

March 19, 2014

MEMORANDUM

TO: State Board of Regents

FROM: David L. Buhler

SUBJECT: Recommendations on High School Mathematics Preparation for Students Enrolling in Utah System of Higher Education Institutions

Issue

The adoption of the Utah Core Standards in Mathematics provides an opportunity for the Utah System of Higher Education (USHE) to examine recommended pathways for high school students intending to enroll in USHE institutions, especially from the perspective of reducing time-to graduation and increasing retention rates. USHE convened a Task Force consisting of mathematicians and mathematics educators from both public and higher education to develop recommendations which are now presented to the Regents for affirmation.

Background

With the recent implementation of the Utah Core Standards in Mathematics in public schools in Utah, the preparation of K-12 students in mathematics is changing. The K-12 mathematics core in secondary school provides for integration of Algebra I, Geometry and Algebra II and the addition of statistics concepts in the new secondary education sequence of Math I, II, and III. This change in high school core standards presented an opportunity for the mathematics departments in USHE to examine the alignment of the K-12 preparation under the new core and ways in which students could be better prepared for college level mathematics.

The USHE convened a Senior Year Math Task Force with the following membership to examine the alignment and make recommendations useful to K-12 students and parents selecting mathematics courses in secondary school. As can be seen in the membership list, several of the members of the Task Force represented K-12 education agencies, and the Task Force included the mathematics and STEM specialist from the Utah State Office of Education (USOE). The final draft of the recommendations has been shared with leadership at the USOE.

USHE Institutions	
Name	Title
Peter Trapa (Chair)	Mathematics Department Chair, University of Utah
Hugo Rossi	Senior Associate Director, U of U Center for Science and Math Education
Donna Dillingham-Evans	Dean/Executive Director/Professor, USU - Tooele
Richard Cutler	Mathematics and Statistics Department Head, Utah State University
Suzanne Mozdy	Chair, Mathematics, Salt Lake Community College
Christine Walker	Faculty, Mathematics, Utah Valley University
K-12	
Name	Title
Diana Suddreth	STEM Coordinator, Utah State Office of Education
Allen Jacobsen	9-12 Math Curriculum Supervisor/USTAR, Davis School District
Outreach and Access/System Academics	
Name	Title
Melissa Miller Kincart	Assistant Commissioner for Outreach and Access, Utah System of Higher Education
Liz Hitch	Associate Commissioner for Academic and Student Affairs, Utah System of Higher Education

The Task Force identified three recommendations to assist students. A draft of their recommendations was shared with the mathematics department chair of each USHE institution for input. Several changes suggested by the chairs are incorporated in the final recommendations, which follow. With the affirmation of these recommendations by the Regents, the Office of the Commissioner will provide copies of the recommendations to high school counselors, administrators, students, parents and teachers.

Policy Issues

There are no outstanding policy issues.

Commissioner's Recommendation

The Commissioner recommends the affirmation of the recommendations of the Senior Year Math Task Force and the further distribution of the recommendations to interested high school students, parents, counselors, teachers, and administrators.

David L. Buhler
Commissioner of Higher Education

DLB/EJH
Attachment

Recommendations on High School Mathematics Preparation

for the Utah System of Higher Education

The adoption of the Utah Core Standards in Mathematics provides an opportunity for the Utah System of Higher Education (USHE) to examine recommended pathways for high school students intending to enroll in USHE institutions, especially from the perspective of reducing time-to-graduation and increasing retention rates. USHE convened a Task Force consisting of mathematicians and educators from both public and higher education to consider this issue. The recommendations of the Task Force are as follows:

Recommendation 1

Each year in high school (4 years), students should take the most rigorous Mathematics course for which they qualify.

Recommendation 2

All students should successfully complete Secondary Math I, II and III, or Secondary Math Honors I, II and III.

- *Note: Secondary Math I, II and III cover more content than Math 1010 (Intermediate Algebra). Math 1010 should not be substituted for any component of the Secondary Math I, II, III sequence.*

Recommendation 3

Students who intend to pursue associates (AA/AS) or baccalaureate degrees should complete one or more Mathematics courses from the following list.

USHE-Recommended Courses BEYOND Secondary Math I, II and III:

- HS Calculus* or AP Calculus* or IB Math*
- HS Precalculus*†
- AP Statistics
- Any other course equivalent to one satisfying a USHE General Education Quantitative Literacy requirement including: Math 1030, 1040, 1050 or any Math course with Math 1050 as a prerequisite

* *Students interested in STEM or other math-intensive careers should take one or more of the classes identified with an asterisk in advance of high school graduation.*

† *HS Precalculus covers the content of Math 1050, Math 1060 and some statistics.*

College = Opportunity

