Working Group 3
College and Career Readiness Pathways

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Policy Area:

World class instructional system that includes a career and college ready standard set to global standards that most students are expected to meet by the end of grade 10 and all students are expected to meet by the end of high school

Access, in high school, to globally-recognized programs preparing students for admission to selective colleges, college-level programs preparing students to receive an Associate's degree and **Career and Technical Education (CTE) pathways** that lead directly into aligned postsecondary technical degrees as well as industry credentials *(CTE Subgroup)*

Element Detail 3a

Element: Develop **fully aligned instructional system**, including curriculum frameworks, course syllabi and assessments with clear examples of standard-setting work and formative assessments to ensure that students stay on track

Design Assumptions:

An aligned instructional system includes:

1. 1. **Standards, or cCurriculum frameworks with standards embedded,** in core subjects (English language arts, mathematics, sciences, social studies/history) that map out the core learning goals of each subject at each grade level, laid out in a logical development sequence reflecting the content standards students have been exposed to previously and the latest developmental science on how students absorb new skills and ways of thinking

   2. **Curriculum resources urriculum Course syllabi** for each subject at each grade level, built on the curriculum framework and standards that are includesdetailed roadmaps of the curriculum framework, standards and goals for each subject at each grade level. These are not lesson plans. They describe what students are expected to master, the texts they will read, the tasks they will complete and the rubrics by which they will be assessed. Teachers can add to the specified body of work materials that may prove more challenging or engaging to their particular class This should include, for each subject maetter cluster:

2. It should describe what students are expected to master, the texts they will read and the rubrics by which they will be assessed. This could include:
   a. State-developed course syllabi for each course at each grade level, with sample lessons for teachers to use as models.
   b. State-approved units of curriculum for alldifferent subjects and t different grade levels, aligned with the curriculum frameworks (assembled from some combination of full courses and shorter units developed by teachers and others in and beyond Maryland, reviewed and approved for quality by the sState or a sState-approved authority)

      Sample lessons for teachers to use as models.
   Low-performing schools would be required to use sState curriculum (3a above). Others would be encouraged to use the sState approved units (3b above)

3. 4. ~~Exams~~ **Assessment system** designed to assess the qualities specified in the curriculum frameworks and standards. Assessments must include:
   a. Summative assessments ~~, serve to~~ meeting federal assessment requirements
   b. Summative assessments that ~~, and~~ provide a means by which to judge whether students have met S~~s~~tate career and college readiness (CCR) standard~~.~~
   c. Summative assessments for meeting high school graduation standards in all subjects not covered by the CCR standard
   a.d. ~~–~~Formative assessments ~~should also be~~ available for all subjects at all grade levels for teachers to use to make sure that students are on track for success against the CCR standard and the high school graduation standards.~~should be essay based and include examples of student responses that meet the standard of mastery for the exam~~

~~5. *Formative assessments* would be designed for all subjects and all grade levels for teachers to use as needed~~

Implementation Considerations:

1. ~~1.~~ The work should start with an inventory of the current instructional system and then build on curriculum review processes already in place at MSDE to develop curriculum frameworks and lesson "seeds", which are outlines of lessons for teachers to expand, but considerable work will be needed to accomplish this goal

2.1.

3.2.2. Designing this system would be a multi-year effort that will involve the development and piloting of each component by teachers and incorporating their feedback

4.3.3. The system would require an online platform to house this set of tools

5.4.4. The strongest teachers in each content area and grade level could lead this work

Element Detail 3b

Element: Establish and implement a **CCR standard** set to global standards that most students should meet by the end of grade 10 and all students should meet by the time they leave high school that certifies students have the literacy skills needed to succeed in first-year credit-bearing courses in open enrollment postsecondary institutions in the State. Review CCR standard in year fiveperiodically to ensure it is internationally competitive.

Design Assumptions:

1. 1. Setting the standard:
    a. The CCR standard will be set where PARCC set it: a score of 4 on the PARCC Algebra 1 and EnglishMath 10 exams, and a qualifying score on MISA
    b. Since PARCC may no longer be a viable option and because PARCC's standard was not empirically set for success in Maryland, the Sstate should consider commissioning an empirical research study of what content has to be mastered to what standard to have a high probability of success in the first year of a community college program in Maryland
    c. The Sstate should then be required to conduct the research needed to establish that the CCR literacy standard set by the empirical study is comparable to the global standard in top performing countries for the same age cohort as in Maryland. This would require having students in Maryland and top-performing jurisdictions take their own country's assessments and the Marylandcommon assessments and comparing thee results.
2. The provisional CCR standards will be scores of at least 4 on PARCC Algebra 1 and English 10 and a qualifying score on MISAAssessing student achievement against the standard:
    a. The sState will use PARCC and MISA, as long as PARCC is a viable option
    b. If PARCC is no longer a viable option, the Sstate should consider the following options:
        i. Adopt Smarter Balanced assessment (which isare matched to the Maryland College and Career Ready standards and is are accompanied by a wide range of resources for teachers to help them get students to the required level of achievement)
        ii. Adopt Cambridge International's IGCSE exams (these will do the

best job of measuring the kind of skills called for by Maryland's College and Career Ready Standards, but it is expensive)

    i.iii. Develop a Maryland exam, possibly using items from PARCC or the Massachusetts Next Generation MCAS exam (this might not be cost effective nor is it likely to fully measure the skills called for by Maryland's College and Career Ready Standards)

2. NEW Maryland should participate in the OECD PISA survey so that it can compare its education system and student achievement to the best in the world Students will aim to achieve these scores on these exams by the end of 10th grade
3. When students achieve these scores, they can move on to a program in high school that will earn them an Associate's degree; a preparation program for selective colleges; and/or a CTE program that will allow them to earn an industry certification, licensure, or other credential and lead directly to a postsecondary degree or credential
4. This provisional standard should be reviewed to ensure that the cut scores are valid and do indeed predict success at open enrollment postsecondary institutions in the State

Implementation Considerations:

1. This would be a major policy change and an implementation calendar would need to be negotiated with open enrollment postsecondary institutions
2. This policy change would need to be communicated clearly, early and often to all partners and to parents and students
3. If teacher-scored exams are adopted, scoring of exams could be a strategy for professional development for teachers.If the State uses assessments other than PARCC for English and math, new qualifying scores will have to be developed based on an analysis of literacy requirements for success in the first year of an open enrollment postsecondary institution in Maryland

Element Detail 3c

Element: Commission's PreliminaryInterim Report calls for the reoOrganization ofe schools so that teachers trained to diagnose and address students learning needs can work collaboratively to monitor students and intervene when a student is struggling. Teachers would meet regularly to monitor student progress, decide on a intervention —academic or a referral to services— and assign a single teacher to take responsibility for following the student until he or she is back on track. (See Working Group 23 elements on this point)

As it will take several years to put this system in place, it will be necessary to develop a transitional program will be developed to address the needs of students who are behind today. This will be a tTutoring program for all K-3rd grade students identified as needing support. Students who continue to need tutoring beyond third grade should be provided with this support. Over time, the role of tutoring and monitoring students will be assignedTransition this role to students' regular school teachers as their time is freed up to do this work and as they are trained in diagnosing and addressing learning difficulties and training is added to teacher prep; students who continue to need tutoring beyond third grade should be provided with this support.

Design Assumptions for Transitional Program:

1. All K-3rd grade students identified by teachers as needing literacy or numeracy support should be provided with tutoring in small groups of students
2. The aim of the tutoring is to get the students on grade level before 3rd grade
3. Students can transition out of tutoring support as soon as their teacher determines they are ready
4. Students in upper elementary school who continue to need tutoring should continue to get these services
5. Tutors should be trained reading and math specialists
6. As a new system is implemented, sSchool leaders and teachers should be trained in new approach to supporting students. This will involve three strands of training: training for school leaders on the system of supports; training for veteran teachers in schools; and training for new teachers in teacher prep institutions on the pedagogy as well as the new system.
7. The special education system would remain in place for students with disabilities,

but as more students are supported early, fewer less students will be referred for special education services.

Implementation Considerations:

1. HB 1415 (Chapter 361), which authorizes funding for evidence–based early literacy intervention in grades K-8 with a priority for K-3rd graders, in a school with a high concentration of students living in poverty has passed the General Assembly and is awaiting the Governor's signature, so implementation of reading tutors will likely begin this year. The bill mandates $2.5 million in each of fiscal 2019 through 2022 for the program.

2. HB 1415 funding expires after fiscal 2022, with a requirement to evaluate the effectiveness of the program at that time. Because tutors are considered a transitional program, needed until teachers have time and capacity to provide this support themselves, it is not anticipated that funding will be renewed.

Other Options:

1. Current legislation (HB 1415) funds reading tutors; could expand to include math tutors as well
2. Many students should be able to transition from tutoring by 3rd grade
3. As expertise in diagnosing and supporting learning difficulties is added to teacher preparation and schools are organized in ways to allow teachers time to provide this support directly, this activity can be phased out

Element Detail 3d

Element: Develop **programs for students in middle school and early high school** who are not likely to meet this CCR standard by the end of 10th grade to help them meet it as soon thereafter as possible

Design Assumptions:

1. Starting in middle school, students likely not to meet the CCR standard by the end of 10th grade should be offered an option to work towards the CCR standard at a differentiated pace
2. This would mean that there would be alternative, "extended" classes that work towards the *same standards*, but spend *more time* (and with more support) on the content in order to assure that students will succeed
3. Teachers would recommend students to take this option, informed by standardized assessments, formative assessments and based on their experience in the elementary curriculum. Parents can appeal this recommendation and request students not be placed in an "extended" curriculum, but students will be transferred back in if they are not succeeding in the standard curriculum
4. If any student moves more quickly than expected, he/she should be transferred into the standard stream of classes
5. Students can be placed in the differentiated option for specific subjects

Implementation Considerations:

1. There would be a development and start up period to develop new curriculum materials and course syllabi.

Other Options:

1. Consider offering grants to districts to develop alternative curricula for middle school and early high school students, with additional strategies to teach the same materials

Element Detail 3e

NEW Element[MOU1]: Revise the high school diploma requirements to allow students who meet the CCR standard to move on to community college and post-secondary technical training programs

Design Assumptions:

1. The State Board of Education should make whatever changes are required in the high school graduation~~specify~~ requirements to make sure that students who meet the CCR standards by the end of 10th grade will be able to take all the courses required to graduate by the end of 10th grade. That will, among other things, include the requirements in History and Social Studies~~dent that can reasonably be met with course taken in freshman and sophomore years so that students can graduate from high school after 10th grade if they are ready to pursue post-secondary education and trainin~~g. There will be students who, despite the fact that the courses are available in the freshman ~~m~~and sophomore years, choose not to take them until their junior and senior years, and they should be able to do that~~.~~

Element: Develop ~~transitional~~ **11th grade programs** for students who do not meet the CCR standard at the end of 10th grade

Design Assumptions:

1. Schools may need to design different interventions for different groups of 11th grade students, depending on how far they are from meeting the CCR standard:
   a. Students who are close to meeting the standard ~~might~~ can be offered targeted tutoring one on one or in small groups, based on a careful diagnosis of what concepts or skills they need to work on. These students ~~may~~ can ~~be able to~~ enroll in the full range of upper level high school courses in subjects other than the ones they are still working on to meet the CCR standard, provided they are likely to be able to pass the CCR assessment by the end of the first semester of 11th grade. They cannot move on to the upper division programs until they meet the CCR standard
   b. Students who are far from being able to meet these standards should be offered year-long classes in English and mathematics aimed at helping them achieve mastery by the end of 11th grade. These classes should not be

a repeat of 10th-grade English and mathematics. They should be specially designed classes focused on identifying each students' problematic areas and using ~~a range of~~ engaging and applied strategies to help address their issues. The classes themselves should be organized around engaging content and themes~~The class can be contextualized in a chosen area of focus~~, including a career or academic area~~s~~ such as the arts, technology or healthcar~~e~~e ~~depending on the school~~. ~~Students in these classes should be able to build~~
~~a full high school program of courses in addition to these courses.~~~~Students in these classes should be able to build a full high school program of courses in addition to these courses.~~

c.   Students in these classes should be able to build a full high school program of courses in addition to these courses.

~~c.~~d.   Students who have not met the CCR standard by 12th grade should be permitted to stay in school until age 21 as they are working toward that standard.

Implementation Considerations:

1. This program should be phased out as struggling students in grades 4-10 are identified and supported early.
2. In order to develop implementation assumptions, the following will be needed:
    a) An estimate of the number of students passing the English and math exams at each of the grade levels (9th, 10th, and 11th) initially and after the system of supports, and the number who do not.
    b) An estimate of a rate of phasing out these programs as more and more struggling students are "caught" in elementary and middle school and put on a track to the CCR at that point.

Other Options:

1. Maryland could consider offering grants to pilot districts to develop these programs then pilot them, and then expand statewide
2. Or Maryland could allow districts to develop their own programs just setting up statewide criteria and offering "start-up" funding

Element Detail 3f

Element: Require all ~~high~~ local school systems ~~schools~~ to ~~offer~~ provide all high school students with access to a set of **post-CCR programs** for all students that includes: 1) at least one of the following: an AP, IB or Cambridge IGCSE college preparatory program, 2) a two-year program leading to award of an Associate's degree on graduation from high school (at no cost to parents or student) and 3) access to CTE programs that lead directly to entry into aligned post-secondary technical degrees as well as industry credentials. (*See 3g for design assumptions related to CTE*)

Design Assumptions:

1. Any high schools that do not currently offer at least one of the selective college preparatory programs will need to be certified to offer them and will be required to train their staff to deliver the curriculum
2. High schools must partner with Maryland colleges to offer programs leading to Associate's degrees. Students can take college credit courses at their high school or at the community college, depending on the specific agreements between districts and postsecondary institutions. Some courses can count for high school and college credit, under dual enrollment agreements.
3. Public, community and 4 year colleges will be required to work out partnership agreements with local school district to enable theses districts to offer college credit course and associates degree programs at no cost to parents and students. ~~Programs might not be offered at all high schools, but schools should partners and offer course cooperatively so that all students have access to courses.~~

Implementation Considerations: checker has edits here

1. MD will need to set a date by which all ~~high~~ local ~~schools~~ school systems must ~~providing high school~~ offer student~~s~~s ~~with~~ access to the full~~a~~ range of post-CCR options.
2. MD will need to make "start-up" funds available for IB/Cambridge IGCSE/AP programs in situations where these are not already available
3. MD should begin by reviewing current high school/LEA offerings and assess where there are gaps in a post-CCR program

CTE Subgroup

Element Detail 3g

Element: Require all local school systems to provide all high school students high schools to offer with access to a set of **post-CCR programs** for all students that includes: 3) access to CTE programs that lead directly to entry into aligned postsecondary technical degrees as well as industry credentials that lead to rewarding careers. (*see Element 3f for detail on 1 and 2*)

Design Assumptions:

1. All high school students should have access to CTE programs that:
b.   Are in industry areas that align with high-growth, high-wage careers
c.   Include rigorous academics that prepare participants for post-secondary education and training
d.   Follow a curriculum designed and approved by industry partners
e.   Use state-of-the-art equipment and materials
f.   Require work-based learning as part of the program including apprenticeship opportunities (students can enroll in registered apprenticeship programs after meeting the CCR standard but while still working on their graduation requirements)
o   Lead to industry-validated, entry-level certifications or licensure
o   Offer college credits as part of the program and/or provide direct entry into a postsecondary program (through articulation agreements) leading to a technical AS/AA degree
2. All high school and middle school students should have career counseling and opportunities for career exploration before selecting post-CCR program options; these opportunities should include visits to high school and community college CTE programs as well as to job sites
3. CTE programming should be aligned with current State initiatives, including the initiative to strengthen computer science education ($5 million is appropriated in the fiscal 2019 budget contingent on HB 281, which passed the General Assembly and is awaiting the Governor's signature)
4. State agencies, including MSDE, Department of Labor, Licensing and Regulation (DLLR), Department of Commerce, and Maryland Higher Education Commission (MHEC), in partnership with the Maryland Association of Community Colleges (MACC) and business and industry leadership should jointly identify, develop and coordinate new/revamped high quality CTE pathways that lead to skills that are needed in the Maryland workforce
5. CTE teachers should have recent, relevant work experience in their fields

Implementation Assumptions:

1. MD will need to set a date by which all high local school systems to provide all high school students with access schools offer students access to a range of post-CCR options including CTE.
2. MD will need to make "start-up" funds available for CTE pathways. House Bill 1415 (Chapter 361), which was passed by the General Assembly and is awaiting the Governor's signature, establishes CTE Innovation Grants to cover one-time costs, including equipment, to develop and implement high quality CTE pathways. Grant applications must include partnerships of at least one school system, community college, and industry leader to develop a specific CTE pathway. A total of $2 million is mandated in the budget annually for CTE Innovation Grants.
3. Smaller and rural districts may need to partner to offer a full range of CTE options for students. House Bill 1783 (Chapter 14 of 2018) requires the Interagency Commission on School Construction to report back to this Commission by July 1, 2018, on the feasibility and financing of regional school construction projects such as regional CTE high schools.
4. A strategic planning process should be undertaken that includes an inventory of existing CTE programs that meet the design assumptions described above and their alignment with in-demand industry areas in Maryland, as well as identifying in-demand industry areas for the development of new or revamped CTE pathways.

Other Options:

1. MD could partner with Pathways or ConnectEd to do review of CTE programs
2. MD could use competitive grants to distribute Perkins funds to districts that want to pilot new CTE programs of study in their schools. Funds could be used for planning, equipment purchases, teacher training, etc.
3. MD could create a State program to address CTE teacher shortages in high-demand industry sectors by offering financial incentives to recruit, support, and retain CTE teachers

CTE Subgroup

Element: Detail 3h Create a State-level CTE steering group to ensure that CTE is a key part of the State's education, economic development and workforce strategy.

Design Assumptions:

1. Permanent State-level CTE steering group with representation from MSDE, DLLR, Commerce, MHEC/higher education institutions, and business and industry
2. The purpose is to coordinate an integrated and articulated education and economic/workforce development CTE system for Maryland
3. This group will ensure that programs are offered in career pathways in high growth industries in Maryland

Implementation Considerations:
1. This group may also monitor implementation of CTE pathways in high schools and higher education institutions and make recommendations regarding best practices both within and outside the State

CTE Subgroup

Element:Detail 3i Develop a statewide **CTE communications initiative** to rebrand CTE

Design Assumptions:

1. Communications strategy should be jointly developed by MSDE, DLLR, Commerce, MHEC, MACC, and industry in partnership with communications experts
2. The purpose is to expand visibility, facilitate public support and rebrand CTE as a rigorous option for students that prepares them for high skill jobs and postsecondary programs
3. The State CTE website should be reviewed and updated to include clear information for students, parents and employers

Implementation Considerations:
1. MD would fund upfront cost to develop strategy and review website; the strategy could then be incorporated into ongoing work of the State CTE steering group and participating agencies