

MassCore Progress Report

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Massachusetts Department of Elementary and Secondary Education
75 Pleasant Street, Malden, MA 02148-4906
Phone 781-338-3000 TTY: N.E.T. Relay 800-439-2370
www.doe.mass.edu



This document was prepared by the
Massachusetts Department of Elementary and Secondary Education
Mitchell D. Chester, Ed.D.
Commissioner

Board of Elementary and Secondary Education Members

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Introduction

The purpose of this report is to update the United States Department of Education (USED) on the progress that Massachusetts is making toward increasing the number of high school students in the Commonwealth that are completing MassCore to earn a high school diploma.

MassCore is a high school program of study that was developed in 2007 as a standard for preparing students to be college and career ready. Since the start of Race to the Top (RTTT), the Massachusetts Department of Elementary and Secondary Education (ESE) considered making MassCore the required curriculum for high school students statewide. More recently, however, ESE has reconsidered this approach in favor of continuing to give local school districts the flexibility to move toward MassCore on their own. A number of districts have already adopted MassCore, and given the effort and resources needed to make this shift ESE believes that it is better to encourage and support districts to move in this direction rather than establish a mandate. ESE is also considering developing a strategy to expand the original MassCore framework to include four career development experiences prior to graduation.

In lieu of making MassCore a requirement at this time, ESE will implement a strategy to support districts as they move to require their students to complete the MassCore program of study to earn a high school diploma. This progress update provides:

1. A comprehensive list of schools in Massachusetts that have made MassCore the required course of study for their high school students.
2. An analysis of the schools that are requiring MassCore, including the following factors: geographic location; school status (i.e., Levels 1 through 5); and student population characteristics (e.g., socioeconomic status, racial and ethnic background).
3. How the state will use the information gathered to inform future MassCore implementation, including consideration of future action by the Board of Elementary and Secondary Education (BESE).
4. A plan and a progress update on the state's efforts to make enhancements to MassCore by continuing to research the work required of local education agencies (LEAs) to institute this course of study.

What is MassCore?

MassCore is a recommended rigorous program of study based Massachusetts' curriculum frameworks that aligns high school coursework with college and career expectations.

The recommended program of study includes: four units of English, four units of mathematics, three units of a lab-based science, three units of history, two units of the same foreign language, one year of the arts and five additional "core" courses. MassCore also includes potential additional learning opportunities including AP classes, dual enrollment and early college, senior and capstone projects, online courses for high school or college credit, and service and/or work-based learning experiences.

A committee comprised of secondary and postsecondary educators, high school students, guidance counselors, members of the business community, and ESE and Department of Higher Education (DHE) staff met several times from spring through fall and winter of 2006–07 to identify the courses and the number of units in the recommended program of study.

Table 1: MassCore program of study

Courses	Subjects
4 years	English
4 years	Mathematics
3 years	Lab-based science
3 years	History/social science
2 years	The same foreign language
1 year	The arts
5 additional “core” courses	Career and technical education, or any other subject areas
As required by state law	Physical education (M.G.L. c. 71,s. 3)
Additional learning opportunities including	<ul style="list-style-type: none"> • AP classes • Dual enrollment/early college • Senior project/capstone coursework • Online courses for high school or college credit • Service- or work-based learning

MassCore was developed to provide guidance for a rigorous program of study that will help provide students with the academic preparation required for success in postsecondary education and the workplace. One of the Commonwealth’s goals is to decrease the percentage of students enrolling in developmental/remedial coursework in Massachusetts public colleges and universities. Currently more than one out of three Massachusetts public high school graduates attending public higher education in Massachusetts enrolls in at least one developmental course in their first semester.

MassCore is an essential part of helping all students become college and career ready. Massachusetts is committed to preparing students who can “demonstrate the knowledge, skills and abilities that are necessary to successfully complete entry-level, credit-bearing college courses, participate in certificate or workplace training programs, and enter economically viable career pathways.”¹

Massachusetts has a long and deep history of valuing local control in education. Local control has led to the establishment of a variety of high school graduation requirements, some set by the

¹ See: <http://www.mass.edu/library/documents/2013College&CareerReadinessDefinition.pdf>

district and some set at the school level. Other than the Competency Determination (a passing score on MCAS 10th grade English language arts and mathematics and high school science technology/engineering), the Commonwealth is essentially silent on high school graduation requirements. As far as coursework, the state mandates just two requirements:

1. Civics: [Mass General Law, Chapter 71: Section 2](#) requires that in all public elementary and high schools American history and civics, including the constitution of the United States, the declaration of independence and the bill of rights, and in all public high schools the constitution of the commonwealth and local history and government and a program relating to the flag of the United States of America shall be taught as required subjects for the purpose of promoting civic service.
2. Physical Education: [Mass General Law, Chapter 71: Section 3](#) requires that physical education be taught as a required subject in **all** grades.

All other course requirements and credits are set by LEAs and individual schools.

Current MassCore completion data

MassCore data is collected annually through the Massachusetts Student Information Management System (SIMS). Districts report which students have graduated and which students have completed the MassCore course of study. ESE then computes this rate based on graduates for that year including summer graduates that are captured in the October SIMS submission.

As indicated in Table 2, there has been little growth in MassCore completion rates over the past few years in all subgroups. The encouraging trend, however, is that MassCore completion rates have remained steady or increased slightly in most subgroups even as the total number of graduates and the graduation rate have increased.

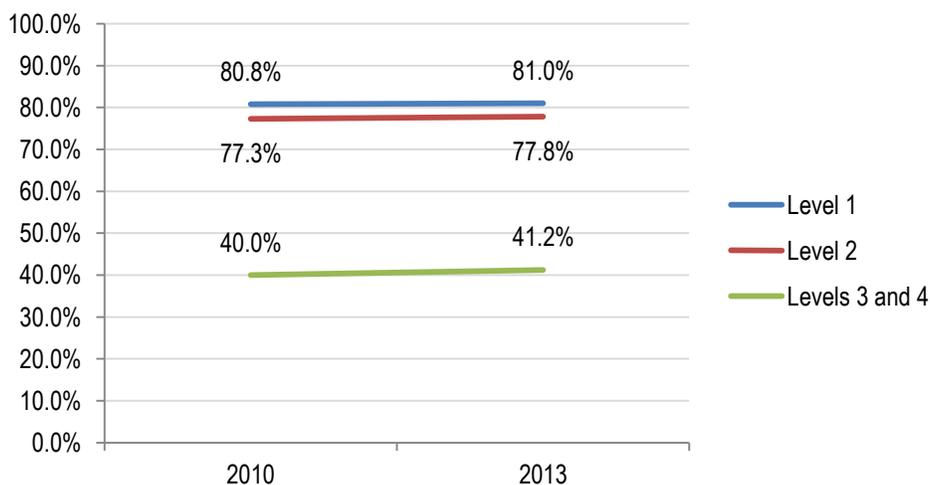
Table 2: MassCore completion rates by student subgroups, 2010 and 2013

Student group	2010		2013	
	n	%	n	%
All	45,386	69.8%	46,601	70.2%
Low Income	11,756	54.8%	14,388	56.8%
Limited English Proficient	1,181	43.5%	1,420	39.9%
Students with Disabilities	5,954	60.4%	6,568	60.5%
White	36,006	74.5%	35,593	75.3%
Asian	2,291	70.3%	2,602	68.5%
African American/Black	2,428	46.9%	2,962	50.5%
Hispanic/Latino	3,815	54.3%	4,408	55.5%

Early indications from the June 2014 graduation data suggests some moderate growth in the MassCore completion rate. For students graduating in June 2014, excluding summer graduates for whom information is not yet available, 72.9 percent completed MassCore statewide compared with 70.5 percent in June 2013.

The SIMS data can also be used to analyze MassCore completion rates by school accountability levels. Massachusetts' state accountability system places schools and districts on a five-level scale, ranking the highest performing in Level 1 and lowest performing in Level 5. Figure 1 shows that MassCore completion rates are much lower at Level 3 and 4 high schools than at Level 1 and 2 high schools. There were no Level 5 high schools in 2013.

Figure 1: MassCore completion rates by school accountability level



Survey of local graduation requirements

One of the biggest levers available for the Commonwealth to increase MassCore completion rates is for individual schools and districts to increase the amount of coursework required for students to meet local graduation requirements. Many schools and districts, either through a commitment to Race to the Top (RTTT) or a realization that a more rigorous program of study is necessary for more students to be college and career ready, have begun to adopt graduation requirements that are equal to or greater than those of MassCore.

In addition, as part of ESE’s work with DHE through RTTT, DHE has increased its minimum admissions requirements for public four year colleges and universities.

Table 3: Requirements for admission to Massachusetts public colleges and universities

Subject	Requirement for college freshman class entering...					
	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016	Fall 2017 and beyond
English	4 courses					
Mathematics	3 courses (Algebra I & II and Geometry or Trigonometry or comparable coursework)				4 courses (Algebra I & II and Geometry or Trigonometry, or comparable coursework) including mathematics during the final year of high school	
Sciences	3 courses (drawn from Natural Science and/or Physical Science and/or Technology/ Engineering; including 2 courses with laboratory work); <i>Technology/engineering courses must be designated as science courses (taken for science credit) by the high school</i>				3 courses (drawn from Natural Science and/or Physical Science and/or Technology/ Engineering), including 3 courses with laboratory work	
Social Sciences	2 courses (including 1 course in U.S. History)					
Foreign Languages	2 courses (in a single language)					
Electives	2 courses (from the above subjects or from the Arts & Humanities or Computer Sciences)					

The increase in these minimum four year requirements for Massachusetts public colleges and universities has prompted many schools and district to examine and increase their own requirements in mathematics and science technology/engineering, with a particular emphasis on increasing laboratory science requirements for the classes of 2016 and 2017.

Every district—and sometimes even different schools within the same district—has its own set of graduation requirements. ESE does not officially collect high school programs of study or high school graduation requirements. Five times over the past ten years, however, ESE has done unofficial collections of high school graduation requirements. In the most recent survey conducted in June 2014, ESE collected programs of study posted online by high schools for the graduating class of 2015. Since the majority of districts in the Commonwealth have only one high school, the survey results can stand as a district level analysis even though the data is collected at the school level. Of the 293 school districts operating in Massachusetts that have at least one high school, only 36 or 12 percent have more than one high school.

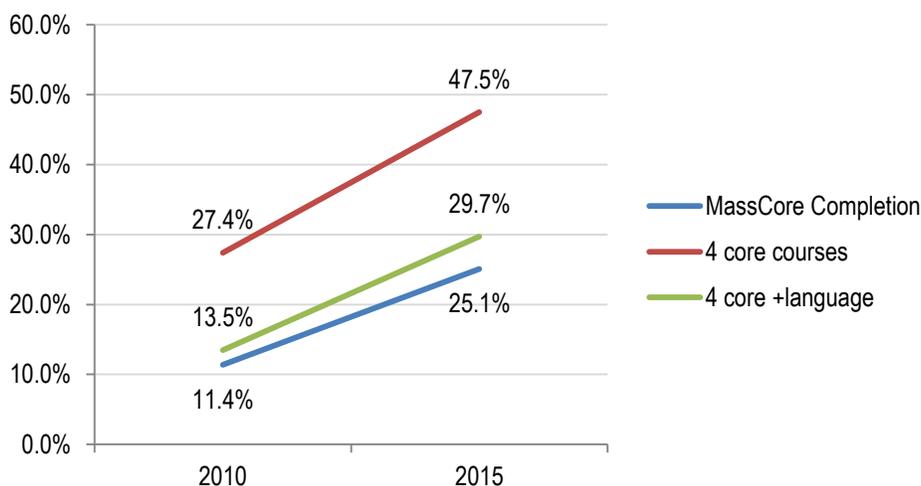
Full graduation requirement data was collected for 343 Massachusetts high schools, representing 87.5 percent of the high schools in the state. Data was not available for 49 high schools; a group mainly composed of alternative, special education, and charter schools and a small number of

vocational/technical and academic high schools. For the purposes of this research, we calculated requirements in terms of year-long equivalents, which counts a full course as a one-year course.

Trending towards a MassCore course of study

Since the beginning of RTTT there has been steady growth in the number of high schools requiring MassCore as a graduation requirement. From our study, we found that 86 high schools or 25 percent now require MassCore, which is nearly a 14 percentage point increase over 2010 (see Attachment A for a complete list of schools). We have also seen consistent growth in schools requiring the four core courses in the MassCore course of study: mathematics, English language arts, science technology/engineering and history/social studies and in the four core courses plus foreign language. Figure 2 shows that of the 343 high schools surveyed, 163 or 47 percent now require their students to complete the four core courses in order to graduate and that 102 or close to 30 percent now require the four core courses plus two year of a foreign language.² There are 28 high schools that would meet MassCore if they required a single year of arts courses and 49 high schools that would meet MassCore if they met the foreign language requirement in addition to the arts requirement.

Figure 2: Schools requiring a rigorous course of study

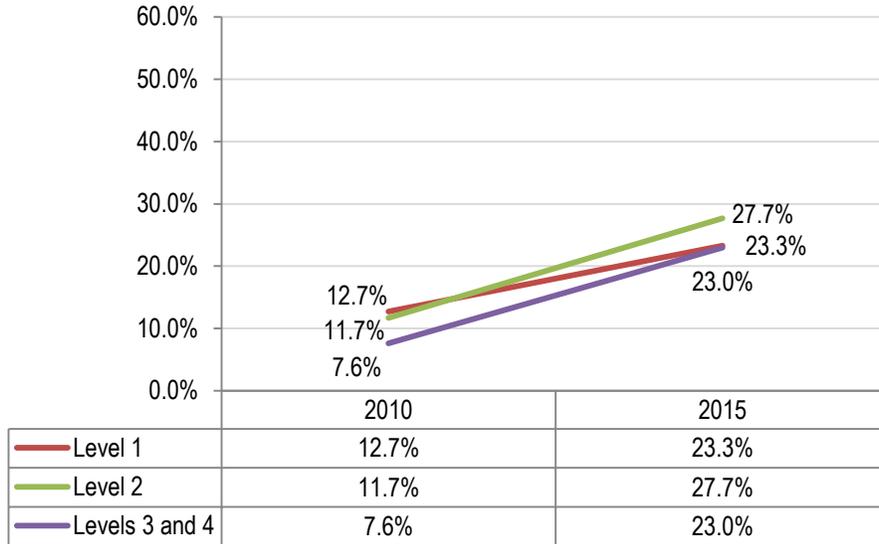


MassCore trends by accountability level

High schools in higher accountability levels are increasingly requiring MassCore. Figure 3 shows that 23 percent of high schools in Levels 3 and 4 are now requiring their students to complete MassCore, up from less than 8 percent in 2010 and just under the state average of 25 percent. The share of Level 2 schools that require MassCore exceeds the state average and the share of Level 1 schools requiring MassCore grew from just under 13 percent in 2010 to just over 23 percent in 2013.

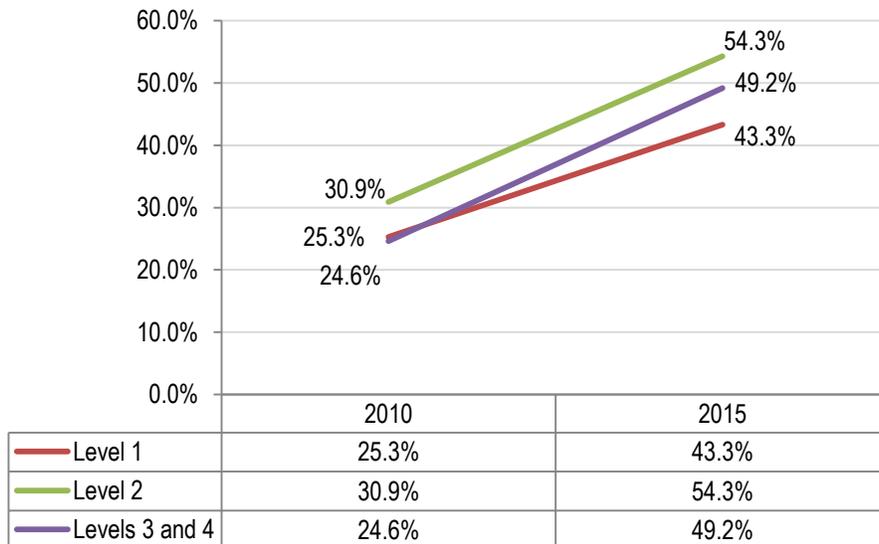
² These figures are inclusive of the high schools meeting MassCore and the high schools meeting the four core courses plus two years of a foreign language.

Figure 3: MassCore as a graduation requirement by school accountability level



Similarly, there has been an increase in the share of schools that require students to complete the four core courses at all accountability levels. Figure 4 shows that 54 percent of Level 2 schools require their students to complete the four core courses compared with 49 percent of Level 3 and 4 high schools and 43 percent of Level 1 high schools.

Figure 4: Core 4 courses as a graduation requirement by school accountability level



This study focused only on the requirements for the high school class of 2015. We anticipate that MassCore completion will continue to rise as more districts implement MassCore as their high school graduation requirement.

MassCore trends by subject

All Massachusetts high schools require at least four years of English and nearly all, 94 percent, require three or more years of history/social studies. The completion of this coursework does not appear to be an issue in the completion of MassCore.

Overall, there has been strong growth in mathematics requirements since 2010. Currently, close to 53 percent of high schools in Massachusetts require four years of mathematics compared with 29 percent in 2010 (see Figure 5). One interesting finding from the survey is that a number of high schools with high MassCore completion rates require only two years of mathematics. Many of these high schools serve wealthier communities with high college going rates.

Figure 5: High schools requiring four years of mathematics

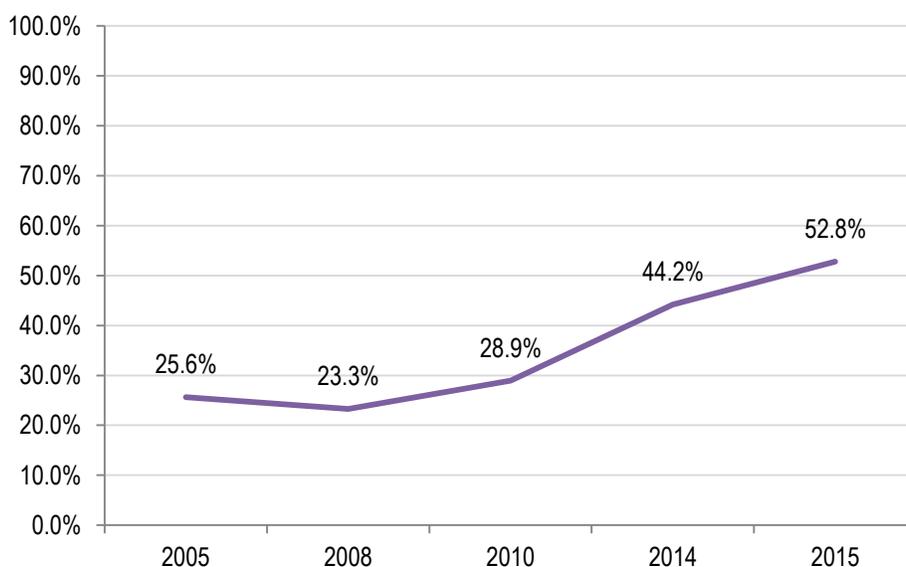
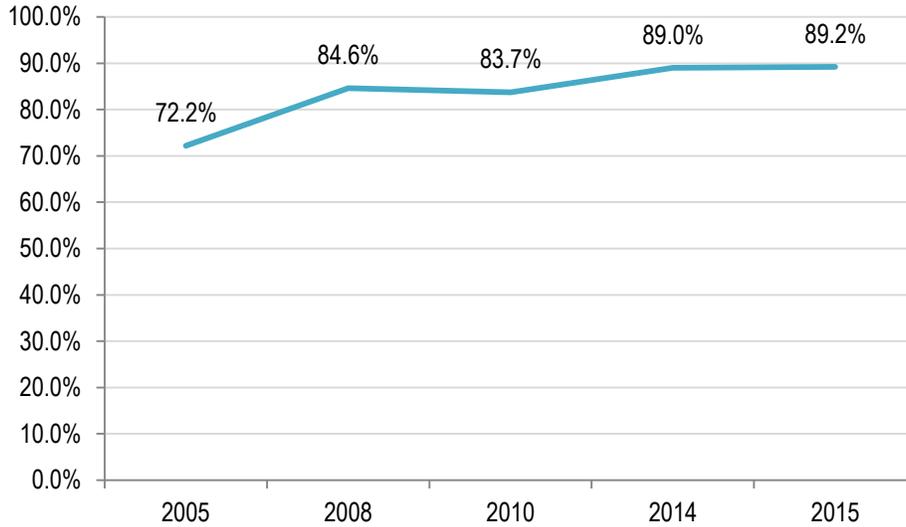


Figure 6 shows that three years of science technology/engineering has nearly become the default across the state, further bolstering the trend toward requiring students to take more STE courses that reflect Massachusetts' four year public institutions of higher education and the labor market.

Figure 6: High schools requiring three or more years of science technology/engineering



This study suggests that, although high school requirements for arts and foreign languages are increasing, they are still a major reason why many high schools are not meeting MassCore requirements. Figure 7 shows that the number of high schools requiring two or more years of foreign language is increasing incrementally and now stands at 49 percent. The number of high schools requiring one or more years of the arts has fluctuated over the years and based on the most recent survey results is now 42 percent, which is the highest rate recorded since the survey began, see Figure 8.

Figure 7: High schools requiring two or more years of foreign language

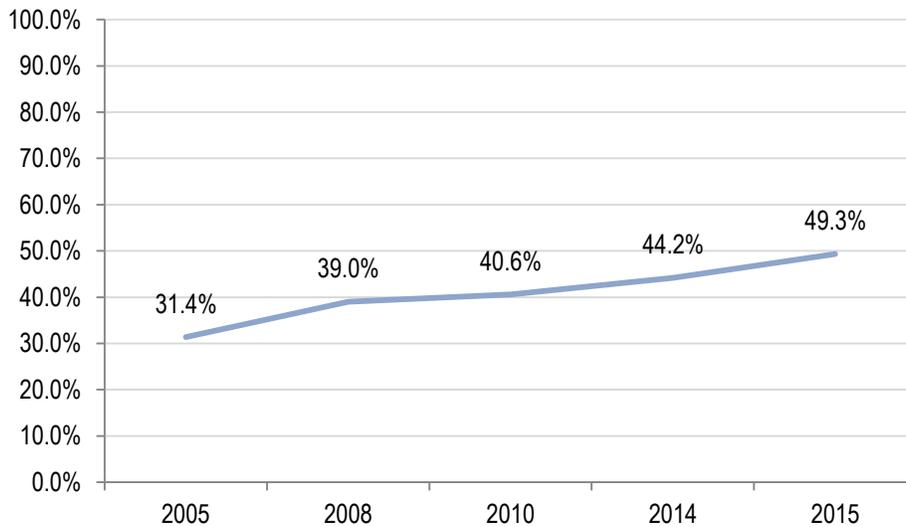
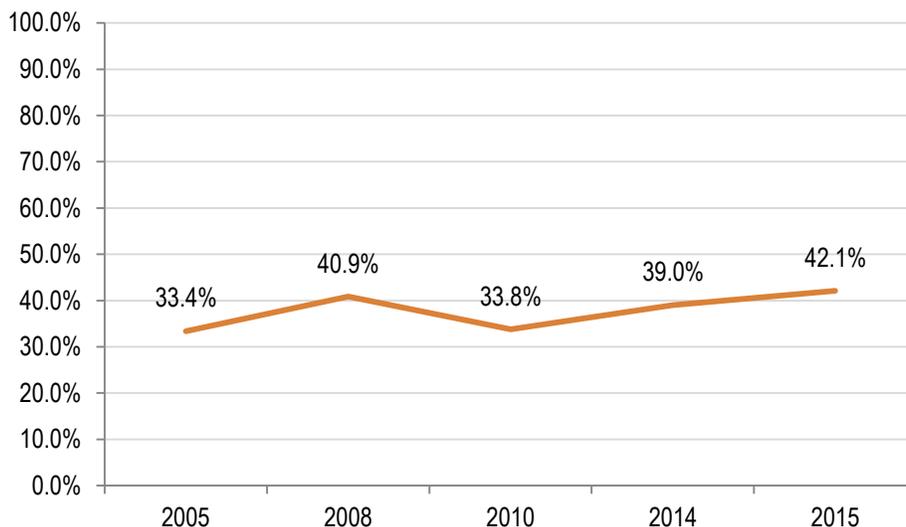


Figure 8: High schools requiring one or more years of the arts



Future MassCore implementation

ESE is looking at its entire college and career readiness agenda to help increase the number of students completing MassCore by:

1. Encouraging schools to increase graduation requirements. This is already taking place in many districts and some larger districts. Worcester and New Bedford, for example, have made MassCore a default program of study for the class of 2017.
2. Working with school counselors, administrators, and others to include MassCore completion in their school and district measures as well as within their district determined measures (DDMs) for the educator evaluation process.
3. Helping districts use the Early Warning Indicator System (EWIS) and other data tools to identify students at risk of not passing all ninth grade classes and other potential obstacles to MassCore completion.
4. Looking at our first full 4-year cohort of student course schedules (SCS) to help ESE determine specific course taking gaps and to assess the accuracy of reported SIMS data across the Commonwealth in the completion of MassCore.

Additionally, ESE is offering a [professional development series](#) for schools, districts, and community partners for school year 2014–15 that supports college and career readiness (CCR) for all students. The CCR professional development series is a blended approach of monthly webinars and regional face-to-face meetings that are open to all districts and community partners in the state.

The 2014–2015 CCR professional development series will be anchored in the following ESE goals:

- Increasing the five year graduation rate
- Increasing the MassCore completion rate
- Increasing the number of students that enroll in postsecondary education
- Reducing the number of students who enroll in developmental (remedial) coursework during their post-secondary educational experience
- Increasing the number of students, schools, districts, and programs participating in career development education (including career awareness, exploration and immersion activities)

Knowing that most of the work to encourage the completion of MassCore and other college and career readiness initiatives happens at the local level, the purpose of the CCR regional sessions will be to provide a facilitated day to help support teams of district, school, workforce development, higher education, and other community partners strategize and plan to move their CCR work to the next level. This will be accomplished through structured sessions to promote sharing across teams, individual team time, and participation in role-alike sessions. Teams will leave the day with the start of (or expansion of, depending on starting place) a CCR action plan that emphasizes coherence across CCR initiatives as well as connections to other key education initiatives.

Among the identified challenges in MassCore completion are:

- **Access:** the creation of appropriate rigorous coursework and pedagogy for students to access a rigorous high school program of study
- **Opportunity:** the preparation of students along a K–12 continuum to engage in a rigorous program of study
- **Support:** the support of tutoring, counseling and other college and career readiness activities to assist and engage students during a rigorous high school program of study

ESE will continue to work with schools and districts on all of these issues to allow students to access a more rigorous course of study that will prepare them for the rest of their lives.

Consideration of an Expanded MassCore Framework

In 2012, the Task Force for the Integration of College and Career Readiness (ICCR) released a [comprehensive report](#) with a series of recommendations designed to promote structured, aligned, and strategic partnerships that support students' fluid movement through elementary, secondary, and higher education and into successful careers. Among these recommendations was to adopt and implement an expanded framework for MassCore that explicitly includes integrated career development experiences for high school students.

The Task Force recommended that this course of study be expanded to include four career development experiences prior to graduation as part of an expanded MassCore framework. These experiences fall into two categories based on grade-span:

- **Career Awareness Experiences (grades 9–10)** including but not limited to: career interest inventories, career fairs and guest speakers, job shadowing, career-themed clubs and activities, student leadership experiences, athletics and other school and community activities, service learning experiences, freshman exploratory
- **Career Immersion Experiences (grades 11–12)** including but not limited to: internships, cooperative education, summer college programs, senior projects, capstone projects, and work-based learning

While the expanded MassCore has not gone to the Board of Elementary and Secondary Education for approval as a recommended course of study, ESE continues to encourage schools, districts and their workforce development partners to build career development opportunities for all students, including work through our [Connecting Activities](#) initiative and the development of the [Career Development Education](#) guide that assists with efforts to create or expand and improve these activities. ESE is working to create specific metrics and targets around the development of career awareness, exploration, and immersion experiences for students. The data collection process is still in development but initial numbers are positive.

