

Working Group 3

College and Career Readiness Pathways

Develop a world class instructional system that will enable Maryland high school graduates to match students in the highest achieving countries in the world in academic attainments, equip them with the complex skills they will need to be successful in a technologically sophisticated economy, contribute to their communities, and play their roles as informed and thoughtful citizens in the world's oldest democracy.

In the United States today, these goals cannot be fulfilled for most adults without at least some postsecondary education, often at the community college level. In that sense, the ability to succeed in the first year of a regular, credit-bearing community college program is the keyhole through which the vast majority of high school graduates will have to pass to achieve their dreams and to make the contributions of which they are capable to their family, their employer, their community and their state.

Toward that ambitious but critical end, the State of Maryland will establish a standard of literacy in English and mathematics (and when practicable also science) at the level needed to assure a high probability of success in the first-year programs of the State's community colleges and other open-enrollment postsecondary institutions. This will be called the College and Career Readiness or CCR standard. The Commission believes that its recommendations, if fully implemented, will yield a K-12 education for Maryland that succeeds, approximately ten years after serious implementation starts, in getting ~~nearly about~~ 80 percent of the high school cohort to CCR – 65 percent by the end of grade 10, 75 percent by the time they are 18, and several percent more thereafter. ~~perhaps another 5 percent by the age of 21.~~

Since a standard of this sort is met by fewer than half of Maryland's students today, the Commission's plan envisions massive improvement in performance and this will open opportunities to most of our young people that are far out of reach now. It will also provide an enormous boost in the capacity of the Maryland work force to compete effectively in the state, national and global economies. If the State continues to implement the Commission's recommendations with fidelity and determination, the Commission believes that, once a cohort of 3- and 4-year-old children experience the full education system recommended by the Commission and reach high school age, all but the most severely disabled ~~students~~ will leave high school with a CCR endorsement on their diploma.

One might wish that all students could immediately achieve CCR by the end of 10th grade. But it is very important to recognize that today, in Maryland, fewer than half the cohort

leaves high school having attained a comparable standard. More than doubling the proportion of students who do so within ten years would be a remarkable achievement. Sustaining such gains over the following ten years so that those not able to meet the standard will be a small number of young people with significant disabling conditions would be another remarkable – yet feasible – achievement.

These estimates are deliberately conservative. The targets set forth above are goals that other countries have both met and gone on to exceed. It is entirely possible that Maryland will be able to match, perhaps even surpass them. Typically, reports and legislation of this kind are unrealistic and set lofty goals that have never proven achievable at scale in any U.S. state. (Consider, for example, the “universal proficiency by 2014” goal of No Child Left Behind.) Once everyone concludes that no such thing will actually happen, the entire report’s credibility is compromised and many don’t even try very hard to carry it out. The Commission does not want its report to fall into this trap of overreaching and thereby dooming its recommendations. To repeat, the goals we have set are credible because entire nations have achieved them – and Massachusetts has approached them.

It is also very important to bear in mind that one’s educational achievement depends on more than schooling. Indeed, study after study shows that other factors – in particular the education and socio-economic circumstances of a student’s parents – greatly outweigh the influence of the school on educational achievement. Closing the gap entirely between what students can achieve and what they actually achieve will, realistically, involve making changes in the environment in which many students grow up, changes that are beyond the reach of the schools. The Commission’s goals and recommendations, in total, take this reality into account.

It is also important to bear in mind that many who do not achieve the CCR by age 18~~the time they leave high school~~ will still be able to receive ~~a~~ high school diplomas. Under the present system, many who receive such a diploma do so by passing a very undemanding “alternative” that undermines the diploma’s real-world value. In the new system, students will get a diploma by taking ~~and passing~~ a set of high school courses required for graduation by the State Board and assessments of their performance on those courses that will be incorporated into the course requirements. There will be no alternative to these assessments or these requirements.

Many decent jobs in the Maryland economy that enable a person to support a family above the poverty level are available to those who can show that they have the grit, determination, self-discipline, basic literacy, numeracy, and overall work ethic needed to do those jobs. The measures described below will not only greatly increase the proportion of students who leave high school with a CCR endorsement, they will also greatly increase the proportion who do not drop out, and who go on to earn a high school diploma that employers will

value.

The creation of an “early warning system” ~~as soon as possible~~ based on formative evaluations is critical to enable teachers to identify students who are beginning to fall behind and have teachers work together to get students back on track. This process should be done in all grades, but will be particularly important for students who do not meet the CCR standard by the end of 10th grade. They will need additional interventions in 11th and 12th grade, building on the State’s current transition course model. Any student who meets the standard before 12th grade will have opportunities to participate in the post-CCR pathways described below. But those who do not meet the CCR standard even by 12th grade will still have opportunities to participate in career counseling and hands-on career exploration.

The immediate benefit for those who meet the CCR standard is access to a set of ambitious and rewarding **post-CCR pathway programs**. These include 1) programs that enable students to earn one of the following: an AP Diploma program (consisting of Advanced Placement courses specified by the College Board), the International Baccalaureate Diploma program, or the Cambridge International Diploma Program; 2) a program that enables students (at no cost to them or their parents) to earn an Associate’s Degree to be awarded along with or subsequent to graduation from high school, or to commence work towards a baccalaureate degree with the possibility of transfer to a Maryland four-year college; and 3) access to robust career and technical education (CTE) programs offered by Maryland high schools, two- and four-year colleges, and training providers that allow students to explore and prepare for various career options and, via apprenticeships wherever feasible, to acquire technical credentials with significant value in the labor market.

We would ~~expect and~~ encourage most students who attain a CCR endorsement to choose one of the three options described above and energetically pursue the additional endorsement that comes with its successful completion. Others will embark upon a fourth pathway that involves components of some or all of the other three pathways: ~~a program that includes other standard high school courses, for instance, AP courses, Cambridge courses, and community college courses (academic and/or CTE). Such a program may resemble that of students now participating in dual enrollment, but can be configured in many ways. This fourth pathway~~It may, for example, consist in large part of advanced academics with one or two CTE certificates added, or it may be a strong CTE program that keeps other college options open. ~~one of those paths and get partway~~: Students in this fourth pathway ~~they~~ may not achieve an Associate’s degree, industry certification or other advanced CTE credential but they will obtain some college credit for advanced courses taken (e.g., AP courses or dual enrollment classes at a postsecondary institution) or some CTE certificates for courses completed and/or successful work experience.

~~Some students who get their CCR endorsement but do not choose any of the three major options are expected to remain in high school and, in addition to completing any remaining diploma requirements, may assemble a program that includes other standard high school courses, AP courses, Cambridge courses and community college courses (academic and/or CTE). Such a program may resemble that of students now participating in dual enrollment, but can be configured in many ways. It may, for example, consist in large part of advanced academics with one or two CTE certificates added, or it may be a strong CTE program that keeps other college options open.~~

Elective courses, extra-curricular activities and other programs, services and academic opportunities typically offered by Maryland high schools will remain available to students no matter which post-CCR pathway program they select.

Element 3a: Develop a **fully aligned instructional system**, including curriculum frameworks, course syllabi and assessments, together 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. **Standards, or curriculum frameworks with embedded standards**, in core subjects (English language arts, mathematics, sciences, history/social studies, music and fine arts) that map out the core learning goals of each subject at each grade level and lay these out in a logical sequence reflecting the content that students should previously have acquired as well as solid developmental science on how students absorb new skills, knowledge, and ways of thinking
2. **Curriculum resources** for each subject at each grade level, built on the aforementioned frameworks and standards. These should include, for each subject or subject cluster:
 - 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 all subjects and grade levels, aligned with the curriculum frameworks. These units may be gathered from courses and units developed by teachers and others in and beyond Maryland, and will be reviewed and approved for quality by MSDE and the State Board of Education.¹ Curricula approved by MSDE must be designed as complete courses, which, when properly implemented and taken in sequence, will

¹ MSDE will use accepted benchmarks such as approval by EdReports or Tier 1 and Tier 2 evidence-based standards established by the federal Every Student Succeeds Act or a review by EdReports.

enable students to meet the CCR standard by the end of grade 10.

Schools identified as low-performing by their scores on statewide assessments will be visited by inspection teams assembled and working under the supervision of MSDE; based on what they find, those teams will recommend courses of action for addressing the problems revealed by the inspections; those recommendations may include. ~~Among those options is~~ requiring a school to use the State courses as designed until such time as its students are on track to meet the CCR standards by the end of 10th grade. In such cases, the inspection team will also recommend appropriate forms of training and technical assistance for the designated schools, including possibly pairing them with schools that more successfully serve similar students. Other schools (i.e. those not low-performing) will be encouraged but not obligated to use the State-approved curricular frameworks and units (2b above).

3. **In the core subjects of English, math, science, and history/social studies, an assessment system** designed to assess students' acquisition of the qualities specified in the curriculum standards and frameworks must include:
 - a. Summative assessments that meet federal requirements;
 - b. ~~Summative~~ Assessments (which may be State and/or local) that provide means by which to determine~~judge~~ whether students have met the State CCR standard and "early warnings" by which teachers and school leaders can identify those who are beginning to fall behind, which will enable them to work together more successfully to diagnose the issues and help get those students back on track to meet the CCR standard (See Working Group 2 recommendations on use of the school day and teachers' time); and
 - c. Evidence of meeting high school graduation requirements. ~~in subjects not covered by the CCR standard; and~~
 - d. An "early warning system" of formative assessments to enable teachers to quickly identify students who are beginning to fall behind and the use of those assessment results by all of that student's teachers, working together as a team, to diagnose the issues and work to get those students back on track to meet the CCR standard (see Working Group 2 recommendations on use of the school day and teachers' time)

Implementation Considerations:

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 (notably, the Maryland District Curricular Support Materials Collaborative) to develop curriculum frameworks and lesson "seeds", which are lesson outlines for teachers to expand, although much work will be needed to accomplish this goal.

2. Designing this system will be a multi-year effort that will involve the development and piloting of each component by teachers and incorporating their feedback.
3. The system will require an online platform to house this set of tools.
4. The strongest teachers in each content area and grade level should play key roles in this work, which could tie into the teacher leader career ladder framework being developed by Working Group 2.

Element 3f: The State Board of Education will revise high school graduation requirements so that students who achieve CCR will be able to enter any of the post-CCR pathways and still earn high school diplomas. This includes retaining the expectation that students will satisfactorily complete four years of English and math, which is the admission standard for the University System of Maryland. All courses required for graduation, including those in history, science and social studies, should be organized such that students can, by the end of their senior year, satisfy both the requirement for post-CCR pathways described in Element 3e and the State high school diploma requirements. Students who participate in one of the post-CCR pathways may take as many of the other courses offered by their high school as their schedules will allow and may participate in high school extracurricular activities.

Design Assumptions:

1. Any high school graduation requirements in mathematics or English that go beyond the CCR requirements and that have not been met by the time a student achieves CCR will need to be made available by the providers of the pathway on which the student progresses. Requirements not yet met in other subjects will have to be provided by the high school at times worked out in collaboration with the pathway provider.
2. Students who complete all course requirements will still earn a Maryland high school diploma upon graduation. Award of the high school diploma will require successful completion of these courses and a passing score on the tests associated with required courses. The State Board of Education will set the pass points for these end-of-course tests.
3. The State Board of Education will create diploma “endorsements” that acknowledge students with attainments that go beyond the course-completion requirements, including meeting the CCR standard, getting an AP, IB, or Cambridge diploma, getting an Associate’s Degree, and/or earning an industry-recognized credential or completing a youth or other apprenticeship program.
4. While students pursue any of the post-CCR pathways, they will remain enrolled at least part-time in their high school and the high school remains responsible for them until their diplomas are awarded; this includes the range of services that a student

- may need, such as academic, career and personal advising.
5. College courses meeting high school graduation requirements and approved by MSDE must also count for high school credit.

Element 3h: ~~A new Career and Technical Education Subcabinet will be created to drive the process of~~ A new Committee of the Governor's Workforce Development Board (GWDB) will be created, to be known as Career and Technical Education Committee (CTE Committee). It will be charged with building a world-class career and technical education system for Maryland, ~~in the context of~~ taking into consideration the priorities established by the Economic Development Commission. Its ~~members – drawn from the GWDB itself –~~ will include ~~be comprised of the agency~~ heads of MSDE, MHEC, DLLR, and Commerce; ~~and the Governor's Workforce Development Board;~~ a representative of the community colleges, which provide much of the State's postsecondary training; the Chair of the Skills Standards Advisory Committee ~~Board~~ (see below); and will include at least four additional representatives of ~~a diversified mix of~~ employers, industry associations, and labor. The Committee's members – and its chair, who should be a business representative – ~~will be~~ selected by the Governor, the President of the Senate, and the Speaker of the House. ~~It will be charged with creating a framework for the new system and then bringing that system into being. The Subcabinet will have a dedicated staff, including an Executive Director, not simply staff assigned to it from other agencies.~~

The ~~Subcabinet~~ Committee will be tasked with ~~building on the good work already done to create~~ ing a system focused on developing the talent needed for staffing the high-tech industries on which Maryland's future depends, from health care and agriculture to cybersecurity and precision manufacturing. It will take the lead in developing the framework for the State's CTE system, mobilizing the business community to become a central player in developing opportunities for apprenticeship and work-based learning, approving CTE programs and standards, bringing the schools and colleges and universities together to align their offerings, assuring that Maryland's entire CTE system is fully aligned with the State's priorities for economic and workforce development and benchmarking that system against the best CTE systems in the world, to make sure that Maryland's workforce is – and can remain – among the most competitive in the world.

~~In general, the Skills Standards Board (see below) is intended to set world class standards for Maryland's workforce and the CTE Subcabinet is intended to create and drive the system in which public and private players pull together to turn those standards into a very highly skilled workforce capable of competing effectively with any state or nation in the world.~~

Design Assumptions

- ~~1. The CTE Subcabinet will be staffed by an Executive Director and other staff.~~
- ~~2. The CTE Subcabinet chair will be selected jointly by the Governor, the President of the Senate, and the Speaker of the House.~~ The chair of the Committee will serve as an Ex Officio member of the State Board of Education, the Higher Education Commission, the Governor's Workforce Development Board, the Maryland Apprenticeship and Training Council, and the Skills Standards Advisory Committee ~~Board~~ (see below). ~~and, at the Governor's discretion, other agencies that play a key role in economic development and workforce development. If this individual is not a State employee, the State should provide compensation for this position.~~
- ~~3.1.~~ 1. The CTE Committee ~~Subcabinet~~ will have the authority to issue whatever regulations are required to implement the statewide framework that it develops for CTE, allocating roles and responsibilities to agencies, mandating required offerings and resolving conflicts that arise among agencies in the course of carrying out those responsibilities. This includes, but is not limited to, deciding which institutions set qualifications for instructors and whether credit is awarded for a course or program. The Committee ~~Subcabinet~~ will issue regulations describing all approved course sequences for CTE.
- ~~4.2.~~ 2. The CTE ~~Subcabinet~~ Committee ~~should~~ will ~~also~~ address operational issues incident to the development of a modern work-based learning system, such as transportation to and from work-based learning venues and insurance for firms providing places for young people.
- ~~5.3.~~ 3. The CTE Committee ~~Subcabinet~~ will review all agency budget requests for CTE-related programs and make recommendations to the Governor and General Assembly ~~on the disposition of those requests~~. This includes middle-and-high school career exploration and development programs, comprehensive career and technical high school CTE programs (where every student is in a focused program of study leading to an approved credential), and postsecondary career pathway options, including college credit-bearing certificate programs, two-year associate's degree CTE programs, and four-year technical CTE degree programs. It also includes postsecondary non-degree, non-credit options, including workforce training programs, non-credit certificate and licensure programs, registered apprenticeship training and other programs that lead to credentials approved by the CTE Committee ~~Subcabinet~~.
- ~~6.4.~~ 4. The CTE Committee ~~Subcabinet~~ will ~~also~~ have a substantial budget of its own, with which to make start-up grants, invest in promising innovations and experiments, contract for needed research and analysis, and more.
- ~~7.5.~~ 5. The CTE ~~Subcabinet~~ Committee staff will provide policy analysis, technical support and recommendations to the ~~Subcabinet~~ Committee, the GWDB, and the Skills Standards Advisory Committee ~~Board~~ described below. They will conduct benchmarking research on leading CTE systems, including skills standards systems,

in the United States and abroad; collect data on the performance of the Maryland CTE system, including reports on the throughput of the system showing results for each entering high school cohort as they progress through the CTE system with particular attention to the proportion of students who gain economically valuable credentials, how many drop out and how many go on to further education, are placed in employment, ~~or~~ enter the military, etc.

~~8.6.~~ 8.6. The CTE ~~Committee~~Subcabinet ~~may create~~will have such advisory structures as necessary~~it needs~~ to ensure that key stakeholders are heard from. Stakeholders may, for example, include the Public School Superintendents' Association of Maryland (PSSAM), parents, and local workforce boards.

~~9.7.~~ 9.7. The CTE Committee, through the GWDB,~~Subcabinet~~ will provide annual public reports to the Governor and the General Assembly on the performance of the Maryland CTE system and, in those reports, will recommend statutory, regulatory, budgetary and structural changes based on its analysis of Maryland's needs and the performance of the evolving CTE system.

Element 3i: ~~There will also be a Skills Standards Board~~ The CTE Committee will create an advisory group to provide advice on skills standards that can be used to drive the new Maryland CTE system. To be called the Skills Standards Advisory Committee, it will be comprised primarily of employers from a diverse mix of industries, leaders of industry associations, and labor groups. It will be charged with setting the standards for a greatly strengthened statewide system of work-based learning and apprenticeships that will form the backbone of the new system. Employers and labor will be asked to play the key role in defining Maryland's system of occupational standards. They will also take the lead in creating a robust array of opportunities for students to earn such credentials in workplace settings provided by employers all over the State and creating a quality-assurance system to ensure that those employers supply the experiences that students need to earn the credentials they seek. Finally, they will be asked to play a key role in developing a coherent framework for occupational standards, and, within that framework, organizing appropriate industry groups to establish the standards and criteria by which candidates will be evaluated for credentials. When the CTE system is fully operational, all programs leading to credentials needed for rewarding mid-level skill jobs will include major work-based learning/apprenticeship components, offered either on the students' high school or community college campus, or, preferably, at the work site of a private or public sector employer or provider of registered and/or youth apprenticeships. ~~To ensure coordination with the CTE Subcabinet, the Chair of the Skill Standards Board will serve as a member of the Subcabinet, and the Chair of the Subcabinet will serve on the Skills Standards Board.~~

Design Assumptions

1. The Skills Standards ~~Board~~ Advisory Committee will be comprised of senior business executives, association leaders, a representative of the Maryland Apprenticeship Training Council and representatives of labor, all to be appointed by the Chair of the CTE Committee. Insofar as possible, the membership of the Skills Standards Advisory Committee will consist of GWDB members who are not already on the CTE Committee, but it may also include community representatives. ~~with one third appointed by the Governor, one third by the Senate President and one third by the Speaker of the House. The chair will be appointed by the Governor with the advice and consent of the Senate.~~
- 2.1. The Skills Standards ~~Board~~ Advisory Committee, supported by the staff of the CTE ~~Committee~~ Subcabinet, will adopt and, where appropriate, develop and regularly update a comprehensive, cohesive system of occupational skills standards to drive the Maryland CTE system, including a comprehensive array of career progressions, standards for each occupation and steps in those progressions, for the credentials to be issued to individuals when they achieve the standards, and the criteria to be used for awarding those credentials. The ~~Board~~ Advisory Committee need not develop new standards for occupations or industries that have already developed standards (such as registered apprenticeships) that the Committee finds ~~Board believes are~~ well-matched to Maryland's needs, but should strive to build a system of standards which, when taken together, is coherent and makes it possible for students and workers to move between careers with credit given for relevant skills and knowledge they already possess.
- 3.2. Standards and other components will comprise a comprehensive, unified system of career progressions for a wide range of occupations at various skill levels that embrace grades 11 through 14 and beyond, with particular attention to the industries and occupations prioritized by the CTE ~~Committee~~ Subcabinet.
- 4.3. The Skills Standards ~~Advisory Committee~~ Board will recommend to the CTE Committee whatever regulations may be ~~have the regulatory power~~ needed to determine which credentials will be approved for award by Maryland high schools and postsecondary institutions; it will set the standards and criteria by which those credentials will be awarded to individuals, based, wherever possible, on performance assessments conducted (and where necessary developed) by expert industry practitioners. The standards (specifying both technical skills and generic employability skills) approved by the Skills Standards ~~Board~~ Advisory Board will, wherever possible, represent not average industry practice but state-of-the-art practice, designed to keep Maryland globally competitive.
- 5.4. The Skills Standards ~~Advisory Committee~~ Board will recommend to the CTE Committee ~~have the authority to regulate~~ the criteria under which employers will be authorized to offer various forms of work-based learning experiences, except that the existing authority vested in the Maryland Apprenticeship and Training Council and the Department of Labor, Licensing and Regulation to regulate registered

apprenticeships will not change.

6.5. The Skills Standards ~~Advisory Committee~~Board will be responsible for regularly updating all the skills standards components to reflect changes in technology and work organization.

Implementation considerations

1. The first phase of this system will focus on high priority occupations and industries and will be in place no later than two years after passage of the enabling legislation.
2. Local workforce development boards will be expected to interpret state policies and priorities in light of local needs.