

SUCCESS AFTER HIGH SCHOOL



Early College Designs

A joint effort of the Massachusetts Department of Elementary and Secondary Education, the Massachusetts Department of Higher Education, and the Massachusetts Executive Office of Education with support from Jobs for the Future

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MASSACHUSETTS
Department of
Higher Education



JOBS FOR THE FUTURE

EARLY COLLEGE DESIGN MODELS

Overarching Mission: Success after High School

Massachusetts is recognized as a national leader in education reform and we have much to be proud of. Our students' mastery of core academic subjects is impressive and they compare extremely well even against international competition. We have led the way on adopting the Common Core Standards into our own Massachusetts Curriculum Frameworks, implementing new regulations for the evaluation of all administrators and teachers, and assuming a significant leadership role in the design and development of the Partnership for Assessment of Readiness for College and Careers (PARCC). But we are also aware that we can do more to support our students' fluid movement through elementary, secondary, and higher education into successful careers.

Our goal is to ensure that all students have the requisite knowledge, skills, and experiences in the academic, workplace readiness, and personal/social domains to successfully navigate to completion an economically viable career pathway in a 21st century economy. More simply, we aim to prepare all students, including students of color, English language learners, students with disabilities, and our low-income population, to succeed in the world that awaits them after high school. Early college is among the most effective strategies for promoting higher rates of college access and degree or credential completion.

What are Early College Designs?

Early college designs incorporate credit-bearing college coursework and academic supports into the high school experience to support increased numbers of students to graduate from high school and go on to complete a postsecondary credential with currency in the labor market. Partnerships are between secondary and postsecondary institutions so students can earn up to two years of college credit or even an associate degree while still in high school. A foundational piece of early college designs is the concept of "dual enrollment".

What is Dual Enrollment?

Dual enrollment (called dual credit or concurrent enrollment in some states) is defined by Massachusetts statute as the following:

"A qualified student enrolled in a public secondary school may enroll as a student in Massachusetts public institutions of higher education. The student shall earn both secondary school and college credits. Students may enroll either full time or for individual courses." ([Mass. General Law, Chapter 15A, Section 39](#))

Dual enrollment is a key component in all early college designs. Dual enrollment programs provide high school students with the opportunity to enroll in college-level coursework (non-remedial) on a college or high school campus. These programs connect students with a college learning environment, access to information about college going criteria and support students in becoming college and career ready. A major incentive for students to meet standards for participation is that courses are free and allow students to save on tuition and fees.

Limited amounts of funds (\$750,000 in FY2014) are provided through a state-funded [Commonwealth Dual Enrollment Program](#) (Partnership) line item to support the 28 undergraduate public higher education institutions to implement dual enrollment in partnership with high schools. Other supports may come from discounted tuition agreements, school district budgets, foundation funds, other grant funding, or family support.



EARLY COLLEGE DESIGN MODELS

In the 2011-2012 academic year, a total of 4,140 students (including homeschoolers and those enrolled in Massachusetts public and private high schools) were dual enrolled at a public higher education institution in Massachusetts. Using the total number of public high school juniors and seniors enrolled in Massachusetts in 2011-12 as a comparison group, these 4,140 would represent approximately 3% of these public high school juniors and seniors. Of this number, 1,821 students participated in the Commonwealth Dual Enrollment Partnership.

Why Early College?

For first generation and underrepresented students, early college is an opportunity to engage in college level work, to develop a deeper understanding of the college-ready criteria and to envision themselves as college students. As postsecondary education becomes increasingly necessary to participate in a 21st century economy, early college has the capacity to engage students who did not see postsecondary education as a component of their future. Early college opportunities with the support of a secondary school structure can increase one's ability to engage in an economically viable educational and career pathway.

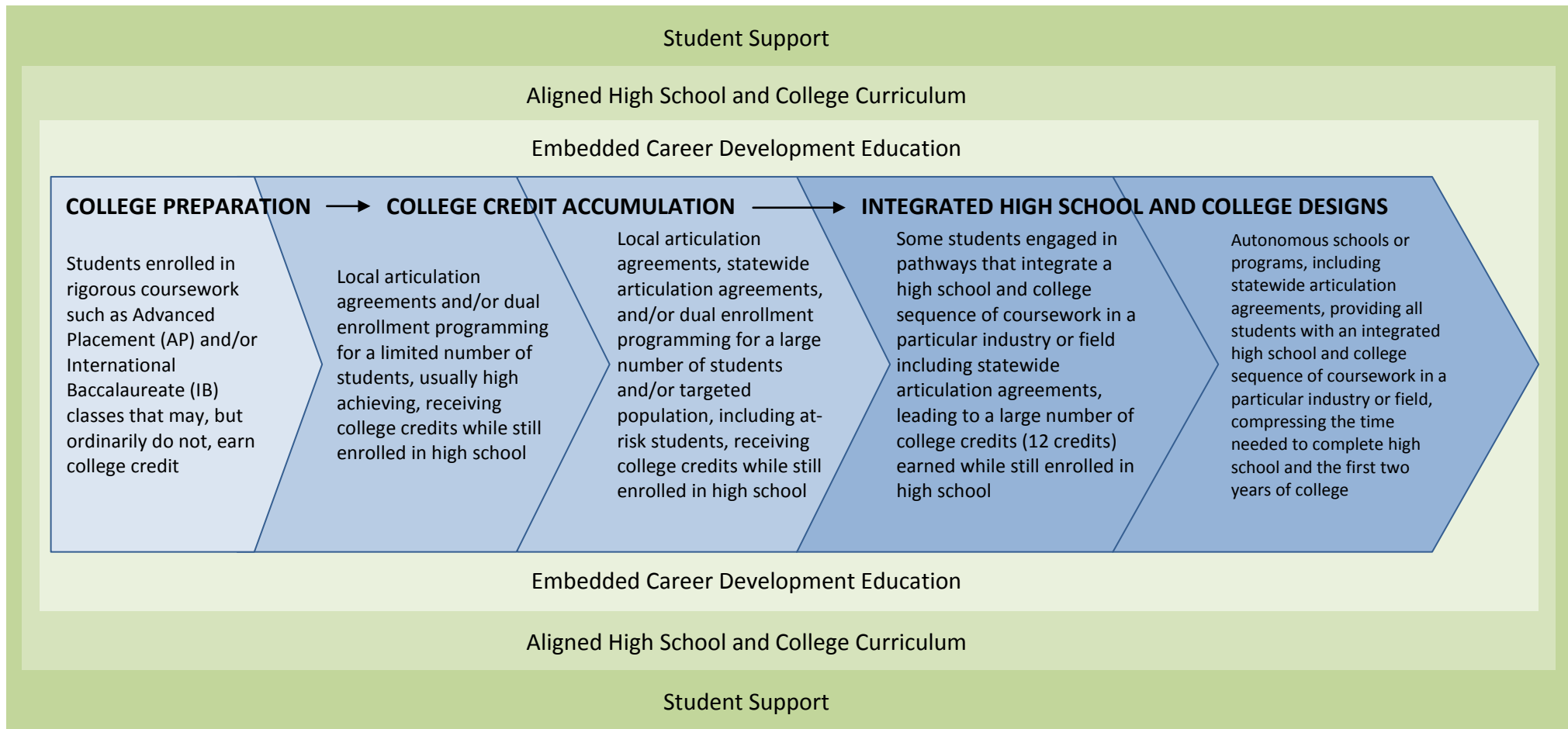
Early college also presents the opportunity to strengthen the relationships between high schools and institutions of higher education. The use of high school faculty as adjunct faculty may support a deeper understanding of the requirements of high school and college level courses. This deeper understanding of each others' work enables both parties to develop greater alignment of standards and curriculum. School counselors foster relationships with their counterparts at the institutions of higher education, allowing both institutions to effectively support students' transitions to postsecondary education. Growing the local relationship between high schools and institutions of higher education is an additional positive outcome of these partnerships.

A [national study](#) published by the American Institutes for Research concluded that students who attend early college schools were significantly more likely than their peers to graduate, enroll in college, and earn a degree. A [national study](#) conducted by Jobs for the Future, the Boston-based organization that has guided the development of early college nationally for over a decade, reported similar results:

- ★ 90 percent of early college students received a high school diploma vs. 78 percent of students nationally.
- ★ The average daily attendance rate of early college students was 95 percent, compared with 92 percent nationally.
- ★ About one in every three early college students earn an Associate's degree or other postsecondary credential prior to graduating from high school.
- ★ 71 percent of early college graduates enroll in college vs. 68 percent of students nationally.
- ★ 86 percent of early college graduates who enroll in college persist for a second year vs. 72 percent of college students nationally.
- ★ There are now about 30 early colleges across the country serving nearly 100,000 students.



EARLY COLLEGE DESIGN SPECTRUM



EARLY COLLEGE DESIGN DASHBOARD

	Campus/CVTE Postsecondary Linkages	Commonwealth Dual Enrollment Program	Gateway to College	Inclusive Concurrent Enrollment	Pathways to Prosperity	STEM-Early College High Schools
# of college credits earned by high school students	3-6	3 - 6	Average of 26 credits with a maximum of 74 (including many associate degrees)	3-6	At least 12	Up to 24
Student groups targeted	Career vocational technical education students	First generation college students, low-income, students of color, interested in STEM	Students at-risk of dropping out of high school and high school dropouts	Students with intellectual disabilities	Students at-risk of not completing a credential	First generation college students
High school and college curriculum aligned	✓		✓	✓	✓	✓
Career development education embedded	✓			✓	✓	✓
Student support services offered	✓	✓	✓	✓	✓	✓
Partially or fully funded by CDEP	These are funded primarily through Perkins	✓		These are funded through the Inclusive Concurrent Enrollment line item	✓	✓
Age or grade level served	Grades 9-12	Grades 9-12	Ages 16-21	Ages 18-21	Grades 9-14	Grades 6-12
Scale*	6 courses aligned statewide; 7 more in process. 13 Colleges, 26 vocational technical schools and approximately 50 comprehensive high schools	284 high schools and 28 Massachusetts public colleges and universities serve over 2,000 students across the Commonwealth	504 students served from 37 school districts at six community colleges	10 public two- and four-year colleges and universities collaborating with 46 school districts and 3 special education collaborative serving approximately 125 students annually	Three regions, partnering with three school districts collaborating with four public colleges, serving approximately 450 students	Six programs across the Commonwealth serving 13 different districts and approximately 500 students.

*Statewide number of students participating in early college design programs may include duplicated counts across the various models.

THE FUNDING CHALLENGE

Identification of sustainable funding mechanisms to support the development of early college designs continues to be a challenge in Massachusetts. Most states have dual enrollment policies that provide both financing and regulations for implementing programs. Many states require that all high schools and community colleges offer dual enrollment courses, and enrollments across the nation have greatly expanded in the last several years. In Massachusetts, there is no dual enrollment policy. The state line item has fluctuated since the mid-'90s and has never provided funding that would allow Massachusetts students to participate at any scale. Outside of the Commonwealth Dual Enrollment Partnership (CDEP) and [Inclusive Concurrent Enrollment](#) Program (for students with disabilities) there are no dedicated state or federal public sources of funds for early college designs.

Nonetheless, with support from the Department of Elementary and Secondary Education (ESE) and Higher Education (DHE), high schools, community colleges, and state universities have together been able to build some strong early college designs. With funding from the Massachusetts Race to the Top (RTTT) federal grant award, the state provided initial support for the planning and implementation of six [Early College High Schools](#) focused on Science, Technology, Engineering and Mathematics (STEM) that link secondary and postsecondary educational opportunities. Additional funding was awarded for three new [Gateway to College](#) sites across the state from the competitive [MassGrad](#) initiative. Student participation in the CDEP as detailed above and below, is currently subject to capacity constraints and a state appropriation. To make CDEP dollars go further, some public institutions of higher education have discounted tuition and fees. Many institutions of higher education contribute funds via Continuing Education and Access and Transition budget lines. High schools and colleges developed organic, local arrangements to fund and support early college designs which have included the use of [School Choice](#) programming and the use of adjunct faculty paid on a per course basis who teach in the high school, rather than sending students to the college where tuition and fees per student are required. Jobs for the Future (JFF) has provided technical assistance and support through state, Federal, and foundation funds.

Most recently, building on the Pathways to Prosperity Network, Jobs for the Future recently received a \$4.9 million [Youth CareerConnect](#) grant in spring 2014 to expand and implement rigorous and engaging career pathway models in three Massachusetts regions (Brockton, Hampden County, MetroWest) focusing on information technology, advanced manufacturing, and health care. The grant runs through the 2017-18 school year and is expected to impact approximately 1,650 students.

See Appendix A for more details about this funding challenge.



COMMONWEALTH DUAL ENROLLMENT PARTNERSHIP

The Commonwealth Dual Enrollment Partnership (CDEP), the only state-funded source for dual enrollment in Massachusetts, provides funding for eligible high school students to take college-level courses free of charge at Massachusetts public higher education institutions and earn credit simultaneously toward a high school diploma and a future college degree. CDEP is managed and supported through a partnership between the Department of Higher Education, as the fiscal and primary agent, and the Department of Elementary and Secondary Education.

Institutions of higher education are encouraged to expand dual enrollment opportunities by enrolling as many qualified students as possible. Most students take one course through CDEP. Some students have been granted release time from their high schools in order to attend their college classes during their regular high school hours. Students may also enroll in afternoon, evening, weekend, and online classes. Colleges also require that the students and parents or guardians complete a Dual Enrollment application form which must be signed by the high school guidance counselor. Students who are under the age of 16 need the college's permission to take college classes and must comply with college's underage student policies and procedures.

All 28 public higher education institutes have participated in CDEP since it was established, however, over the last three fiscal years only 25 campuses have participated. Community colleges enroll the majority of CDEP students and have long included dual enrollment in their missions and tend to operate numerous dual enrollment, early college, and other college preparatory initiatives on their campuses in addition to CDEP.

Implementation Spotlight

Springfield Public Schools

The partnership leverages CDEP funding to recruit students from across the district to take a Westfield State University course at the high school. The spring 2011 course in *African American Art* engaged a diverse student population; 56 percent were first generation college goers and 88 percent were students of color. This model minimizes travel costs, facilitates participation for students who do not have access to a vehicle, and provides a setting familiar to families. The courses were taught by fulltime and adjunct faculty that were vetted by the appropriate academic departments.

Key Characteristics

CDEP eases the transition from high school to college, allows students to get a head start on their college careers, and provides meaningful and challenging academic experiences to qualified students who otherwise may not have access to an early college experience by:

- ★ Striving to improve access to higher education by giving priority to students who would be first-generation college students and those interested in the Science, Technology, Engineering, and Mathematics (STEM) fields.
- ★ Limiting eligible CDEP course selections in order to promote transferability and to facilitate counting college credit towards the high school diploma. Remedial, non-credit courses, physical education, courses less than three credits, and first-year orientation courses are ineligible.
- ★ Requiring higher education institutions to provide orientations to familiarize CDEP students, their parents/guardians, and high school staff with the expectations of college and the services they provide.



INCLUSIVE CONCURRENT ENROLLMENT

The purpose of the Inclusive Concurrent Enrollment for Students with Disabilities (ICE) program is to build partnerships between public high schools and state public institutions of higher education to develop inclusive concurrent enrollment initiatives for students with severe disabilities between the ages of 18 and 22. The Executive Office of Education (EOE) is the lead agency and shares decision making responsibilities with the Department of Higher Education (DHE). EOE, in collaboration with the Institute for Community Inclusion (ICI) at UMass Boston, provides technical assistance to the partnerships around transition activities. DHE acts in an advisory capacity with partner campuses on matters of academic quality, enrollment, and higher education policies.

In fall 2012, four partnerships were funded through the ICE grant: Bridgewater State University, Bunker Hill Community College, Roxbury Community College, and UMass Boston. Quinsigamond Community College administrators decided to pursue supports for students with intellectual disabilities and autism without state grant support. MassBay Community College chose to return to the “Transition Scholars” model, with a set fee covering tuition, books, fees, and educational coaching, and with the college covering other costs such as the salary of the program coordinator. The Transition Scholars program at MassBay has also expanded to include students with intellectual disabilities who are older than 22 and no longer receive special education from their local districts. Holyoke Community College continues to offer an ICE-model program and developed a memorandum of agreement with local districts that provides the partnership with a predictable source of funding that is cost-effective from the point of view of partnering districts.

Implementation Spotlight

Bridgewater State University

Fall 2012 was Bridgewater State University’s second full semester of implementation. 17 students took classes as diverse as *Introduction to Special Education*, *Human Communication Skills*, and *Theory and Practice of Gymnastics*. Four students successfully completed a *Child and Adolescent Development* class, which aligned with their career goals to work in childcare and included job shadowing opportunities at local early childhood centers. A student whose career goal is graphic design was able to take *2D Design* and impressed a potential employer with his confidence and skill level.

Key Characteristics

The ICE program provides Massachusetts students with severe disabilities between the ages of 18 and 22 the opportunity to take part academically and socially in the life of the college by:

- ★ Leveraging resources that currently exist on the campus to ensure that students are appropriately supported, which may include access to testing accommodations, interpreter services, note taking services, and partnering students with an educational coach who may be a high school or college staff member or college peer.
- ★ Providing professional development to partnership members to build and sustain the ICE initiative, which include technical assistance activities, provided by the ICI, needed to support students with severe disabilities in inclusive college courses and in the life of college.



LOCALLY DETERMINED MODELS

Increasingly, high schools and institutions of higher education are developing innovative ways to increase high school students' access to postsecondary programs. For higher education institutions, it is a way to increase the visibility of their programs, and for high schools, it is an opportunity to provide an array of services to suit the unique needs of their students. These programs leverage unique local structures in place to address the individual needs of the partners.

Due to their nature, we are unsure of the scale throughout the Commonwealth.

KEY CHARACTERISTICS

The diverse nature of these programs makes it challenging to capture the wide variety of what is currently taking place. One method being used at high schools across the Commonwealth is the exchange of facilities in return for some level of higher education support. This support comes in the form of seats in a traditional college class, contract courses, professional development, or tutoring support. Other programs support the implementation of college-going curriculum, including placement testing, information on financial aid, and college advising.

Some common characteristics of these models include:

- ★ Providing a blend of high school and college in a rigorous, yet supportive program, compressing the time it takes to complete a high school diploma and up to the first two years of college.
- ★ Committing to servicing students that are typically underrepresented in higher education, including low-income young people, first-generation students, English language learners, students of color, and students at-risk of dropping out.
- ★ Developing the program collaboratively with local education partners, higher education institutions, and the community to sustain a long term collaborative team to leverage data and provide continuous program feedback adjustments.
- ★ Developing a highly integrated high school and higher education program that pushes all students to obtain two years of college credit for an associate's degree and provides a pathway through transfer articulation that allows credits to be used at a four-year institution.
- ★ Providing comprehensive support systems that develop students' academic skills, social skills, and behavior skills.

Implementation Spotlight

Early College at Amesbury High School

The curriculum for the program comes from the Massachusetts Transfer Block and includes courses in composition and writing, behavioral and/or social sciences, humanities and/or fine arts, natural or physical science, and mathematics/quantitative reasoning. It is possible for students to obtain 34 college credit hours through the Massachusetts Transfer Block.

Roxbury Massachusetts Polytech Pathway (RoxMAPP)

Governor Deval Patrick and Mayor Thomas M. Menino announced a first-of-its-kind partnership between the Commonwealth of Massachusetts and the City of Boston to increase student achievement and prepare students at Roxbury Community College (RCC) and Madison Park Vocational Technical High School (Madison Park) for success in a 21st century economy. RoxMAPP, the Roxbury Massachusetts Advanced Polytech Pathway, will create clear avenues for students to high-demand careers including health care, information technology, and the life sciences in the region and beyond. A group of 18 Madison Park students were the first to participate in RoxMAPP, a number expected to increase over the next few years.



GATEWAY TO COLLEGE

The Gateway to College (GtC) program reengages students who have dropped out of (or who are currently unlikely to graduate from) high school by providing a full-fledged college-based education that is on campus, flexible, and includes a summer option. Colleges and districts work together to develop and regularly review an integrated academic plan that leads to a high school diploma and maximizes opportunities to earn college credit leading to a credential.

The Department of Elementary and Secondary Education provided the MassGrad Gateway to College Award to three community colleges who are partnered with at least one MassGrad-eligible school district to start a new Gateway to College program (MassGrad funding was started in 2011 and ends 2015). Prior to MassGrad funding three other colleges across the state started the Gateway to College model between 2006 and 2010. The six community colleges currently running the Gateway to College model are Holyoke Community College, Massasoit Community College, Mount Wachusett Community College, Bristol Community College, Quinsigamond Community College, and Springfield Technical Community College.

KEY CHARACTERISTICS

The GtC program uses a cohort based model to provide students with the resources necessary to develop academically and socially by:

- ★ Providing students a full-fledged college-based education that is on-campus and flexible. Students are made to feel like college students, because they are college students.
- ★ Offering wraparound student support to meet the academic, social, and emotional needs of students in an environment that fosters the development of knowledge and skills necessary to succeed in school and in life. Dedicated student support professionals (“resource specialists”) provide students with intensive support throughout the Gateway experience.
- ★ Placing students in a community of learners (cohort) through a Foundation experience that prepares them to succeed in college and become lifelong learners.
- ★ Gateway faculty and staff working together as highly collaborative teams with the goal of maximizing student success while improving their own practice.

Implementation Spotlight

*Bristol Community College (BCC) with
Fall River Public Schools and
Dartmouth Public Schools*

BCC received a MassGrad Gateway to College award in October 2011 and the college is currently partnered with Fall River and Dartmouth Public Schools. To respond to the challenge of students completing their coursework on time, BCC implemented a mandatory Academic Resource Period on Fridays for all 1st semester students. To better address the needs of students BCC also implemented new development math and English pathways that are module-based. BCC is partnering with outside organizations to offer the Making Proud Choices teen pregnancy prevention and health program. In the summer BCC has a co-op program that provides on-campus paid internship opportunities for GtC students.

Communication is key at the BCC GtC program. The BCC Program Director schedules monthly phone meetings with representatives from partnering school districts and the BCC Resource Specialists maintain constant communication with the high school guidance counselors throughout the school year. All GtC students are required to check in daily with the BCC Resource Specialists before class and student attendance information is shared daily to GtC faculty. Faculty also provide weekly attendance/status updates to BCC Resource Specialists. GtC staff and faculty meet bi-weekly to monitor student progress and discuss program policies and initiatives.



CVTE POSTSECONDARY LINKAGES

Formally known as the Secondary Postsecondary Linkages Set-Aside in the Perkins Postsecondary Allocation Grant, this program supports students' seamless and successful completion of career vocational technical education (CVTE) programs of study that begin in grades 9-12 and result in a postsecondary credential awarded in grades 13-16. Linkages led by colleges based on the Tech Prep consortia have developed across Massachusetts to facilitate linkages between secondary CVTE and postsecondary education. Each consortium is comprised of a lead agency that is a community college and a school district which has a Perkins Act Local Plan Chapter 74 approved program. Each consortium's work is guided by an advisory committee that plans and coordinates the services that are provided to ensure they meet the size, scope, and quality necessary to have a significant impact on students' readiness for college, apprenticeships, and employment. Twenty percent of each college's Perkins allocation must be spent on Secondary/Postsecondary Linkages.

15 Secondary Linkage programs linked to Perkins postsecondary recipients have been developed across Massachusetts. CVTE also developed six articulation agreements for specific vocational technical courses and is in the process of developing an additional seven articulation agreements in order to allow students to claim postsecondary credit in vocational technical coursework when they enter any Massachusetts community college.

Implementation Spotlight

Berkshire Community College

Berkshire Community College (BCC) is the lead agency of the Berkshire CVTE Linkage Consortium. BCC works with eight public high schools, including Pittsfield High School, to offer postsecondary linkage programming. In addition to the 12 courses in health technology/biology, culinary arts, and business students engage in the broader BCC community. Students are encouraged by BCC to participate in their Bridge to College Program and Dual Enrollment program as an additional way to gain college credit and to explore potential career pathways.

KEY CHARACTERISTICS

Linkages support students in career vocational technical education by:

- ★ Coordinating development of articulation agreements between high schools and postsecondary institutions to eliminate the duplication of coursework, thereby supporting students to earn a credential, certificate, or degree sooner at a reduced cost.
- ★ Providing early college placement testing with the results shared with students, parents/guardians, and educators in order to provide sufficient time to guide students in addressing their academic needs to further reduce the need for remediation.
- ★ Coordinating development of seamless programs of study "grids," which serve as a road map for guiding students' educational pathway. The recommended sequence of high school and college courses in addition to work-based learning experiences are tailored to the need of the student.
- ★ Dual enrollment offered to high school students in selected programs by some community colleges as an early pathway to postsecondary education.
- ★ Articulation agreements allow students to receive credit for coursework already completed in high school.



PATHWAYS TO PROSPERITY

In February 2012, the MA Executive Office of Education (EOE) was approached by Jobs for the Future (JFF) and Harvard Graduate School of Education to engage in a multi-state career pathways network known as Pathways to Prosperity (PtP). The concept for creating a multi-state network was premised on Harvard's 2011 report entitled *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century*. The report calls for an intensive effort on the part of employers, educators, and government leaders to build pathways that link work and learning and are aligned with current and projected regional labor market demand. The Department of Elementary and Secondary Education (ESE) was appointed project lead in 2013.

Three Massachusetts community colleges, along with their intermediary and high schools partners, are designing grade 9-14 career pathways. These include Hampden County (West Springfield High School, Springfield Technical Community College, Regional Employment Board of Hampden County) focusing on advanced manufacturing; Boston (The Community Academy of Science and Health, the Edward M. Kennedy Academy for Health Careers, Bunker Hill Community College, Harvard MEDScience, Boston Private Industry Council) focusing on health care; and Metro West (Marlborough STEM Early College High School, Framingham State University, Partnerships for a Skilled Workforce, Inc.) focusing on information technology, advanced manufacturing, and health care. The Brockton area is also implementing pathways through the Youth CareerConnect grant (Brockton High School, Massasoit Community College, Brockton Area Workforce Investment Board) focusing on health care.

Implementation Spotlight

Hampden County

The Hampden County Advanced Manufacturing Pathways program is a partnership between West Springfield High School (WSHS), Springfield Technical Community College (STCC), the Regional Employment Board of Hampden County (REB), West Springfield advanced manufacturing companies, other regional advanced manufacturing companies, and area businesses that provide direct services to the regional advanced manufacturing industry. The first ninth grade cohort began this pathway in the 2013-14 school year and are working towards earning a degree in Mechanical Engineering Technology.

KEY CHARACTERISTICS

PtP supports young people in completing high school, attaining a postsecondary credential with currency in the labor market, and launching into careers while leaving open the prospect of future education by:

- ★ Creating high school and community college 9-14 career pathways, with clear structures, timelines, costs, and requirements linking and integrating high school and postsecondary curricula and aligning both with labor market requirements, particularly in the advanced manufacturing, information technology, and health care fields.
- ★ Providing learning opportunities at the workplace and supporting the transition of young people into the labor market through local or regional intermediary organizations that serve as conveners, brokers, and technical assistance providers to schools and employers engaged in building and sustaining pathways.
- ★ Exposing students, starting in the middle grades, to a wide range of career options, information, and opportunities to learn about high school and postsecondary courses of study leading to careers.



STEM-EARLY COLLEGE HIGH SCHOOLS

Given the state's need for highly skilled workers in STEM areas, districts have been encouraged to consider developing models that motivate and prepare students to explore STEM career pathways while still enrolled in high school and to pursue STEM majors in college.

Six districts were chosen in a competitive process to open a STEM-Early College High School (ECHS) and each received approximately \$120,000 of Race to the Top funds to be spent over four years for school planning, start up, and full implementation. These districts include Boston (Dearborn Middle School), Marlborough (Marlborough High School), Worcester (North High School), Randolph (Randolph High School), Quaboag (Quaboag Innovation STEM Early College High School), and a consortium of schools under the leadership of the Massachusetts Association of Vocational Administrators Association (Southeastern Regional Vocational School).

KEY CHARACTERISTICS

The STEM-ECHS were designed to lead to improvements in students' achievement in STEM subjects and increase enrollment in STEM college majors by:

- ★ Developing a program within an existing high school or a new high school and developing a sequence of courses that students will complete that includes a minimum of 12 college credits and up to 30 college credits or more with an emphasis on STEM courses.
- ★ Developing strong partnerships with an institution of higher education and other partnership, such as other districts, businesses, workforce development, and community-based organizations.
- ★ Creating a strategy for recruiting and retaining students in the program, with a particular focus on first generation college attending students.

Implementation Spotlight

Marlborough

The Marlborough STEM-ECHS opened in fall 2011 with inaugural sixth and ninth grade classes, and will add one grade per year until full enrollment. Each grade will initially be housed at their respective buildings, the Marlborough middle and high schools and at a lab school site in future years. Partnering with Framingham State University, students engage in a project-based curriculum and choose career pathways that incorporate dual enrollment during their junior and senior years. Students will engage in industry partnerships and opportunities derived through a partnership with the Metrowest STEM network. The Marlborough STEM-ECHS will use an individual growth plan model focusing on academic and personal support and community involvement. The school will give priority access to first-generation college bound students, drawing on the district's low-income, students with disabilities, Latino, and English language learner populations.



GLOSSARY

Back on Track through College: Engages youth who have dropped out of high school or are struggling to graduate on time by completing credits needed for high school graduation at an institution of high education, while simultaneously earning college credits.

Career Development Education (CDE): Offers students a framework for gaining the knowledge, skills, and experiences necessary to navigate the myriad of options available for postsecondary success. In an exemplary CDE model, students will participate in a well-designed sequence of CDE activities that become progressively deeper and more intensive as the students gain skills and maturity. CDE also addresses student attitudes and beliefs about their future selves, ensuring a personalized approach to their learning process. Career Development Education encompasses three stages that help students move from the cognitive to the experiential: career awareness, career exploration, and career immersion.

College and Career Readiness: Students have the knowledge, skills and experiences necessary for success in postsecondary education and economically viable career pathways in a 21st century economy.

Dual Enrollment: Provides high school students with the opportunity to enroll in college-level coursework on a college or high school campus while simultaneously enrolled in high school.

Early College High Schools: Autonomous schools that provide a systemic blend of high school and college (scope and sequence of coursework) in a rigorous yet supportive program, compressing the time needed to complete high school and the first two years of college (students can earn up to an Associate's degree or up to two years of transferable college credit).

Early College Pathways: Accelerated pathways for all students that integrate high school and college (scope and sequence of coursework) that includes all the requirements for completing a high school diploma and a postsecondary credential with value in the labor market (students can earn up to 12 college credits).

IHE: Institutes of Higher Education

MassGrad: In fall 2010, the U.S. Department of Education selected Massachusetts as just one of two states for the federal High School Graduation Initiative (HSGI) award and one of 29 projects total nationwide chosen for funding out of 184 total applicants. The Massachusetts grant project - MassGrad - focuses on the 133 high schools throughout the Commonwealth that exceeded the statewide annual dropout rate of 2.9 percent in the 2008-09 school year. The grant has four key activities, which include, creating a state high school graduation coalition, expanding the dropout prevention and recovery work group, implementing research-based practices in the HSGI school cohort, and establishing new Gateway to College sites.

STEM: Science, Technology, Engineering, and Mathematics.

Success after High School: The Massachusetts Department of Elementary and Secondary Education's overarching mission to ensure that all Massachusetts students are prepared for success and opportunities after high school – including career and higher education opportunities.



APPENDIX A

There is no one size fits all model for funding early college opportunities in Massachusetts. It takes partnership and creativity to make programs stay visible and stay afloat financially.

Two concerns compound the funding issue:

1. Each early college model has unique characteristics. For example, college level courses may be taught by adjuncts or by high school teachers; classes may meet on college campuses or at the high schools; students may begin the program in sophomore or junior year; the number of college credits range from 3 – 34.
2. The cost of the dual enrolled courses and charges to participating high schools from the partner institute of higher education varies widely (see next page).



APPENDIX A

Dual Enrollment Cost by Institute of Higher Education*

College or University	Cost of Dual Enrollment Course Offered at the Institution	Cost of Dual Enrolled Course Offered at High School or Other Site	Cost of Dual Enrolled Course Offered as Part of Program (Early College, Pathways, Gateway, etc.)	Maximum Course Enrollment
Bristol Community College	*one course/semester free, funded through CDEP	N/A	In the early stages of discussion about establishing an early college program with B.M.C. Durfee high school, Fall River	Dual enrolled students enroll in "regular" classes
Bunker Hill Community College	\$141/credit (same as "in-state" tuition)		Anticipated cost of \$141/credit	
Framingham State University	\$944/student for 4 credit course; students funded though CDEP pay nothing	\$10,000 (\$2,500/credit)	\$944/student for 4 credit course	Math: 30; Intro to College Writing: 18; Expository Writing: 20; Other Courses: 25-35
Mass Bay Community College	1 st course free, subsequent courses at \$57/credit	1 st course free, subsequent courses at \$57/credit	N/A	N/A
Middlesex Community College	\$87/credit	\$87/credit	\$87/credit	
Mount Wachusett Community College	\$190/credit hour (same as "in-state" tuition), additional fees for registration, books, lab and materials	N/A	Pathways Early College courses are free. Gateway to College free for students maintaining a 3.0 GPA	
Northeastern University**		N/A	\$1,000 including books and fees (course is a hybrid – meets 6-7 times on campus, the rest online)	
Northern Essex Community College	\$7,500 (additional fees for placement testing) or normal tuition/fees for students no CDEP	\$7,500 (plus fees for placement testing)	\$7,500/course (plus fees for placement testing), families pay \$600 program fee/year	Courses in computer lab: 22; maximum for most courses:32
Quinsigamond Community College	1 st course is free	\$5,000	Free (funded by the Vision Project and Perkins)	From 10 – 25
Springfield Community College	\$760/4 credit course; \$597/3 credit course, students not charged tuition or fees so the cost is absorbed by the college	N/A	Anticipated cost of approximately \$760/4 credit course and \$597/3 credit course	

*All costs are for academic year 2013-14. Some institutions predict increases for academic year 2014-15.

**As part of the STEM-EC program. Courses do not count towards high school graduation.

