

# *MSDE Obstacles to Student Opportunities*

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**Introduction:**

The Maryland State Department of Education's (MSDE) primary goal is to equip students with the skills to be successful upon graduation. Whether that be in a college, career, and community, the goal is to cultivate students who are ready to take on the world. However, the reality for many students is a system of rigid requirements that make graduation difficult. Students lack much choice in what courses satisfy graduation requirements leaving students disengaged and uninterested in their learning. Although not the intended consequence of MSDE, these requirements compel students to take classes they may not be interested in or that may be irrelevant to their potential careers. However, course flexibility is only one of many barriers students face. Students in Career and Technology Education (CTE) programs across Maryland schools find difficulty in creating class schedules which fit their interests, CTE courses, and fulfill credit requirements instituted by MSDE. This difficulty is because many CTE courses do not satisfy graduation requirements as a result of a cited "double dipping" rule that does not exist in written law. Thereby, with the little flexibility that the MSDE credit requirements offer, students often find themselves in a predicament: either to quit their CTE pathway or to sacrifice the opportunity of enrolling in classes of their interest. Moreover, many graduation requirements are outdated, forcing students to take classes such as technology education which no longer serve a purpose to students of this generation. These unnecessary courses prohibit students from learning beneficial skills- such as financial literacy- which would undoubtedly aid them in their future.

The current requirements set by the MSDE and the Maryland state legislature create barriers for students striving to follow their educational passions and are severely outdated. As students of the Maryland Public Schools System, we implore you to hear our concerns outlined

in this essay. This paper will look at different issues with the current graduation requirements and provide a robust solution that will address the needs of various stakeholders.

### **CTE/ Double dipping**

Career and Technical Education (CTE) programs are designed to provide students with “academic and technical skills, knowledge and training necessary to succeed in future careers and to become lifelong learners.” Unfortunately, these programs are time-consuming, with many lasting three out of the seven classes students take in school, and are structured to be taken throughout the four years a student is in high school. Despite the extensive opportunities these pathways provide, many graduation requirements hinder students’ opportunities to take advantage of these programs and thus students are restricted from enrolling in CTE courses in order to satisfy their graduation requirements. Isabel Santiesteban, a sophomore taking the Health Professions CTE pathway at Paint Branch High School, provides her thoughts on the current graduation requirements and the impacts they have on the courses students take: “ My third year [course] is a double period and from what I’ve seen, people usually stop after the first or second year because they want to graduate on time. They wouldn’t be able to do so if they continue with the program.”

The “Double Dipping Rule” has been cited for years as the restriction for students asking to use CTE courses to complete graduation requirements. This rule alleges that CTE course classes, which count for elective credits, may not be counted as specific graduation credits even if the content meets relevant standards for that content area.

The following is a list of courses embedded in CTE courses that satisfy relevant COMAR requirements and MSDE content guidelines. **LIST OF COURSES:**

Thus, “Double Dipping” acts as a barrier for students who then must choose between satisfying their graduation requirements and taking a CTE course. However, there is no evidence that “Double Dipping” exists but rather has been cited to prohibit students in CTE programs from using those courses to satisfy graduation requirements. . A student taking a Medical CTE Pathway or the *Project Lead The Way BioMedical Science Pathway* could have those classes count as a Science credit if the curriculum is slightly altered to fit NGSS standards. However, these classes, because of the double-dipping rule, cannot count as both an elective completer and a science credit. Thereby, students in CTE courses have difficulty completing their graduation requirements due to the shorter number of class periods at their disposal to complete their core course requirements and CTE programs. MSDE must abandon the idea of “Double Dipping”, a practice that is not an enumerated policy but still affects CTE students as a whole.

One obstacle students in CTE programs face is the number of credit requirements imposed by MSDE and their local county’s guidelines. This credit requirement discourages students from pursuing CTE programs because of the worry of not being able to accrue enough credits to graduate on time. Students typically enroll in summer school to fulfill the elective credits that would have instead been taken during the school year but were not obtainable due to their respective career pathways. Khoi Tran, a student also taking the Health Professions CTE at Paint Branch High School, adds that he has felt forced to take the CTE program out of his schedule due to the time commitment. Furthermore, he often worries about graduating on time due to the number of required credits.

The following schedules outline what a student in the CTE Medical Pathway Program and a regular student would take, respectively:

CTE Student \*model below is based on **Class of 2023** graduation requirements therefore so

**1 year of Health hasn't been mandated yet\***

Freshman Year	Sophomore Year	Junior Year	Senior Year
Hon English 9	AP Government	Certified Medical Assistant Course	Health (1 Sem)/Sociology (1 sem)
Hon Algebra 2	Hon English 10	Certified Medical Assistant Course	AP Language and Comp
Hon Physics	Structures and Functions	Travel Period	Volleyball
Hon US History	Hon DP Bio (1st Sem)/DP Chem (2nd Sem)	AP Biology (DP)	AP World History
Spanish 1A/B	Hon DP Bio (1st Sem)/DP Chem (2nd Sem)	AP Biology (DP)	AP Statistics
Foundations of Medicine	Spanish 2A/B	AP Calc BC	Internship Period
AP Computer Science Principles	Hon Precalculus	Hon English 11	Internship Period

Regular Student:

Freshman Year	Sophomore Year	Junior Year	Senior Year
Hon English 9	Hon English 10	AP Language	AP Literature
Hon Algebra 2	Hon Precalculus	AP Calc AB	AP Statistics
AP Government	AP US History	AP World History	*student choice*
Spanish 1 A/B	Spanish 2 A/B	Hon Physics	*student choice*
Hon Biology	Hon Chemistry	*student's choice*	*student choice*
Photography	Foundations of Technology	*student's choice*	*student choice*

P.E.	Health (1 semester) *student's choice* (1 semester)	*student's choice"	*student choice*
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Blue - required courses

Purple - student choice

Orange - CTE courses

As shown above, there is a significant difference between a normal student's schedule when compared with a CTE student's schedule. The CTE student had to take classes over the summer in order to graduate on time and did not have space in their schedule for interest-based electives, while the normal student did not have to do summer classes and had extra space in their schedule to pursue electives that suited their interests. Undoubtedly, students should not have to endure the stress of wondering if they would be able to graduate on time, even with good grades, especially when they are already taking rigorous classes. Therefore, the double dipping rule is an arcane and unnecessary extension of MSDE policy.

Another added stress is not being able to take classes that would benefit students in the college application process. Classes, such as AP Biology and AP Chemistry, are double-periods and provide students with strong science foundations. These are particularly beneficial to incoming STEM students. However, some students have to face a difficult decision regarding their schedules. Students participating in the Medical CTE are forced to choose between taking difficult classes that would benefit their college applications and science backgrounds over gaining hands-on experience in the medical field – like Structures and Functions – which does not satisfy any graduation requirement. Quy Vu, a sophomore in the Health Professions program at Paint Branch High School often feels like he needed to quit the CTE pathway in order to get a strong enough science background for his college applications. “As a student interested in going

the pre-med route, I know that I need to have a strong science background. Joining the CTE pathway has been a good experience for me and I get to know more about the career I plan to get into. Unfortunately, junior year is a 3-period class, and could be 4 if transportation isn't scheduled in the lunch block. I want to be able to take classes such as AP Chemistry and AP Biology but with this time commitment, I wouldn't be able to fit a double period into my schedule. I have to choose between CTEs and AP science classes unless I do summer school.” Khoi and Quy have done summer school for classes such as Health. Isabel and Quy are part of the Online Pathway to Graduation and take classes after school to fulfill their credits. They are part of the 32.95% of MCPS students in a CTE pathway according to data from Maryland CTE Enrollment Data<sup>1</sup>. The struggles of accruing the credits needed to graduate is the true reality for many CTE students meaning it is imperative that MSDE acts quickly and eases the crushing burden of graduation requirements.

In order for students to be further prepared for their future careers, there should be a push in offering high school credit classes among middle schoolers. This is especially necessary in middle schools that feed in schools with CTE pathway pathways, as well as a proposal to resolve the restrictive credit structure of the CTE program.

Elective credits were originally required with the idea of giving students a chance to pursue interests outside of high school in the hopes that they find and put into use the newfound skills. However, CTE pathways do just that in itself, it would be more burdensome to require elective credits when CTE students achieve the main idea of electives by pursuing the program. The students that we interviewed collectively agreed that early electives are beneficial and could help future CTE students finish their electives earlier, therefore eliminating the problem of graduating on time.

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<sup>1</sup> <https://www.mdctedata.org/dashboards/enrollment.php>

As aforementioned, a more extensive solution to the barrier of graduation requirements is to alter certain pathways such as Health Professions to fit NGSS/ other credit standards for science classes like Biology. Khoi agrees that altering the class to fit NGSS standards would be more beneficial to students. This would allow for students to take more classes they enjoy and graduate on time without the added stress of taking courses over the summer.

Removing the Double Dipping “rule” and expanding the credits that CTEs may fulfill will assuredly remove the barriers which CTE program students face. However, these solutions remain unaddressed by MSDE. Thereby, CTE program students continue to choose between taking summer courses and graduating on time, or not continuing with their program. Nonetheless, with MSDE’s cooperation and consideration to solving this issue, we can help students succeed in their respective future careers.

### **Financial Literacy**

One course that has real-world implications and can directly prepare students with beneficial life skills no matter what career path they choose is financial literacy. A study found in Forbes found that only “57% of adults in the United States are financially literate.” This leaves the remaining 43% of adults less equipped to make informed financial decisions, worsening our nation’s economy. These alarming statistics prove the need for financial literacy to be taught in schools as students graduate without essential knowledge to be successful in their college/career endeavors. Skills like applying for financial aid in the college process or seeking out scholarships have early impacts on a student’s life, yet remain out of the high school graduation requirements. A personal finance course would create students who are financially literate and ready to contribute positively to our economy, whether that’s through responsible spending, limiting debt,



or paying taxes on time. According to Next Gen Personal Finance, “students who graduate with a financial literacy course are 21% less likely to carry a balance on a credit card while in college submit the FAFSA 3.5% more often, and use subsidized student loans 13% more often than their peers without guaranteed financial education, saving an average of \$1,300 in high-interest private debt per student.” These are just some of the benefits of teaching personal finance in schools. The result is graduates who are financially competent and ready to be successful adults.

A personal finance credit requirement would also begin to close the wealth gap in Maryland, as this requirement can “break cycles of poverty.”( ) Thereby, a financial literacy requirement can help lower-income students become financially successful. After all, the current system forces students to learn these topics on their own, creating disparities amongst students with and without financially literate parents. Students with financially literate parents and guardians are often exposed to these topics throughout their formative years. However, students without financially literate parents and guardians are forced to understand these topics without guidance from any experienced individual. If a requirement is implemented, all students, no matter who they are, will learn about these critical subjects before graduation.

Financial Literacy as its own credit is needed, as opposed to having personal finance education embedded into different areas of high school curricula (similar to what occurs in the Montgomery County Public School System). MCPS currently requires financial literacy to be taught for three weeks in 7th grade followed by a trip to finance park (an interactive seminar), where they “put into practice what students learn through a real-life simulation in which they must shop for what they need to live and work but stay within their budget.” In MCPS, students are also exposed to this knowledge in their high school government class, however there is little accountability in the teaching.

As stated by Christian Sherrill, director of partnerships and advocacy at Next Gen Personal Finance, “If personal finance is not guaranteed as a standalone course, unfortunately, it doesn't always get taught because of overcrowding in curriculum.” This course requirement isn't new, as eight states have made financial literacy requirements for high school students.

According to Forbes, Alabama, Mississippi, Missouri, North Carolina, Tennessee, Utah and Virginia currently require financial literacy for students. Iowa is currently implementing it and Florida, Nebraska, Ohio and Rhode Island are in the process of preparing to implement it in the near future. In our own state, Prince George's county became the eighth county to require a financial literacy requirement this year. It is time for the Maryland State Department of Education to follow suit and properly equip students with the knowledge for them to succeed by requiring all districts in the state to create a personal finance credit requirement.

Furthermore, adding a personal finance requirement would accomplish MSDE's goal of prioritizing students' college/career readiness. Students are currently graduating without the proper financial knowledge to succeed beyond high school. The Maryland high school curriculum does not teach students how to build a budget, retain a good credit score, and save money. With a financial literacy requirement, students can start learning about these important subjects before graduation. It is timely and necessary in today's world, where irresponsible spending patterns are common among younger people. As students of the Maryland Public Education System, we implore you to explore a half-credit financial literacy requirement for all Maryland students.

**Mathematics:**

The current MSDE mathematics requirements are designed to make students fully college and career ready. Instead, they serve as a barrier to students being able to take courses they are passionate about. Currently, the Code of Maryland Regulations (COMAR) 13A.03.02.03 Enrollment and Credit Requirements state that students entering the 9th grade class of 2014–2015 or after must earn a minimum of four mathematical credits, including one credit each in Algebra 1 and Geometry. Furthering this requirement, Senate Bill 0740 (2013) establishes that students are required to enroll in a mathematics course each year of high school. This requirement was a result of an upward trend of college freshmen needing remedial courses in mathematics to “get up to speed before they can enroll in true college-level math courses.” (Washington Post) Additionally, as more states were beginning to implement a four-year mathematics requirement, Maryland decided to follow lead so that it would increase rigor and better prepare students for college and career opportunities after high school. Due to this policy, however, students lose valuable space in their schedules for courses which would be applicable to their desired careers. Even if a student completed high school level mathematics courses in middle school, they still must enroll in 4 years of high school math courses. Thus, thousands of students across Maryland are forced to enroll in advanced classes which do not pertain to the career path of their choosing. In fact, only about 22 percent of U.S. workers report using mathematics more advanced than basic fractions and percentages based on survey data conducted by Northeastern University sociologist Michael Handel. Although it may be argued that the four-year participation requirement would allow for adequate college and career readiness, the focus should be shifted to applying mathematics to realistic situations that people will experience in their lives. This would be illustrated by teaching students basic and applicable numeracy skills in the classroom but also allowing them to choose higher-level mathematics

courses as an elective throughout their years of high school. Thereby, while students learn valuable numeracy skills, they can pursue higher level mathematics curricula if they so choose. Therefore, by lowering the COMAR regulations to solely require students to complete Algebra 2 and its prerequisites, students will have enough space in their schedules to take other classes of interest and still have enough foundational knowledge of mathematical concepts to prepare them for college and career readiness post high school.

**English:**

Per COMAR requirements, four credits of English are required to complete high school. Currently, there are 6 courses readily approved to provide literacy education to high school students: English 9, English 10, English 11, and English 12 with English 11 and 12 being able to be replaced by AP Language and Composition and AP Literature and Composition, respectively. While there is some variation with each honors course, there is little room for new content to be explored, especially when considering the two AP English courses. Therefore, important skills such as resume-writing or speech-writing are typically left untaught in English classes. Moreover, students are often left with repetitive course content taught year by year that is not valuable compared to literacy skills such as the aforementioned. In AP Seminar, an elective course part of the AP Capstone program, students learn skills such as reading and analyzing texts, creating compelling and multi-layered arguments, and finding sources to support and defend their argument. While Honors English provides students a basic foundation of how to create an argument and employ evidence, AP Seminar introduces students to a wide range of methods to argue topics and find sources. These skill sets serve to improve students' thinking skills in classes such as social studies, where multiple perspectives must be analyzed. AP

Seminar goes much deeper than the standard English curriculum, is far more rigorous and independent, provides skills that can be carried throughout high school and college, and includes skills that some high schoolers will not even learn until college. Similarly, the elective course partnered with AP Seminar in the Capstone program, AP Research, shares skills with a current class accepted for English credit: AP Language and Composition (AP Language). In AP Language, the main focus of the class is essay writing. Similarly, the main project of AP Research is a research paper due at the end of the year. These two courses cover many of the same topics, such as analyzing evidence, and applying context and perspective to students' work. Moreover, AP Research delves even deeper, empowering students to conduct their own studies and look at others' research. The AP Research curriculum spends time guiding students throughout the research journey, writing literature reviews, conducting studies, and sharing implications and results of research thereby mirroring what would be required of a college student. Nonetheless, neither AP Seminar nor AP Research are acceptable for English credit, despite the fact that they are more rigorous and teach many of the same topics as the current courses counted for credit. Thus students are forced to undergo a repetition of learning and a restricted schedule space that could be used for other classes. Therefore, by counting AP Seminar and AP Research as English credits, the college and career readiness of students would increase, as well as their success in High School .

## **Technology**

From the moment students enter the public school system, they are introduced to technology. It influences every aspect of students' lives, whether in the classroom, or at home. The initial intentions of the COMAR technology credit requirement was to mold technologically

savvy students who are able to utilize technology in their lives. However, this requirement is no longer necessary as current students are already adept at using technology. In fact, the 2018 graduation requirements task force recommended in January 2021 that the Maryland State Board of Education should reduce the year tech credit to a semester worth of tech credit.

Notwithstanding, this was the only recommendation that the board did not adopt. The task force had recommended that “Technology education should be infused across the entire curriculum at all grade levels, regardless of the high school graduation requirement.” Instead of making students enroll in a Technology Education Course for a year (especially because technology is so integrated in students’ lives already), MSDE should disperse technology education across its curricula. Shortening the requirement would undoubtedly create more space in students’ schedules for other classes and interests the student might have.

In line with the task force’s recommendation, we strongly recommend shortening the technology credit to a half credit (single semester course). The MSDE should also encourage the development of middle school courses that can help students attain the technology requirement in students’ earlier years. Thereby, MSDE can continue to support students’ college and career readiness by allowing them to enroll in classes which benefit them rather than those which they are already proficient in.

### **Conclusion:**

The issues layed out in this whitepaper describe what high school courses look like for Maryland students. In summary, we propose that the Maryland State Department of Education eliminates the practice of citing double dipping as a reason against using career and technology education courses as certain graduation credits (such as science). Instead of an outdated

requirement like the technology credit, we urge that MSDE shortens it, in line with the graduation requirements task force, to a half credit. To supplement that, we implore that MSDE adds a financial literacy requirement to prepare students for life post-graduation. We call on the Maryland General Assembly to change the math requirement from all years in high school to Algebra 2 and its prerequisites. Finally, we ask that MSDE widens the array of courses students can take to graduate in English in order to properly equip students with necessary communication skills to graduate.

We believe that these changes are imperative to ensure that students graduate without unnecessary barriers. More importantly, though, these changes would guarantee that every Maryland high school student is ready to make informed decisions, which will undeniably benefit the future of Maryland.

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