

BOARD OF HIGHER EDUCATION

REQUEST FOR COMMITTEE AND BOARD ACTION

COMMITTEE: Academic Affairs

NO.: AAC 14-19

(as amended by
AAC, 12/03/13)

COMMITTEE DATE: December 3, 2013

BOARD DATE: December 10, 2013

POLICY ON DEVELOPMENTAL MATH EDUCATION IN RESPONSE TO THE COMMISSIONER'S TASK FORCE ON TRANSFORMING DEVELOPMENTAL MATH EDUCATION

MOVED:

Following its October 29, 2013 vote to receive the final report of the Commissioner's Task Force on Transforming Developmental Math Education and revise the 1998 Common Assessment Policy, the Board of Higher Education adopts the following additional policies consistent with the recommendations of the Task Force report:

- Beginning in 2014-15, as limited variations in the GPA placement standard criteria are being piloted consistent with Board vote AAC 14-12, campuses are strongly encouraged to: (1) Design and implement general academic pathways within their credit bearing programs appropriate for all students and consistent with recommendation 2 of the Task Force Report; these pathways will include varying sequences in mathematics consistent with the requirements of continuing studies within the academic areas associated with each pathway; (2) Campuses are also strongly encouraged to revise the content, sequencing, and timeframe of their developmental math education offerings consistent with the varying math requirements of these general academic pathways and with Recommendation 3 of the Task Force Report.
- The Board sets an **intermediate goal** of increasing by 20% by the Fall of 2018 the rate of students completing a first gateway college-level math course within two years of enrollment. The baseline for determining success in achieving this goal will be the 2009 rate.

The Board calls upon the Commissioner to (1) convene an implementation planning team during the remainder of 2013-14, including representation from the campuses, to develop guidelines for the period of experimentation, **which shall include incremental goals for increasing the rates of students completing a first gateway college-level math course within two years of enrollment**; and (2) to promote the design and development of general academic pathways at the campus level; (3) to promote best practices with respect to

developmental coursework in mathematics consistent with the findings of the report; (4) to recommend steps to assure the recognition of coursework earned in the alternative developmental education sequences and the alternative general academic pathways being developed under this policy; and (5) to assure that the range of programmatic patterns adopted by the campuses during the period of experimentation will permit the BHE to draw conclusions about the most effective approach to developmental education in math in anticipation of establishing revised statewide policy; and (6) to report to the Board by March 2015 on the progress of the experiments, on a recommended timetable for adoption of revised policy based on the experiments, and on progress towards the Fall 2018 goal of increasing by twenty percent the rate of students completing a first gateway college-level math course within two years of enrollment.

Authority: Massachusetts General Laws Chapter 15A, Sections 6, 9(c), 9(u) and 32.

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BACKGROUND

Throughout the country, colleges and universities are grappling with the need to ensure greater success among the college-going population. Massachusetts is no different, and increasing graduation rates has been a core component of the Vision Project since its inception. In March 2012, as part of an overall strategy to increase college completion rates, the Commissioner of Higher Education created a Task Force on Transforming Developmental Math Education and charged it with recommending steps to systematically improve the percentage of students who complete developmental math education and pass the first college-level math course required for their program of study.

On October 29, 2013 the Board of Higher Education received the final report from the Task Force, and voted unanimously (AAC 14-12) to allow, on an experimental basis, the application of new standards of placement for students in the area of developmental math education consistent with the Task Force recommendations. The purpose of the new placement standards is to provide a more accurate predictor of long term student success in gateway credit bearing math courses.

AAC 14-19 is a companion piece to AAC 14-12. Like AAC 14-12, AAC 14-19 is based on the findings and recommendations of the Commissioner's Task Force on Transforming Developmental Math Education. Like AAC 14-12, AAC 14-19 takes an experimental approach to its recommendations. Academic year 2014-2015 is established as a pilot year in which campuses are strongly encouraged to experiment with the approaches outlined in the recommendations. Data from these experiments will be collected by the DHE and shared with the Board no later than March 2015. At that point the Board will be able to decide to revise its developmental math policy based on these experiments, to leave the developmental math policy unchanged, or to gather further information before making a final decision.

AAC 14-19 includes five distinct components aligned with recommendations of the Commissioner's Task Force on Transforming Developmental Math Education.

1. Academic Pathways: This component of AAC 14-19 relates to credit-bearing rather than developmental math courses, but grows out of the body of research reviewed by the Task Force, and is tightly tied to the developmental math recommendations. A basic limitation of the current math sequence, both developmental and college-level, is that it is often misaligned with the needs of students in both their specific areas of study and their ultimate career intentions. While the current pathway is appropriate for students interested in pursuing STEM careers, it doesn't provide the basic tools needed to succeed in other areas, particularly those where statistical methods and quantitative reasoning are more important skills.

The academic pathways proposal encourages campuses, in line with national best practice, to experiment with the establishment of multi-disciplinary meta-majors such as social sciences and human services, health care and career sciences, and STEM. Students would commit to their area of study as early as possible, and then take the math sequence appropriate to their field. In some areas, this would be a traditional calculus sequence, while in others the focus might be more on statistics. There is no lack of rigor in these pathways; they simply are more appropriately focused on the kind of mathematical skills that will be needed in the student's intended major and career.

They also do not serve as ‘tracks’ that funnel students into specific areas or preclude changes in majors or areas of disciplinary interest. Ensuring that a student is placed in an appropriate math sequence relative to their career and study is the first step towards ensuring that any developmental math course a student requires is aligned with their college level math pathway.

2. Aligning Math Development Education Sequences with Academic Pathways: As noted, the alternative, credit bearing academic pathways require different mathematical skills. A central recommendation of the Task Force report is that developmental education programs should include alternative sequences aligned with the specific math requirements of these alternative pathways. National research indicates that organizing math developmental education in this way improves the likelihood of successful student outcomes. It is important to note that the creation of additional pathways in no way diminishes the opportunities of students to move from one area of specialization to another.

3. Improvements to Developmental Math Education: National research has shown that if we align and accelerate the progress of students through a rigorous sequence of relevant materials, students will become better prepared for their selected course of study and more successful in completing their gateway math course. To this end, the task force research uncovered a wide range of best practices, many of which are already in use at some of our campuses. These practices are geared towards ensuring that students enter into college-level, credit bearing courses no more than one year after enrollment.

Effective strategies include continuous enrollment in math coursework until of the completion of the appropriate gateway math course; acceleration of developmental math through delivery of content in modules that are often self-paced and focus specifically on areas of student’s weaknesses; provision of developmental math as a co-requisite alongside a credit-bearing math course rather than a pre-requisite; delivering developmental math within the context of the student’s academic and career interests; and providing additional support to students in developmental and gateway math courses.

4. Setting an Improvement Target: The central goal of AAC-19, and of developmental math in general, is to ensure students obtain the skills necessary to move as quickly as possible into credit-bearing courses, thus increasing the chance that they will succeed in obtaining a degree. This motion therefore sets an improvement target, by Fall 2018, of increasing by 20% the rate of students completing a first gateway college-level math course within two years of enrollment. The 2009 rate serves as the baseline.

5. Implementation: The motion concludes with six steps for implementing the provisions of both AAC-12, passed on October 29, and AAC-19, which will be voted on by the Board on December 10. These steps call upon the Commissioner to:

1. Convene an implementation planning team, including campus representation, to develop guidelines for the 2014-2015 period of implementation;
2. Promote the design and development of general academic pathways—the multidisciplinary meta-majors described above—at the campus level;
3. Promote best practices with respect to both developmental and college level math consistent with the Task Force findings;

4. Recommend steps to assure the recognition of coursework in the alternative developmental education sequences and the alternative general academic pathways being developed under this policy;
5. Ensure campus experiments during the pilot year will enable to the Board to draw conclusions about the most effective approach to developmental math in anticipation of establishing revised statewide policy; and
6. Report to the Board by March 2015 on the progress of these experiments, on a recommended timetable for adoption of a revised Developmental Math policy, and on progress towards the Fall 2018 Improvement Target.

College readiness should not be considered an event, it is a process. The overarching goal of developmental education in mathematics is to prepare students to succeed in the college level math sequence most appropriate for their elected course of study. The purpose of AAC 14-19 is to allow for the heightened alignment between developmental education, college level mathematics, and students' academic and career interests and intentions, and to increase the percentage of students who make rapid progress towards completing college-level math courses.