

*“For the things of the world cannot be made known without a knowledge of mathematics.”*

Roger Bacon, 13<sup>th</sup> century philosopher

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*“Ohio is deeply committed to improving the college completion rates of its citizens. We understand that mathematics plays a critical role in increasing student success and have taken steps toward improving the mathematics curriculum on all of our campuses. We launched the Ohio Mathematics Initiative to engage mathematicians from our campuses in developing the vision for how multiple mathematics pathways could be established statewide, how success in gateway mathematics courses could be improved, and how new best practice standards could be developed for the assessment and placement of students.*

*I am proud of the work this group outlined, as it helped set a clear direction that has been widely embraced at our institutions. We realize, however, that more must be done, so we continue to work to implement the recommended changes at our public colleges and universities.”*

Chancellor John Carey

## Mathematics plays a crucial role in Ohio’s postsecondary success initiatives

Currently, 37.5 percent of work-age Ohioans (25-64) have earned an associate degree or higher. This means that Ohio is stuck pretty much in the middle – a bit below the national average of 39.4 percent.\*

Given the reforms of the past decade, both in K-12 and higher education, one might anticipate that educational attainment rates are on the rise – maybe enough to move Ohio out of the pack. Unfortunately, the most current data provide little support for this expectation. The needle has barely moved in recent years. This represents billions of dollars in lost economic activity each year, and it weakens Ohio’s competitive position in a global economy in which knowledge and skill are highly prized and rewarded.

This explains Ohio’s determination to dramatically increase its college participation, retention and success rates – to help a growing number of postsecondary students realize their promise by earning a degree or certificate with value in the marketplace.

This determination is reflected in a recently released timeline for a mosaic of postsecondary success initiatives, all of which point to the critical role mathematics plays in advancing student success. According to Rebecca Watts, Associate Vice Chancellor for P-16 Initiatives, most of the activities included in the timeline are driven by four initiatives: (1) implementation of Ohio’s new performance funding model, which gives institutions tangible incentives to make completion a priority; (2) Ohio’s Statewide Uniform Remediation-Free Standards; (3) the work of the Complete College Ohio Task Force; and (4) the recommendations of the Ohio Mathematics Initiative.

“The importance of the Ohio Mathematics Initiative cannot be overstated,” Rebecca Watts said. “That group called for placement strategies for students who achieve remediation-free status, high-quality gateway courses and mathematics pathways connected to coherent programs of study, assessments that include multiple measures for more accurate placement and enhanced co-curricular support for students who place below the identified benchmark. Each of these is an important component of Ohio’s postsecondary success agenda.”

A brief description of some of the initiatives included in the timeline can be found on page 4.

\* Lumina Foundation (2015). *A Stronger Nation Through Higher Education*, based on 2013 U.S. Bureau of Census data, <http://strongernation.luminafoundation.org/report/#ohio>

# Learning outcomes, remediation-free standards and placement assessments highlight work during the last half of 2015

## JUNE 2015

Review of learning outcomes for College Algebra and Statistics begins



## JULY 2015

Review of new Ohio Transfer Module mathematics pathways courses begins



## AUGUST 2015

Ohio applies for Complete College America Scaling Up Co-Requisite Strategies Grant (Mathematics and English)



## SEPTEMBER 2015

ODHE meets with Provosts/CAOs to discuss expanding assessments in Remediation-Free Standards and use of multiple measures for placement purposes



## NOVEMBER 2015

Community College Multiple Measures for Placement Advisory Group (CAOs and Student Affairs Leaders) begins work



## OCTOBER 2015

Mathematics and English Language Arts Faculty Panels meet to consider expanding array of assessments in uniform Remediation-Free Standards



## NOVEMBER 17-19, 2015

Complete College America National Academy on Co-requisite Reform, Cohort I



## DECEMBER 2015

OATN approval of Quantitative Reasoning course learning outcomes



## DECEMBER 2015

Review of learning outcomes for College Algebra and Statistics is complete



## DECEMBER 2015

Community College Multiple Measures for Placement Advisory Group presents recommendations to CAOs



## DECEMBER 2015

Faculty panels provide assessment expansion recommendations to OACC CAOS and IUC Provosts



# Workshops, webinars and assessments for remediation-free standards dominate 2016 postsecondary success calendar

**JANUARY 2016**  
Meeting of Ohio Mathematics Chairs/Leads

**JANUARY 2016**  
Regional mathematics workshops on 12<sup>th</sup> grade transitional course development

**EARLY SPRING 2016**  
Mathematics webinars (CCA/Dana Center)

- Gateway Courses
- Co-requisite Strategies
- Remediation

**SPRING 2016**  
Regional mathematics workshops on high school to postsecondary curriculum alignment

**LATE SPRING 2016**  
Ohio professional development for Quantitative Reasoning courses

**EARLY FALL 2016**  
Statewide Placement Institute

**FALL 2016**  
Community colleges scale up use of multiple measures for student placement



**JANUARY 2016**  
Provosts and CAOs vet recommendations for expanded assessments for Remediation-Free Standards

**FEBRUARY 2016**  
Provosts and CAOs recommend expanded array of assessments for Remediation-Free Standards to Presidents. Presidents take action.

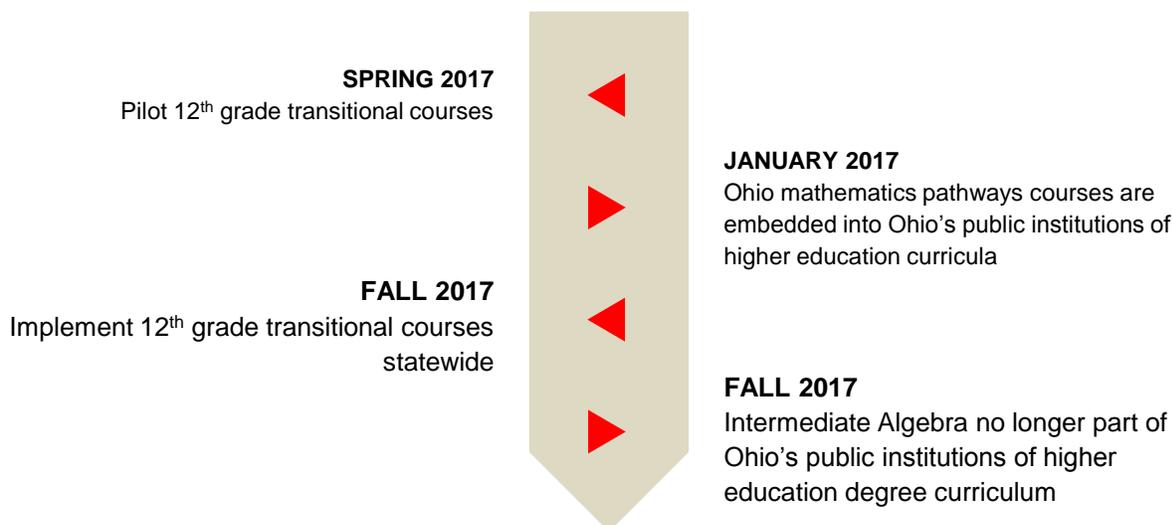
**SPRING 2016**  
Boards of Trustees of USO institutions codify expanded list of assessments in uniform Remediation-Free Standards policy

**LATE SPRING 2016**  
Complete College America/Dana Center mathematics pathways statewide workshop

**FALL 2016**  
ACT phases out COMPASS assessment

**FALL 2016**  
Ohio's public institutions of higher education implement expanded array of assessments for uniform Remediation-Free Standards

# 12<sup>th</sup> grade transitional courses and new mathematics pathway courses to be introduced in 2017



## Four key postsecondary success initiatives

**Designing and Implementing Mathematics Pathways for All Majors.** In 2013, the Ohio Department of Higher Education directed the Ohio Mathematics Steering Committee to make recommendations for the development of high-quality entry-level courses and pathways connected to coherent programs of study for students majoring in mathematics, other mathematics-intensive majors and majors that are not mathematics-intensive. In 2014, Ohio was awarded technical support from Complete College America to join six other states in the Complete College America/Dana Center Building Math Pathways Initiative. This work is focused on addressing policy obstacles at the state level, supporting implementation at the college level and identifying or developing curricular materials and faculty training.

**Statewide Remediation-Free Standards.** As required by state law, in 2012 the presidents of Ohio's public colleges and universities established statewide remediation-free standards for all institutions, regardless of their admissions selectivity. This state law also established a sunset for operating subsidies for delivering remedial or developmental courses on the main campuses of the state's four-year institutions, with the exception of three open-access universities.

**Ohio English and Mathematics Faculty Panel.** The panel was charged by the Chief Academic Officers (CAOs) and Provosts of Ohio's public institutions of higher education to explore expanding the array of assessments for the Ohio uniform statewide remediation-free standards. Specifically, the panel was directed to identify existing large scale standardized assessments used by Ohio's public institutions to determine college readiness as defined by Ohio's Uniform Remediation-Free Standards, evaluate the predictive validity of the identified assessments as determined by student success in courses subsequent to gateway courses, review and evaluate the revised recommended college readiness score for the ACT Reading assessment and determine if an adjustment should be recommended to the Ohio cut score for students earning Remediation-Free Status; and recommend the statewide assessments to be used to determine college readiness.

**Co-Requisite Model Design and Implementation.** Ohio colleges and universities are developing and implementing co-requisite models to support students with academic supports simultaneous to their enrollment in credit-bearing courses. In Mathematics, some institutions are using Quantway/Statway while others have designed new courses that embed co-requisite strategies unique to the institution. Co-requisite models in Ohio are being implemented in Mathematics and English. Ohio has received technical assistance as part of the Complete College America Scaling Up Co-Requisite Strategies multi-state initiative.