This will remove many Business Teachers positions in the counties and again if we are truly trying to help students become college and career ready - please remember that we are trained business professionals, preparing students for the #1 major nationally, year over year (Source: https://nces.ed.gov/fastfacts/display.asp?id=37). Why would we want to reduce that preparatory effort? We need to have more CTE</p>		
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		<p>completers through classes offered by CTE teachers, not less.</p> <p>Thank you for taking into consideration my concerns and those of many of my peers in Career and Technical Education. If you would like to respond to me further, please contact me at (304) 326-7470 ext. 6871 (noon until 1:00 pm - planning), (304) 669-9976 cell after 3:00 pm or email at: jyearego@k12.wv.us.</p> <p>Sincerely,</p> <p>Julie Yearego, MEd, MAT Business Education & Marketing Teacher DECA Advisor</p>		
2017-01-29 20:39:42	C Howley Charleston WV	I fully support computer science standards. As the parent of two science-minded daughters, I think both would have benefitted from rigorous computer science instruction. Science careers increasingly require computational thinking and programming skills; without these, our young people will be underprepared for the broad array of capabilities needed in emerging fields.	N/+	
2017-01-30 12:02:21	Michelle Liga Technology Integration Specialist Preston County Schools Kingwood WV	<p>I would like to see foreign language to be added as a subject that can be switched out for the HS level. This should be a switch for coding classes not just general computer classes. Also, Math should not be a switch out.</p> <p>In the middle school, coding classes would be more beneficial than a foreign language. At</p>	N/o	

		least how the foreign language classes are being offered now.		
2017-01-30 15:23:20	Crystal Adkins Teacher AFT Rivesville Wv	This policy recommends adding a Computer Science course at the middle school level and three courses at the high school level. Two of the high school level courses may be counted also as a Math or Science credit.	N/o	
2017-01-30 16:09:16	Pam Kinzer Princeton WV	It would be good to have computer science courses at the middle school level.	N/+	
2017-01-30 17:41:08	Tammy Darnell MT HOPE ELEMENTARY SCHOOL Mount Hope West	I do not think the computer course should be math credit. Science credit would be fine but to truly be college and career ready the students need full math courses. Students are already scoring too low on math scores and many will avoid math by using the computer classes for credit.	NA/-	See Response 3.
2017-01-30 19:07:17	Carrena Rouse President AFT Boone County Federation of Teachers St. Albans West	The business world, in which our students must be prepared to operate with proficiency, requires our students to possess the skills from computer science and accuracy of speed in keyboarding. They do not have these now since the courses were eliminated a few years ago. We need these back.	NA/-	See Response 1. Offering of keyboarding is a local decision. Additionally, CTE business courses are available.
2017-01-31 07:50:37	Melinda Owens Hurricane Middle Hurricane West	Our society is so dependent upon technology that our students need all the computer science they can get. These courses would help enable our students to be prepared for most any undergraduate college program.	N/+	
2017-01-31 10:34:03	Teresa Mullen Teacher PCHS Dunmore WV	We already force too much math on our students. We need to focus on reinforcing the basics, as many students lack these skills even at the secondary level. Students cannot	N/-	

		<p>complete basic calculations nor can they work out simple word problems that require them to problem solve. We should also be focusing on math that is relevant the the real world of work instead of the common core math. Most of the math we teach our students will never be applied in their careers once they leave high school, so why not shift our focus to career readiness. We have put so much emphasis on math that we have forgotten our other important subjects. Why are we not discussing/addressing literacy issues? Many students cannot write a complete paragraph or speak using proper grammar. As someone who also works in an industry and education I would higher someone who can speak intelligently, show up for work on time, and be respectful than someone who can do calculus.</p>		
<p>17-01-31 14:29:51</p>	<p>Jenny Pippin Teacher Randolph Technical Center Elkins WV</p>	<p>Technology is a critical component of our present world. The question is not whether students should have classes that incorporate technology within them and separate classes that focus exclusively on technology. The question is whether the method proposed with these computer science classes is the best possible method.</p> <p>In my comments, I will only address the high school courses since I do not have experience with the lower grade levels. Listed below are questions that I have as I consider whether I support these proposed courses. I hope that</p>	<p>N/o</p>	<p>See Response 2. See Response 3. See Response 4. See Response 5. <i>Additionally, Computer Science in the Modern World</i> is not a required course.</p>

		<p>these questions have already been considered in the development process and that I just do not know the answers myself.</p> <p>Computer Science in the Modern World</p> <ol style="list-style-type: none"> 1) What teacher certification is required to teach this class? 2) Is the teacher required to receive special training or would he/she be able to receive special training? 3) Is there a particular curriculum that teachers would follow to ensure that this required class would be the same across the state? 4) Some of the content of this class overlaps with classes available at Technical Centers. Were CTE instructors involved in the developing of this class? Would they be eligible to teach it? 5) There are 48 standards in this class. There are 90 days in a semester. Will students have the time to master each of these standards when so many of them require hands-on practice? <p>Computer Science and Mathematics</p> <ol style="list-style-type: none"> 1) Is the math teacher required to receive special training or would he/she be able to receive special training? 2) Is there a particular curriculum that teachers would follow? 3) There are twelve standards listed for this class that are identical to standards in the Computer Science in the Modern World class. 		
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		<p>If the Modern World class is required, why would those standards be retaught in the Math class?</p> <p>Introduction to Geographic Information Systems</p> <p>1) Is the science teacher required to receive special training or would he/she be able to receive special training?</p> <p>2) Is there a particular curriculum that teachers would follow?</p> <p>3) This class has 21 standards compared to 48 in the Modern World class and 44 in the Math class. Are these standards more representative of what students are able to accomplish within a semester time-frame? Are these standards much more involved and time consuming?</p> <p>It is my understanding that here in Randolph County, the School Board is considering removing the technology graduation requirement (Basic Computer Applications) that currently exists. Students learn Microsoft Word and Excel in the BCA class. If this new computer science requirement replaces the current BCA class, will students have the base knowledge they need in order to be successful?</p>		
2017-02-02 12:47:15	Gregory Page Science Instructor SVHS Huntington WV	This is really outrageous that computer classes could be used to compensate for up two science credits. This obviously is going to be abused by students to bypass difficult science classes. This should be used only as an elective.	NA/-	<i>Computer Science – Introduction to Geographic Information Systems</i> was created to count as a lab-based

				science credit and be delivered by a certified science teacher. This is the only computer science course able to fulfill a science graduation requirement.
2017-02-02 15:37:49	Geraldine Beckett Teacher Robert C. Byrd High School Clarksburg West	<p>I am a 25 year AFT member, and while I do support increasing the number of computer science classes in our schools, I believe the teachers in those classrooms should be business certified. It is necessary if the student wants to use the course to fulfill requirements for a CTE program to qualify for high school graduation.</p> <p>There are already computer science courses created with CSOs. They are CTE classes taught by business dept. teachers who have taught computer courses, including coding and gaming for years in our schools</p> <p>These classes are taught by certified business teachers trained in various aspects of XHTML programming, networking, database management, etc.</p> <p>It is important to note that if a student isn in a professional (college) pathway, then they have to be in a Career Readiness pathway which can be completed at a county technical center (vo-tech), or in a high school by completing four related courses in a CTE program. If students</p>	NA/o	See Response 2. See Response 3.

		<p>are going to use any computer science classes they take to complete a CTE program, the class has to be taught by a certified business teacher in the state of WV. If the teacher is not certified, the credit (class) cannot count toward completion of a CTE program. That is important!!</p> <p>We fear that any teacher will be able to teach our classes, just like Teach for America does and Betsy DeVos wants to do, it undermines a quality education, and indeed our entire education system.</p> <p>Please share our concerns with legislators.</p> <p>Thank you!</p> <p>Geraldine Beckett, Ed.D.</p>		
2017-02-06 09:04:25	Kathryn Williamson Teaching Assistant Professor West Virginia University Morgantown WV	From my perspective, this policy is absolutely essential to jumpstart the change that we need in WV. This is a starting ground that will be a lever towards immediate and large-scale increase in opportunity for kids and for our state.	N/+	
2017-02-07 07:54:29	Paul Marganian Software Engineer Green Bank Observatory Dunmore WV	WV needs to give all students access to Computer Science!	N/+	
2017-02-07 10:19:49	Michael Holstine Business Manager Green Bank Observatory	It is imperative that WV school children be exposed and properly trained in the computer science fields and this curriculum standard not	N/+	

	Green Bank WV	only provides that preparedness but also provides specific goals for responsible protections of digital identity and responsible use of information. This is a tremendous move in the right direction for preparation of our school children toward proper business needs and every walk of life.		
2017-02-07 16:19:42	Amanda Shelton Teacher Clay Middle Clay WV	Will there be additional funds to employ those certified to teach these courses? Or will we have to rearrange already tight and fragile schedules with limited staff? There is certainly a need for the standards to be taught, however, please consider what adding requirements without additional funds will do to our poor and struggling counties.	NA/o	See Response 3. See Response 7.
2017-02-09 11:04:23	Sonya Ashby Library Media Specialist Wood County Schools Washington WV	I am all for including Technology standards into our curriculum. For middle and high school, it appears that in most instances new courses are being formed. I saw nothing in this proposal regarding certification of the teachers teaching these courses. Will this be considered a "core" course? If it is not a core course, are other elective teachers going to be displaced to make room for this?	NA/o	See Response 7.
2017-02-09 20:50:06	Joanna Burt-Kinderman Math Instructional Coach Pocahontas County Schools Hillsboro WV	Im so grateful that the WVDE is taking a forward stance towards ensuring that all WV kids, and so our state, can be competitive in a tech-rich future. These policies are a fine first step. I hope that we continue towards requiring computer science modules in middle school, and full courses in high school. I would love to see a partnership with UCLAs Exploring	N/+	

		Computer Science for these high school courses, so that we could have built-in networking opportunities, as well as a well-researched PD model to transform non-computer scientists into CS learning guides.		
2017-02-10 10:06:27	Sheila Rose Vocational counselor and psychologist WVDRS Hillsboro WV	These standards fill a gaping void in my childrens education. Computer science is one of the most critical skills needed to be successful in the employment world. I work in vocational services and so many of my clients can do the basics like emails and online applications for work. These standards address not only the basic skills, but also the growing field of technology as a career. People in our rural areas have no idea of the possibilities out there and think they could never work in such a filed, but it truly could be the future economy for our state. It will these students to create the infrastructure and show the entrepreneurial spirit that can make WV shine. Great job! Please approve!!!	N/+	

Action		Type	
N	No Response	-	Negative
NA	Not Accepted	+	Positive
A	Accepted	o	Neutral

DATE	INDIVIDUAL ORGANIZATION	COMMENTS	ACTION/TYPE	RATIONALE
§126-44U-1 General				
2017-01-30 15:25:33	Crystal Adkins Teacher AFT Rivesville Wv	These standards for grades 6-12 will be delivered within the programmatic level in a sequence designed by the school leadership team. AFT-WV is concerned the requirement is adding one more additional item for the school leadership to do without providing any compensation for their time.		
§126-44U-2 Purpose				
2017-01-30 15:25:33	Crystal Adkins Teacher AFT Rivesville Wv	Compensate the teachers for their time. We one of the lowest paid professions in the state. More work we need adequate compensation.		
§126-44U-4 Summary of the Content Standards				
2017-01-30 15:25:33	Crystal Adkins Teacher AFT Rivesville Wv	These standards for grades 6-12 will be delivered within the programmatic level in a sequence designed by the school leadership team. AFT-WV is concerned the requirement is adding one more additional item for the school leadership to do without providing any compensation for their time.		
§Comment West Virginia College- and Career-Readiness Dispositions and Standards for Student Success for Grades K-12				
2017-01-30 19:09:33	Carrena Rouse President AFT Boone County Federation of Teachers St. Albans West	Our leadership teams are already covered up with more than we can get through. Why is anyone trying to add to the job.		
2017-01-31 07:53:31	Melissa Adkins Teacher Valley High School Smithers WV	The School Leadership Teams are already asked to do so much that is above their pay grade, including serving as an often-unwelcome liason between administration and staff. Asking us to be involved in the creation of schoolwide policies for applying standards is delving into curriculum specialist type work and should come with monetary compensation. Enough is enough!		

2017-02-06
09:38:40

Ysabel Bombardiere
Parent/ CS Volunteer
CHARLESTON WV

WV Computer Science Standard does not match the 2016 Interim CSTA standard or the K-12 Computer Science Framework. K-8 milestones are mainly digital literacy, not computer science.
WV standard did not integrate CS practices like Collaboration, Testing and Refining, Fostering an Inclusive Computing Culture and some others.
WV Computer Science Standard does not match the latest standards nationally recognized.

2017-02-07
09:17:54

Pam Stollings
Counselor
Tyler Consolidated High School
Sistersville WV

Great Job! I like the collaboration among all entities.