

The seventh NCEE Building Block to a world-class education system is to “create an effective system of career and technical education and training.” Maryland has one of the stronger career and technical education (CTE) programs in the U.S. and does require CTE programs to lead to either an industry-recognized credential or college credit. However, NCEE points out that this standard is less rigorous than the standard in top performing systems in other countries. That standard is a program of CTE study that results in an industry-recognized *certificate* that signifies a student is ready to begin a job that leads to a rewarding career. In these top systems, the majority of students are enrolled in rigorous CTE programs and work-based apprenticeship or industry training programs for two or three years, after they have achieved a minimum level of academic proficiency required of all students. In its gap analysis of how Maryland compares to the top performers, NCEE “challenge[d] Maryland to think outside of the existing structure and Perkins funding silos and consider how business and postsecondary institutions might be engaged to reinvigorate CTE pathways that would serve both students and employers.”

Maryland has for several years been focused on increasing college and career readiness and college completion, recognizing that 66% of jobs (footnote Carnevale, Georgetown) that the current generation of students will be seeking will require some postsecondary credential, be it a college degree or industry certification. However, in Maryland, about 47% of adults hold a college degree and only 3% receive a high-quality postsecondary certificate. Building out a high-quality CTE program at the secondary level will help prepare Maryland students for the jobs of the future. Currently, only 21% of high school students are enrolled in CTE programs in Maryland, well below the level of top performers. Most of these CTE students are among the best and brightest in high school, contrary to the public perception that CTE programs are for the less prepared students. However, every student who is on track for college and career should have the opportunity to enroll in a CTE program.

Legislation enacted in 2017 set an ambitious goal that by 2025 45% of high school students will have completed a CTE program, earned an industry-recognized credential or completed a youth apprenticeship program. This goal is moving the State in the right direction. However, Maryland must proceed strategically to ensure that high-quality CTE programs are offered to students that lead to high-wage jobs and transportable skills, and do not track students into low-wage jobs. In addition, completing a CTE program is not the same as receiving an industry-recognized certificate that shows that a student is ready for a job in the career field. Schools should regularly be judged not just for how many students graduate from high school and enroll in postsecondary education, but also for how many students achieve industry certification prior to graduation. Presently, only 9% of students receive an industry certificate.

The Commission recognizes that Maryland has taken significant steps to improve its CTE programs. This places Maryland in an enviable position of being able to build on these efforts and now move to provide rigorous CTE programs to all Maryland students who wish to pursue a career pathway during high school. Since Maryland was among the first U.S. states to identify career clusters and work with industry to ensure that programs meet industry standards, the state is well positioned to elevate its CTE programs to an international standard, provide students with the opportunity for an industry recognized certificate and align its CTE programs with current

and future State and regional workforce needs. The success of CTE programs must be judged based on receipt of an industry certificate or license, or college credit that is aligned with a career pathway, and not on completing a sequence. At a minimum, the cost of receiving the certification or licensure should be covered by the school for those students who cannot afford to pay it. CTE programs must also work with employers and others to offer apprenticeships that provide the enhancement of job skills in a real-world setting.

An essential element to providing rigorous career pathways to high school students is to ensure that students are on track for college and career readiness *before* they focus on college and/or career pathways. Thus, the Commission recommends that Maryland should have an education system in which students who are on track for college and career readiness (by the end of 10th grade for most students) have the opportunity to pursue rigorous career pathways that meet employment standards for a rewarding work life after graduating high school *in addition to* being ready to enroll in credit-bearing courses at an open enrollment post-secondary institution. This recommendation is related to Commission recommendations on Building Blocks 3 and 4, which propose an instructional system that will allow most students to be on track for college and career by the end of 10th grade.

The Commission recommends that Maryland move expeditiously to dispel the notion that only students who do not excel in the traditional academic subjects should enroll in a CTE program. Maryland already has several examples of successful CTE programs, such as at Western Technical and Sollers Point Technical High Schools in Baltimore County, that combine the development of certified workforce skills with high academic standards. As a start in the effort, Maryland schools and other stakeholders should develop and implement a communication plan, drawing upon successful CTE programs both in Maryland and elsewhere, to better inform and ensure parents and students that participation in a rigorous CTE program in no way precludes the ability to attend college. Maryland must also invest in career counseling to provide students with the information and knowledge to identify their career interests and skills and make smart choices to prepare for college and/or career pathways. In addition to the “hard” skills that are needed for employment, the Commission recommends that *all* students, even those not enrolled in a CTE program, should be taught the “soft” skills that are needed in the workforce. This includes professionalism, attitude, timeliness, public engagement, cooperative team building, thinking creatively, problem solving, and adaptability to change.

The Commission recognizes that in order to develop rigorous CTE programs additional stakeholders need to have a seat at the table, including business leaders, representatives of industry sectors, community colleges and four-year institutions, trade unions, local chambers of commerce, and workforce development programs in State and local governments. Therefore, the Commission recommends that a high-level group of stakeholders be appointed as an implementation and monitoring group to develop high performing CTE programs across the State. Concrete actions this group should undertake include:

- A state partnership with Pathways to Prosperity and Jobs for the Future to design rigorous and successful CTE programs (initial fee of \$25,000 for six-month planning

consultation to facilitate a strategic planning process — annual membership cost of \$100,000 to \$200,000 if the partnership proves worthwhile);

- Engagement of the business community with public schools and higher education institutions to develop strong CTE programs that are aligned and lead to certificates or licenses that are meaningful to employers and signal that the student is career ready;
- Evaluation of the success of CTE programs based on students achieving industry certification or licensure, not on completing a set number of courses.
- Systematic evaluation of schools not only on traditional academic subjects, but also on the CTE program through regular data collection and public dissemination of the data;
- Partnerships between schools and school districts with the local community college to develop and provide seamless transfer into post-secondary CTE programs;
- Alignment of CTE programs with the economic goals and workforce needs of the State and regions within the State;
- An inventory of current CTE programs to ensure that each program is aligned with the standards that are required for employment in that industry or licensed profession;
- Development of a plan for additional CTE programs that are recommended and aligned with industry needs and standards;
- Development of partnerships with employers and federal and State government agencies to provide meaningful internship and apprenticeship opportunities; and
- Development of policies that would solve the current shortage of qualified CTE instructors.