The Massachusetts Landscape of Early College

A collaborative initiative among the MA Department of Elementary and Secondary Education, the MA Department of Higher Education, and the MA Executive Office of Education, with support from Jobs for the Future

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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.
Introduction

What is Early College?

Early college programming incorporates credit-bearing college coursework and academic supports into the high school experience to support increased numbers of students, particularly those who are traditionally underrepresented in postsecondary education, to graduate from high school and go on to complete a postsecondary credential with currency in the labor market.

Many early college programs incorporate the following five components:

- District and College Partnerships
- Earned College Credit
- Aligned High School and College Curriculum
- Career Development Education
- Student Support Services

Each of the early college programs highlighted in this report describes these components in more detail.

The Massachusetts Department of Elementary and Secondary Education (ESE) partners with the Massachusetts Department of Higher Education (DHE), the Massachusetts Executive Office of Education (EOE) and Jobs for the Future (JFF) to support statewide and local efforts in building and sustaining early college programs. Visit JFF’s website for more information about early college, including state and local strategies for sustaining and scaling programming, 9-14 career pathways, and national trends and outcomes.

Can Students Earn College Credits?

A foundational piece of early college programming is high school students earning both secondary and college credits simultaneously. Earning secondary and college credit (called dual enrollment, dual credit, or concurrent enrollment) 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)

Earning college credits provides high school students with the opportunity to enroll in college-level coursework (non-remedial) on a college or high school campus. This opportunity connects students with a college learning environment, access to information about college going criteria, and supports students in becoming college and career ready. College courses are free or offered at a reduced price and allow students to save on tuition and fees.

In the 2013-14 school year, a total of 6,673 high school students (including homeschoolers and those enrolled in Massachusetts public and private high schools) were enrolled in both high school and college courses. Using the total number of public high school juniors and seniors enrolled in Massachusetts in 2013-14 as a comparison group, these 6,673 would represent approximately 4.8 percent.

More information on earning college credits can be found within each early college program description highlighted throughout this report, particularly the Commonwealth Dual Enrollment Partnership (CDEP) found on page 7.
Why Early College?

Early college presents the opportunity to strengthen the relationship between high schools and colleges. The partnership fosters a deeper understanding of what students need to know and be able to do at both the high school and college-level. 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 college, allowing both institutions to effectively support students’ transitions to postsecondary education and into the workforce.

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 experience, and to envision themselves as college students. As postsecondary education becomes increasingly necessary to participate in a 21st century economy, early college has the potential to close the educational attainment gap between advantaged and disadvantaged students. Early college opportunities can increase all students’ ability to engage in an economically viable educational and career pathway.

The Early College, Continued Success report, a national impact study published by the American Institutes for Research, concluded that students who participate in early college programs were significantly more likely than their peers to graduate high school, enroll in college, and earn a degree. The Early College Expansion report, a national study conducted by Jobs for the Future, reported similar results:

- 90 percent of early college students received a high school diploma vs. 78 percent of students nationally.
- About one in every three early college students earned an Associate’s degree or other postsecondary credential prior to graduating from high school.
- 71 percent of early college graduates enrolled in college vs. 68 percent of students nationally.
- 86 percent of early college graduates who enrolled in college persisted for a second year vs. 72 percent of college students nationally.

Trend data shows that Massachusetts students’ high school to college completion trajectory drops significantly between high school graduation and college enrollment. Following the ninth grade students in the 2007 cohort, only 35 percent graduated high school within 5 years, immediately enrolled in college, persistently enrolled in college, and obtained any* college degree within six years of high school graduation. The statistic is even more startling for our low-income students, with only 15 percent meeting these milestones.

Data Source: Success after High School, DART

* To be considered as obtaining a degree, a student must obtain a certification, associate, bachelor, or any other postsecondary degree.
**Early College Spectrum**

Most high schools offer some aspect of early college programming, such as college preparation through Advanced Placement and/or International Baccalaureate courses, college credit accumulation through dual enrollment opportunities and articulated agreements, and/or integrated high school and college designs through career pathways in particular industries or fields. In Massachusetts, there is a unique mix of early college programming implemented on high school and college campuses. The following pages describe various early college models found throughout the Commonwealth.

<table>
<thead>
<tr>
<th>College Preparation</th>
<th>Earned College Credit</th>
<th>Integrated High School and College Designs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students enrolled in rigorous coursework such as Advanced Placement (AP) and/or International Baccalaureate (IB) classes that may earn college credit</td>
<td>Local and statewide articulation agreements and/or dual enrollment programming for students receiving college credits while still enrolled in high school</td>
<td>Some students engaged in pathways that integrate a high school and college sequence of coursework in a particular industry or field leading to a large number of college credits (12 credits) earned while still enrolled in high school</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Autonomous schools or programs providing all students with an integrated high school and college sequence of coursework in a particular industry or field, compressing the time needed to complete high school and the first two years of college</td>
</tr>
</tbody>
</table>
# Early College Dashboard

The state collects information on a variety of early college programming. Although comprehensive, the following dashboard does not contain information on the many locally developed early colleges found throughout the Commonwealth.

<table>
<thead>
<tr>
<th>Student groups targeted</th>
<th>Campus/CVTE Postsecondary Linkages</th>
<th>Commonwealth Dual Enrollment Partnership</th>
<th>Gateway to College</th>
<th>Inclusive Concurrent Enrollment</th>
<th>Pathways to Prosperity and Youth CareerConnect</th>
<th>STEM-Early College High Schools</th>
<th>STEM Starter Academy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career vocational technical education students</td>
<td>1st generation college students, interested in STEM</td>
<td>Students at-risk of dropping out and youth that previously dropped out</td>
<td>Students with intellectual disabilities</td>
<td>1st generation college students, interested in STEM</td>
<td>1st generation college students, interested in STEM</td>
<td>New to college students</td>
<td></td>
</tr>
<tr>
<td># of college credits earned by high school students</td>
<td>3-6</td>
<td>3-6</td>
<td>Average of 26, maximum of 74</td>
<td>3-6</td>
<td>At least 12</td>
<td>Up to 24</td>
<td>Up to 9</td>
</tr>
<tr>
<td>Aligned Curriculum</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Career Development Education*</td>
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<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Student Support Services</td>
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<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Funding</td>
<td>Federal funds</td>
<td>State funds</td>
<td>Federal and local funds</td>
<td>State and local funds</td>
<td>Federal and local funds</td>
<td>State and local funds</td>
<td>State funds</td>
</tr>
<tr>
<td>Age or grade level served</td>
<td>Grades 9-12</td>
<td>Grades 9-12</td>
<td>Ages 16-21</td>
<td>Ages 18-21</td>
<td>Grades 9-14</td>
<td>Grades 6-12</td>
<td>HS grads – Grade 14</td>
</tr>
<tr>
<td>Scale**</td>
<td>13 Colleges, 26 Vocational Technical High Schools, 50 Comprehensive High Schools</td>
<td>28 Colleges, 258 High Schools, Over 2,000 Students</td>
<td>6 Colleges, 37 Districts, Over 500 Students</td>
<td>13 Colleges, 57 Districts, 2 Collaborative Programs, Approximately 120 Students</td>
<td>4 Colleges, 4 High Schools, Over 1,100 Students</td>
<td>5 Colleges, 5 Districts, 1 Association (MAVA) Over 500 Students</td>
<td>15 Colleges, Over 3,500 Students</td>
</tr>
</tbody>
</table>

*Career Development Education encompasses three stages that help students move from the cognitive to the experiential: career awareness (e.g. listening to career speakers), career exploration (e.g. informational interviews with local professionals), and career immersion (e.g. internships or cooperative education placements).

**There is some overlap between programming, for example, there is overlap between the Pathways to Prosperity and the STEM Early College High School Programs.
The Funding Challenge

Identification of sustainable funding mechanisms to support the development of early college programs continues to be a challenge in Massachusetts. Most states have dual enrollment policies that provide both financing and regulations for implementing programs. Some 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, the Commonwealth Dual Enrollment Partnership (CDEP) state line item has fluctuated since the mid-’90s and has never provided funding that would allow students to participate at any large scale. Outside of CDEP and Inclusive Concurrent Enrollment Initiative (for students with disabilities), there are no dedicated state sources of funds for early college programming.

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 programs. 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 in this report, is currently subject to capacity constraints and a state appropriation. To make CDEP dollars go further, some state universities and community colleges have discounted tuition and fees and some contribute funds via Continuing Education and Access and Transition budget lines. Some high schools and colleges develop organic, local arrangements to fund and support early college programs which have included the use of adjunct faculty who teach in the high school, rather than sending students to the college. Staff at 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.
The 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 at Massachusetts public higher education institutions and earn credit simultaneously toward a high school diploma and a future college degree. College courses are free or offered at a reduced cost to support greater access and savings on tuition and fees. 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.

The goal of CDEP is to expand college opportunities to a greater number of students who would otherwise have limited or no access to an early college experience. College courses offered through CDEP expose high school students to a college curriculum and provide an early start to a college and career pathway.

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 institutions are eligible to participate in CDEP. Massachusetts public higher institutions support CDEP and have long included dual enrollment in their missions and operate numerous opportunities to earn college credit and participate in early college programs and other college preparatory initiatives on their campuses in addition to CDEP. CDEP places an emphasis on providing opportunities for first-generation college students, low-income students, and students who are interested in Science, Technology, Engineering, and Mathematics (STEM) fields. In the 2013-14 school year, over 2,000 high school students participated in CDEP.

Spotlight: Bunker Hill Community College and Malden High School

Bunker Hill Community College (BHCC) is a comprehensive, multi-campus urban institution located in Boston’s historic Charleston neighborhood, with a second campus in Chelsea and satellite locations in East Boston, Malden High School (MHS) and Boston’s South End. BHCC is the largest community college in

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.
Massachusetts and offers more than 100 certificate and degree programs. BHCC’s Dual Enrollment Program enables high school students from nearly 30 high schools and community based organizations to earn high school and college credits simultaneously, while gaining familiarity with the college experience. The following spotlight describes the BHCC Dual Enrollment Program with Malden High School.

BHCC and MHS have partnered for over five years to operate a Satellite Campus at MHS which currently enrolls nearly 1,000 students (including high school and adult learners) in day and evening college classes each semester. BHCC waives tuition and fees for MHS students in dual enrollment in lieu of rental fees for the use of MHS facilities. This partnership enables students to participate in an onsite BHCC Dual Enrollment Program, attending classes alongside BHCC students.

Since its inception in 2009, BHCC’s Dual Enrollment Program has enabled a diverse cohort of MHS students and has grown exponentially to 111 juniors and seniors in 2014, a 44 percent increase from 2013. These students learn in a mixed enrollment model, meaning high school students are taking classes with the general college population, rather than only with their cohort of high school students. BHCC courses are currently available in the areas of English, English as a Second Language, Math, Biology, Chemistry, Psychology, Business, and Sociology.

MHS Dual Enrolled Students:

<table>
<thead>
<tr>
<th>School Year</th>
<th>Student Count</th>
<th>School Year</th>
<th>Student Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>25</td>
<td>2012</td>
<td>59</td>
</tr>
<tr>
<td>2010</td>
<td>22</td>
<td>2013</td>
<td>77</td>
</tr>
<tr>
<td>2011</td>
<td>36</td>
<td>2014</td>
<td>111</td>
</tr>
</tbody>
</table>

In 2014, BHCC and MHS piloted an early college program with five MHS students taking a full-time load of BHCC college courses toward BHCC’s Liberal Arts major. The early college program will provide students the opportunity to receive a MHS diploma and an Associate degree or up to two years of BHCC credits.

MHS partners with local business and industry partners to provide students with workplace learning opportunities. These include a five-week Senior Internship Program, weekly individual coaching by a Career Place Job Coach, a Commonwealth Corporation Pilot afterschool program that connects students with career pathways and job coaching, and a summer/winter Job Program.

MHS has a comprehensive parent involvement strategy that keeps parents informed and actively engaged in the Dual Enrollment Program. Monthly Parent Council Meetings, quarterly “Ask the Principal” Nights, weekly newsletters, and Naviance online college and career readiness assistance all keep parents up-to-date about these learning opportunities.

LifeMap is a program and a process that is dedicated to promoting student success in their educational, career and life goals. LifeMap utilizes technology combined with personal attention students receive from BHCC faculty and staff to ensure a positive and productive postsecondary educational experience. The BHCC portal allows students to access the many technological components contained in LifeMap including career planning tools, ePortfolio, advising and counseling information, financial planning and information regarding support services on and off campus.

For more information about BHCC’s Dual Enrollment Programs, contact:

Gretchen Lahey
Dual Enrollment Coordinator
Bunker Hill Community College
dualenroll@bhcc.mass.edu
617-228-3319
www.bhcc.mass.edu/dualenrollment

For more information about MHS’s Dual Enrollment Program, contact:

Ann O’Connor
Guidance Counselor
Malden High School
aoconnor@maldenps.org
781-397-6032
http://www.maldenps.org
CVTE Postsecondary Linkages

Formerly 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 were originally based on the Tech Prep consortia model developed across Massachusetts to facilitate linkages between secondary CVTE and postsecondary education. Although Tech Prep no longer exists, the consortium model that remains 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 thirteen statewide articulation agreements for specific vocational technical courses and is in the process of developing more articulation agreements in order to allow students to claim postsecondary credit in vocational technical coursework when they enter any Massachusetts community college. CVTE is also working on developing articulation agreements with four year institutions.

Spotlight: Berkshire Community College

Founded in 1960, Berkshire Community College (BCC) was the first community college established by the Commonwealth of Massachusetts. BCC currently offers 36 associate degree and 19 certificate programs, including options and concentrations. BCC strives to place higher education within reach of all residents of Berkshire County and beyond. BCC is committed to access, academic excellence, student success, and leadership in the community.

The CVTE Linkage Initiative at BCC works with local high schools to provide a smooth transition for high school career vocational students into their post-secondary programs of choice. The Berkshire CVTE Linkage Initiative Advisory Committee, formed through collaborative partnerships between BCC and local school districts with CVTE programs, provides guidance to this work. BCC invites other Berkshire County high schools to participate in Linkage projects and activities on a space available basis.
At BCC, CVTE Linkage coordinates secondary to postsecondary linkage activities such as dual enrollment and articulation agreements to assist students along their path toward earning a degree, certificate, or credential from the college. CVTE Linkage coordinates faculty meetings between BCC and high schools to review curriculum alignment in these articulated pathways.

In addition, CVTE Linkage supports college and career exploration activities such as career fairs and connections to college programs to help students prepare for postsecondary education, training, and employment.

For more information about the CVTE Linkage Initiative at Berkshire Community College, contact:

Berkshire Community College
CVTE Linkage Initiative
413-236-2180
www.berkshirecc.edu

Spotlight: Quinsigamond Community College

Quinsigamond Community College (QCC) was established in 1963 to provide residents of Central Massachusetts access to higher education. Since the early '60s, enrollment has grown from 300 to over 13,000 full and part-time day and evening students. QCC offers over 70 associate degrees and certificate career options in Business, Health Care, Technology, Liberal Arts, and Human Services.

The Career Vocational Technical Education (CVTE) Linkages Initiative provides Chapter 74 high schools, as well as high schools that meet the definition of career and technical education, course articulation agreements, early college placement testing (Accuplacer), credit course offerings, and college readiness activities. Through the initiative, students are able to experience a seamless path from high school to postsecondary education.

Articulation agreements enable students to take courses at their high schools earning both high school and college credit. The advantages of articulation to the students are three-fold: (1) reduced college cost, (2) less time to complete the college program and (3) the option to take advanced technical courses in their college program. Students choose from a list of courses that allow them to discover and develop their talent in a career field and once enrolled in QCC, have a head start in a related degree program.

College credit courses offered to the high schools provide students the opportunity to earn college credits, create a transcript, and save time and money. A variety of college-level courses can be delivered at the high schools or online. Students must meet all course pre-requisites or co-requisites and can earn from 3 to 15 college credits while still in high school. Most of the courses offered fit the MassTransfer Block which satisfies general education and core requirements across Massachusetts public higher education institutions. Taking advantage of QCC’s credit course offerings enable high school students to get a jump start.

College readiness activities such as Math IV and Math Boot Camps are offered to high schools to prepare students for college level math. Math IV is a noncredit course that combines the content of developmental courses: Beginning Algebra and Intermediate Algebra. This course can reduce the average time for a student to place into a college-level math course.

Math Boot Camps are for students who wish to improve their skills in order to accelerate the pace at which they travel through the developmental math course sequence. Students attend the Math Boot Camp for a period of one-week for four hours each day. At the completion of the Math Boot Camp, the students retake the Accuplacer placement exam with the goal of improving their scores and placing into college level math.

For more information about the CVTE Linkage Initiative at Quinsigamond Community College, contact:

Christina Hebert
Manager of Educational Partnerships
Quinsigamond Community College
chebert@qcc.mass.edu
508-854-2853
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.

Spotlight: Massasoit Community College

The Gateway to College program at Massasoit Community College (Massasoit) aims to maximize student learning by setting high academic standards, increasing academic achievement, and developing students’ learning skills by initiating responsible strategies to prepare students for the world of tomorrow. To bring this vision to fruition, Massasoit’s objective is to promote student achievement and academic rigor for college and career readiness by fostering educational excellence.

To fulfill this mission, Massasoit provides a cooperative educational environment that encourages participation in the community to help students achieve their highest potential and become life-long learners; eliminates barriers to academic and personal success by delivering the necessary wrap-around support services, including individual counseling and necessary community referrals for additional support; and offers the necessary components for academic success that include small class sizes, tutoring, academic advising, flexible part-time class schedules, and a challenging curriculum.

A memorandum of agreement with partnering school districts funds the Gateway to College program. Currently

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.
partners include Brockton, Hanover, Middleboro, Norton, Randolph, Weymouth, West Bridgewater, Whitman-Hanson Regional, and Everett.

Required coursework is determined by Accuplacer scores, the sending school district and credits granted on the high school transcript. Graduation Plans are subject to change depending on number of classes taken and passed successfully each semester. Students take all of their classes at Massasoit.

Beginning in the spring 2014 semester, Massasoit began offering developmental and college courses in accelerated sessions (5-week sessions, three in a 15-week semester). Math and English (all developmental levels), US History 1 and 2, Chemistry, Speech, and Computer Keyboarding were all offered as accelerated courses.

Of the 14 students who graduated in December 2014, six students returned to Massasoit for the spring 2015 semester and one student transferred to Bridgewater State University. Thirty-eight students are on track to graduate in June 2015. Graduates of the program earn an average of 27 college credits.

Each Gateway to College site is staffed by a program director who works with liaisons from sending districts and schools to identify and support students’ transition from the traditional high school to the college setting. Each site also employs one or more resource specialists who are primarily responsible for providing both academic and socio-emotional supports to students.

The Gateway to College program at Massasoit is committed to helping all students achieve their goals by transforming them into lifelong learners. Under the guidance of resource specialists, as well as a caring team of instructors, students learn the skills they need to succeed in college, career and life, all while earning a high school diploma and significant college credits.

Career readiness is built into the students’ experience through a series of program specific seminars. Students begin by taking Foundation Seminar that covers a range of topics intended to prepare students for success in the program and on a college campus. Students are introduced to career assessments utilized by the college and build on the results in Civic Engagement Seminar. This seminar encompasses resumes, cover letters, thank you letters and mock interviews. Students use this experience to perform a minimum of 10 hours volunteer work each semester to gain experience in a field of choice. In Transition Seminar, students complete and present a portfolio that includes reflection on their civic engagement experience to inform their college and career path.

For more information about the Gateway to College program at Massasoit Community College, contact:

Christina Alves
Director of Gateway to College
Massasoit Community College
calves@massasoit.mass.edu
508-588-9100 ext.1687
http://gateway.massasoit.mass.edu

For more information about the Gateway to College National Network, visit:

http://www.gatewaytocollege.org
I nclusive Concurrent Enrollment

Funded by the Commonwealth since 2007, the Inclusive Concurrent Enrollment Initiative (ICEI) offers grant funded programs supporting public high school students with severe disabilities, ages 18-22, who have not passed MCAS the opportunity to participate in inclusive college courses (credit or non-credit) to increase their school and work success. In the Initiative’s early years, partnerships were formed solely between districts and community colleges. Now, five four-year public universities are involved in Inclusive Enrollment Initiative partnerships.

Students benefit academically and transition to young adulthood more readily when they have the opportunity to engage in all college-related activities rather than staying at high school. Students continue to avail themselves of opportunities to take courses alongside their nondisabled peers; to develop self-determination and self-advocacy skills; to improve academic, social, and functional skills; and to participate in career planning, vocational skill-building activities, and community-based integrated competitive employment opportunities.

The Executive Office of Education (EOE) is the lead agency and collaborates with both the Department of Higher Education (DHE) and the Department of Elementary and Secondary Education (ESE). EOE also works with the Institute for Community Inclusion (ICI) at UMass Boston to provide 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.

Eleven programs are grant-funded, including Bridgewater State University, Bunker Hill Community College, Cape Cod Community College, Middlesex Community College, Roxbury Community College, University of MA Amherst, University of MA Boston, Westfield State University, Framingham State University, Northern Essex Community College, and Berkshire Community College. Two other independently funded programs are located at Holyoke Community College and MassBay Community College. These 13 institutes of higher education partner with a total of 57 districts and 2 educational collaboratives.

Spotlight: Westfield State University

The Westfield State University (WSU) ICEI program began in September 2013, serving five students. The program has expanded to serving 20 students from six sending districts. The way in which students spend their days in the program is individualized to each specific student. The

Key Characteristics

The ICEI 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 ICEI 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.
experiences through the ICEI program are aimed to provide students with the skills needed to meet their long-term employment goals. The goal is to locate paid employment by the end of a student’s participation in the program. The WSU program addresses students’ academic, health/wellness, social/emotional, and employability skills by using a Person-Centered Plan to identify preferences, strengths, and goals.

The college takes the lead in ICEI partnerships. College partners are responsible for leading the grant development process, and if awarded funds, the college will be responsible for receiving and distributing the funds as proposed. The partnership consists of a core team of a higher education implementation specialist, a high school liaison, an educational coach, and an employment specialist. Other partners that are encouraged to participate in the partnership include a parent consultant and a youth leader.

Westfield State University partners with Agawam Public Schools, Amherst Regional Public Schools, Chicopee Public Schools, Gateway Regional Public Schools, Hampden Charter School of Science, Ludlow Public Schools, Southwick-Tolland Regional Public Schools, and Westfield Public Schools. A total of 20 students participated in the fall 2014 semester and there are 17 currently enrolled for the spring 2015 semester.

Students are enrolled in classes with age appropriate peers and accompanied by an Education Coach to provide support and assist with any needed accommodations. Course selection is aligned to the student’s long-term employment goals. Courses offered at WSU include academic, business, technology, arts, career exploration, and wellness and personal development courses.

An Employment Specialist helps students identify career interests, enhance employability skills (i.e. interviewing, job searching), creating resumes and portfolios, identifying potential internships, and paid employment aligned with students long-term goals. The Employment Specialist hosts biweekly employment seminars, with the goal for students to obtain employment by their last semester in the ICEI program.

Peer mentors accompany students on campus during a range of activities such as tutoring, exercising, breakfast and lunch in the dining commons, campus-based social activities, and ICEI identified activities. The Peer Mentors have become an official club pleCEs: Positive Inclusion of Everyone Creates Educational Success to identify and plan to support night and weekend activities that ICEI students can come back to campus for.

For more information about the Inclusive Concurrent Enrollment Program at Westfield State University, contact:

Lyndsey Nunes
Inclusive Concurrent Enrollment Coordinator
Westfield State University
lnunes@westfield.ma.edu
413-572-8439
http://www.westfield.ma.edu

For more information about the Inclusive Concurrent Enrollment state grant, contact:

Glenn Gabbard
Inclusive Concurrent Enrollment Coordinator
MA Executive Office of Education
glenn.gabbard@state.ma.us
617-979-8335
http://www.mass.gov/edu/birth-grade-12/higher-education/initiatives-and-special-programs/inclusive-concurrent-enrollment
Locally Determined Models

Increasingly, high schools and higher education institutions 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 that address the individual needs of the partners.

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.

Due to their nature, we are unsure of the number of students participating throughout the Commonwealth.

Spotlight: Haverhill Early College Program

For the past several years, Haverhill High School (HHS) has been working to close its achievement gap. With a student population of 1,845 students, of which 55 percent are low-income, HHS implemented an Early College Program to (1) provide dual enrollment opportunities, (2) provide college-level academic and career support such as tutoring, mentoring, and career guidance, (3) increase high school graduation rates leading to higher enrollments in postsecondary education, and (4) incorporate rigorous career awareness, exploration, and immersion activities into the curriculum and pathways and (5) reduce the need for remedial coursework when students enroll in college.

The Early College Program at HHS started in 2012, with a partnership between Haverhill High School and Northern Essex Community College (Northern Essex). In this cohort model, students in the program attend college classes taught at the high school and pay about half of the standard college tuition.

High school sophomores start the program taking two college courses – U.S. History I and American Literature I. Students in the program will continue to take courses for college credit throughout high school and graduate from high school with 24 or more college credits. The courses in the program are part of the MassTransfer
Block and are taught by faculty from Northern Essex and the high school. High school faculty must meet the same hiring requirements as Northern Essex faculty and be vetted through Northern Essex to be eligible to teach Northern Essex courses at HHS.

A program course sequence might look like this:

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sophomore</td>
<td>LIT 201</td>
<td>HIS 101</td>
</tr>
<tr>
<td>Junior</td>
<td>LIT 202</td>
<td>HIS 102</td>
</tr>
<tr>
<td></td>
<td>SOC 101</td>
<td>ART 106</td>
</tr>
<tr>
<td>Senior</td>
<td>ENG 101</td>
<td>Course selections per Northern Essex’s advising schedule</td>
</tr>
</tbody>
</table>

In school year 2014-15, 87 students, including sophomores, juniors, and seniors, took college courses at the high school taught by teachers from Northern Essex and the high school. Of those students, 18 seniors will graduate this year with an average of 27 college credits. Of the 18 seniors, 1 will graduate with 31 credits, 1 will graduate with 30 credits, 13 will graduate with 27 credits, 2 will graduate with 24 credits, and 1 will graduate with 18 credits. All of these students have bypassed any need for taking remedial coursework when enrolling in college. The credits earned from Northern Essex are transferable to other public and private colleges and universities. See Northern Essex’s website for a list of transfer agreements.

In 2010, Haverhill High School was the recipient of a 21st Century Community Learning Centers grants for out-of-school time programming. Part of that funding was used to begin an Internship Program, which has grown to offer 60 internships per year. Haverhill’s Internship Coordinator developed and cultivated over 70 local businesses and service organizations committed to training and educating students through career fairs, guest speakers, and/or hosting internships.

Students in the early college program are provided with an on-campus orientation that includes information on student services as well as a focus on academic opportunities, expectations, and support services. Students have ready access to and support in using Northern Essex’s learning resources including but not limited to library and information resources and services, tutoring, academic advising, and counseling services.

For more information about the Haverhill Early College Program, contact:

HHS School Counseling Department
Haverhill High School
978-374-5700
http://hhs.haverhill-ps.org/

In addition to partnering with HHS, Northern Essex also partners with Amesbury High School, Greater Lawrence Technical High School, Lawrence High School, Lawrence High School Learning Center, Methuen High School, Newburyport High School, Pentucket Regional High School, Phoenix Academy-Lawrence, Triton Regional High School, Whittier Regional Vocational Technical High School, Sanborn Regional High School, and Timberlane Regional High School in New Hampshire.

For more information about Northern Essex Early College Programs, contact:

Lori Weir
Director of K-12 Partnerships
Northern Essex Community College
lweir@necc.mass.edu
978-556-3943
http://www.necc.mass.edu
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 institutes of higher education, 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.

In 2014, Jobs for the Future received a $4.9 million Youth CareerConnect (YCC) grant to expand and implement rigorous and engaging career pathway models that take young people from 9th grade through industry credentials and an associate’s degree in high demand fields. The grant will fund pathways in three regions across Massachusetts, including Hampden County and MetroWest (as noted above), and the Brockton area (Brockton High School, Massasoit Community College, Brockton Area Workforce Investment Board) focusing on health care, information technology, and advanced manufacturing.

Spotlight: Boston Pathways to Prosperity

In Boston, Pathways to Prosperity is a six-year pathway program for high school students, starting in grade 9, who have expressed an interest in healthcare professions. Students have an opportunity to complete Bunker Hill Community College (BHCC) prerequisite coursework prior to...
enrolling at the college by engaging in a scope and sequence of coursework and work-based learning experiences.

| Grade 9 | ★ Aligned curricula  
| Clinical engagement with pathways  
| Healthcare Education Program (P.E.P.) Part I  
| Harvard Medscience Mini Module |

| Grade 10 | ★ Aligned curricula  
| Clinical engagement with pathways  
| Healthcare Education Program (P.E.P.) Part II  
| Harvard Medscience Mini Module |

| Grade 11 | ★ Begin dual enrollment courses based on chosen program  
| Harvard MedScience BIO108 |

| Grade 12 | ★ Continue dual enrollment courses based on chosen program  
| STAND Program NUR095 |

| BHCC Year 1 | ★ Continue prerequisites toward healthcare program  
| Apply to healthcare program  
| Clinical internship |

| BHCC Year 2 | ★ Complete healthcare program*  
| *LPN and Allied Health Certificate Programs  
| Clinical internship |

BHCC partnered with the Department of Secondary and Elementary Education, Jobs for the Future (JFF), Boston Public Schools (BPS), the Harvard Medscience Program, and the Boston Private Industry Council (PIC) to develop a six year, grade 9-14 career pathway for students from high school through community college, and into the healthcare workforce. Participating high schools include the Edward M. Kennedy Academy for Health Careers and the Community Academy of Science and Health. In school year 2014-15, close to 500 students are participating in the program.

A team of high school and college educators aligned mathematics and English language arts curricula for the 9th and 10th grades. By aligning curriculum in the early high school grades, students are less likely to need developmental coursework during their first year at BHCC (RDG 090/095 – Reading One and Two; ENG 090/095 – Writing Skills One and Two; MAT 093 – Foundations of Mathematics).

The Pathways to Prosperity Healthcare Education (P.E.P) Program provides work based learning opportunities for 9th and 10th grade students, in clinical settings, around the City of Boston through the Boston PIC and the Harvard MedScience Program. Students explore the wide variety of health care career choices through hospital tours, job shadowing, and career panels and hands-on simulation experiences in order for students to better understand which career appeals to their interests and skills. Through the P.E.P., students will be able to make an informed decision about which healthcare career path is right for them.

Students Taking Action for Nursing Diversity (STAND) is a component of Pathways to Prosperity for students interested in the nursing field. Students who complete the STAND program requirements and BHCC’s course prerequisites and who achieve passing scores on the Test of Essential Academic Skills (TEAS) will be guaranteed acceptance into BHCC’s highly competitive Nursing Program. Students will also have the option to receive a certificate from one of the BHCC Allied Health programs, such as Medical Assistant, Medical Coding, Phlebotomy Technician, Surgical Technician, Patient Care Technician, and Central Processing.

STAND mentors are available to advise students on coursework, scheduling and other issues. Tutoring is available with mathematics, science, and nursing faculty, as well as tutoring for Accuplacer and TEAS prep. Thirty senior high school students are recruited each year. Students receive monetary assistance for transportation and course book costs.

For more information about the Boston Pathways to Prosperity Program and STAND, contact:

La Toya Robinson  
Director of STAND and Pathways to Prosperity  
Bunker Hill Community College  
ltro3971@bhcc.mass.edu  
617-228-2313  
www.bhcc.mass.edu/stand
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).

Spotlight: Marlborough STEM Early College

Marlborough’s STEM Early College High School (ECHS) is a Massachusetts Advanced Pathways Program (MAPP) focused on strengthening the STEM pipeline by exposing all students to a rigorous 21st century learning experience and providing them with the skills essential for college and career. The specialized curriculum infuses the MA Curriculum Frameworks with the Engineering Design Process and Scientific Method across all content areas through project and problem-based learning. With startup costs provided by a Race to the Top grant from the Massachusetts Department of Elementary and Secondary Education, the ECHS is now a part of the Pathways to Prosperity State Network created by Jobs for the Future and the Harvard Graduate School of Education, and is using its $1.8 million share of YCC federal funds (see page 15). The ECHS currently serves 600 students, grades 6 through 12.

Marlborough’s ECHS begins at Whitcomb Middle School (grades 6-8) and continues at Marlborough High School (grades 9-12). Marlborough High School ECHS students have access to college credit courses at Framingham State University (FSU). Marlborough High School is currently developing a partnership with Quinsigamond Community College (QCC) to expand STEM pathways opportunity for its ECHS students.

The ECHS utilizes a teaming model in grades 6 through 10. Teacher teams – composed of Mathematics, Science, History, English Language Arts, and Engineering teachers – receive common planning time each day to help support the academic and social needs of all students as well as to develop interdisciplinary project and problem-based learning experiences.

Curriculum aligned between the middle and high school results in the following sequence of STEM-related coursework:

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**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.

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Massachusetts Landscape of Early College, 19
## STEM-Related Coursework

| Grades 6-8 | Project/Problem-Based Learning  
| | Engineering  
| | Computer Science |
| Grades 9 | Project/Problem-Based Learning  
| | Algebra 1  
| | Electrical Engineering  
| | Physics  
| | Technical Drawing |
| Grade 10 | Project/Problem-Based Learning  
| | Geometry  
| | Engineering  
| | Biology  
| | Technical Drawing |
| Grades 11-12 | Dual Enrollment Opportunities |

The ECHS honors curriculum requires all high school students to take a year of engineering coursework. One semester focuses on 3D modeling using professional grade CAD and architecture. The second semester focuses on an introduction to electricity and robotics. In addition to this requirement, all freshmen and sophomores participate in a required course called STEM project-based learning (PBL). The course meets once every nine days for an 85-minute block. Juniors and seniors advance to a rigorous STEM-focused schedule that allows for advanced placement and honors courses in both STEM and non-STEM areas.

With its school-within-a-school model, STEM classes are distinct from other high school classes, yet students who are not participating directly in the STEM program still benefit. Teachers share curriculum ideas, instructional techniques, and other best practices for interdisciplinary, project-based classes. The program also fosters greater school-wide awareness of what it means to become college and career ready in the 21st century.

Several high school ECHS teachers participated in the [STEM Certificate Program](http://www.mps-edu.org) offered by Framingham State University and PTC. The certificate program provides professional development to K-12 educators and includes online lectures instructed by industry and education experts, hands-on sessions focused on how to author STEM curriculum, industry and higher education mentoring, presentation opportunities for teachers to exhibit best practices in STEM education, and provides educators with tools and resources to design project-based curricula in STEM subjects and beyond. After completing the certificate program, participants have custom units for their classrooms as well as access to every unit designed by their peer-educators in the STEM Certificate community.

Students in grades 11 and 12 have the opportunity to earn up to 18 college credits while still in high school rooted in a STEM-based MassTransfer-approved program. These programs include Computer Science, Engineering, Biotechnology, Pre-Pharmacy, Nursing, and Technology Manufacturing. Marlborough High School is developing a memorandum of understanding with Quinsigamond Community College (QCC) to support this vision.

The ECHS maintains industry partnerships with PTC (formerly Parametric Technology Corporation), Boston Scientific, Raytheon, Intel, Dow, Marlborough Hospital, and the Marlborough Regional Chamber of Commerce. The ECHS also utilizes a Career Speaker Bureau, developed in collaboration with Partnerships for a Skilled Workforce (PSW). The Bureau invites industry experts into the classroom to mentor and guide ECHS students on project-based learning (PBL) days.

For more information about the Marlborough STEM Early College, contact:

Dan Riley  
Director of STEM Early College High School  
Marlborough High School  
driley@mps-edu.org  
508-460-3500, ext. 7510  
www.mps-edu.org  
STEM Starter Academy

In the summer of 2013, the Department of Higher Education worked with the community colleges to create the STEM Starter Academy (SSA) program. All fifteen community colleges came together to write a common proposal. The objective of SSA is to inform, engage, recruit, retain, and graduate significantly more students with STEM degrees and put them on a successful career pathway. During the first year of the program (summer 2014-spring 2015), each campus had the flexibility to shape what the SSA looked like at their school in order to best serve the needs of their students. In Year 2 (summer 2015-spring 2016), the campuses will be working together to articulate a common SSA model, which will help to ensure that students have similar experiences regardless of the campus they attend.

During its first year, nearly 10,000 non-enrolled individuals, including high school students, adult learners, and parents, were engaged in recruitment efforts comprising of outreach activities and information-sharing about opportunities to explore STEM programs at the community colleges. At least 979 additional students were newly enrolled in the community colleges in fall 2014 and participated in STEM Starter Academy activities. These new students entered college able to take advantage from the start of their studies of all academic supports provided by the Academy. Additionally, over 2,600 previously enrolled community college students also benefited from this program by participating in SSA programs in 2014. This number includes the 786 students who participated in the most intensive, extended-duration “summer bridge” programs, exploring STEM research projects, completing developmental and college credit mathematics, and building college readiness skills.

As SSA participants progress through the semesters at the community colleges, the Department will be tracking student retention rates, enrollment rates in STEM programs, and graduation rates.

Spotlight: Springfield Technical Community College STEM Starter Academy

The SSA program at Springfield Technical Community College (STCC) focused primarily around a summer-long intensive bridge program for incoming STCC students. To be admitted, students had to have graduated from high school in the previous 3 years, needed to be Massachusetts residents, had to enroll at STCC, and had to have a minimum GPA of 2.0.

Students were required to attend and participate in all aspects of the program, 5-days per week, from 8 a.m. to 4 p.m., for 7 weeks. The program started with an Accuplacer test followed by two weeks of math review and a STEM contextualized college success course. After the first two weeks, students were retested and placed into math courses for the remaining five weeks. In addition to that math course, students continued with the College Success course, and participated in an accelerated 3 credit Introduction to Engineering Technologies course.

Throughout the program, mandatory study hall, math lab, and lunch times were scheduled into students’ days. All study halls and math labs had either instructors or tutors embedded. Fridays were dedicated career exploration days, which involved field trips, speakers, activities, and discussions.
Of 120 applicants to the program, 65 students were selected to participate, 33 students enrolled and 30 completed all activities. The group was diverse in terms of race/ethnicity, gender and high school context. Half of the enrolled students were students of color, 60 percent were female, and half were from urban high schools. Nineteen high schools were represented among the 33 students.

The program was free to students, including lunch, and students were eligible to receive stipends of up to $1,000 at the end of the summer based on a point system related to attendance and engagement. The point system required students to meet regularly with a dedicated STEM coach who advised students on how to navigate issues related to being a student, including counseling around life issues that could interfere with academic life. The coach was in contact with students daily, showing up during study hall and open lab times where students often pulled her aside to discuss issues they were facing. Although the coach did not register students for classes, she did help students navigate the registration process, advising them not only about courses, but also on communicating with their advisors in thinking about their schedules in big-picture terms. The coach also mentioned advising students who may have been too ambitious in the number of credits for which they had registered.

In a focus group, students said they had reaped many benefits from participating in the SSA summer program. They appreciated the career awareness, math and college preparatory activities, the free credits, and the resume-boosting power of the program. They also felt very well supported and could not think of support they would have wanted but were not receiving.

Many students said the career awareness activities exposed them to possible academic and job paths they might not have considered. SSA career-focused activities (including aspects of the college success course) also helped students to link academic programs to future career possibilities.

For more information about STEM Starter Academies, please contact:

David Cedrone
Associate Commissioner of Economic and Workforce Development and STEM
Department of Higher Education
dcedrone@bhe.mass.edu
617-994-6904
http://www.mass.edu/stem/initiatives/stemacademy.asp
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.  
http://www.jff.org/initiatives/back-track-designs

**Career Development Education**: Career Development Education offers students a framework for gaining the knowledge, skills, and experiences necessary to navigate the myriad options available for post-secondary success. Research shows that quality Career Development Education also enhances academic performance. Career Development Education encompasses three stages that help students move from the cognitive to the experiential: Career Awareness, Career Exploration, and Career Immersion.  
http://www.doe.mass.edu/connect/cde.html

**Career/Vocational Technical Education**: Career/Vocational Technical Education (CVTE) offers students opportunities for career awareness and preparation by providing them with the academic and technical knowledge and work-related skills necessary to be successful in postsecondary education, training, and employment. CVTE programs provide students with a curriculum that combines integrated academic and technical content and strong employability skills. A list of Chapter 74 Career/Vocational Technical Education programs in the state is available here: http://profiles.doe.mass.edu/  
http://www.doe.mass.edu/cte/

**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. In winter/spring 2013, The Massachusetts Board of Higher Education (BHE) and Board of Elementary and Secondary Education (BESE) approved the state's new college and career readiness definition. Voting on the definition marks the first time that the two boards overseeing the state's K-12 schools and public colleges and universities have partnered in formal agreement on what it means for students to be prepared for success in postsecondary education and the workplace. The definition sends a clear, unified message about our expectations and the level of preparation and performance that signals a student's readiness for college and careers. The definition provides a solid foundation for continued collaboration between the K-12 and higher education systems.  
http://www.doe.mass.edu/ccr/

**Concurrent Enrollment**: Provides high school students the opportunity to take college-credit bearing courses taught by college-approved high school teachers. Concurrent enrollment partnerships differ from other models of dual enrollment because high school instructors teach the college courses.  
http://www.nacep.org/about-nacep/what-is-concurrent-enrollment/

**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. 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.  
http://www.mass.edu/dualenrollment
Early College High Schools: Offers students a systemic blend of high school and college (scope and sequence of coursework) in a rigorous yet supportive program, compressing the time need 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).

http://www.doe.mass.edu/ccr/EarlyCollegeDesignLandscape.pdf

IHE: Institutes of Higher Education. The Massachusetts system comprises 29 campuses divided into three segments: 15 community colleges, nine state universities and the five University campuses. Each of the state universities and community colleges has its own Board of Trustees, as does the University of Massachusetts system. Links to individual campuses’ websites and a map of the campus locations are available on the Public Higher Education campus directory.

http://www.mass.edu/system/campusdirectory.asp

Individual Learning Plan (ILP): A student-directed, dynamic, multi-year planning tool designed to increase students’ understanding of the connections and relevance of what they do now to their future success. The ILP maps academic plans, personal/social growth, and career development activities while taking into account the student’s unique, self-defined interests, needs, and goals for the attainment of post-secondary success. While ILP implementation is not required in Massachusetts, an increasing number of schools and districts across the Commonwealth are implementing ILPs to support the college and career readiness of their students. The Department published a guide for implementing ILPs in fall 2014.

http://www.doe.mass.edu/ccr/ilpguidance2014.pdf

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.

http://www.doe.mass.edu/ccr/massgrad/

Service-Learning: Service-learning is a teaching and learning approach that integrates community service with academic study to enrich learning, teach civic responsibility, and strengthen communities. It is a method whereby students learn and develop through active participation in thoughtfully organized service that is conducted in and meets the needs of communities. It is integrated into and enhances the academic curriculum of the students and provides structured time for students or participants to reflect on the service experience.

http://www.doe.mass.edu/csl/

STEM: Science, Technology, Engineering, and Mathematics.

http://www.doe.mass.edu/stem/

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. DART Detail: Success After High School turns a vast amount of high school, postsecondary, and career development education data into valuable, easily consumable information for tracking select indicators over time, and makes sound, meaningful comparisons to the state or ‘comparable’ high schools.

http://www.doe.mass.edu/apa/dart/
Appendix A

Programmatic Spotlights
Appendix B

The Massachusetts Department of Higher Education approves admissions standards for the state universities and University of Massachusetts. The Admissions Standards for the Massachusetts State University System and the University of Massachusetts emphasizes strong academic preparation while in high school. These standards represent minimum requirements; meeting them does not guarantee admission, since college officials consider a wide range of factors in admissions decisions. These standards do not apply to the community colleges in Massachusetts, which implement open admission and enrollment policies. For additional information about admissions at the community colleges, please contact the admissions office at that college.

The admissions standards for freshmen applicants to the state universities and University of Massachusetts have several components:

- Fulfillment of all requirements for the high school diploma or its equivalent;
- Submission of an SAT or ACT score;
- 16 required academic courses this will increase to 17 (to include four mathematics courses) for students planning to enroll on or after Fall 2016; and
- Minimum required grade point average (GPA) earned in college preparatory courses completed at the time of application.

Each state university or UMass undergraduate campus to which a student applies will calculate the GPA for purposes of applying the admissions standards.

Grade point averages are calculated based upon grades earned in all high school level academic courses. Grades earned in honors, Advanced Placement or dual enrollment courses are given extra weight when college admission offices calculate a student’s high school GPA for the purpose of admissions review at that particular college or university.
Appendix C

Below, you will find the links for the various resources found throughout this report:

Admissions Standards for State University System and the University of Massachusetts:

American Institute for Research’s Early College, Continued Success national impact study:

Commonwealth Dual Enrollment Partnership:
http://www.mass.edu/strategic/read_cdep.asp

Jobs for the Future’s Early College Initiative:
http://www.earlycolleges.org

Jobs for the Future’s Early College Expansion national report:

Massachusetts General Law, Chapter 15a, Section 39:
https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter15A/Section39

MassGrad Initiative:
http://www.doe.mass.edu/ccr/massgrad/

Northern Essex Community College’s Transferable Agreements:
http://www.necc.mass.edu/academics/support-services/transfer/transfer-agreements/

Pathways to Prosperity, Meeting the Challenge of Young Americans for the 21st Century:

Race to the Top, STEM Early College High Schools:
http://www.doe.mass.edu/ccr/stem.html

STEM Certificate Program:
www.stemcertificate.org

Youth CareerConnect:
http://www.doleta.gov/ycc/